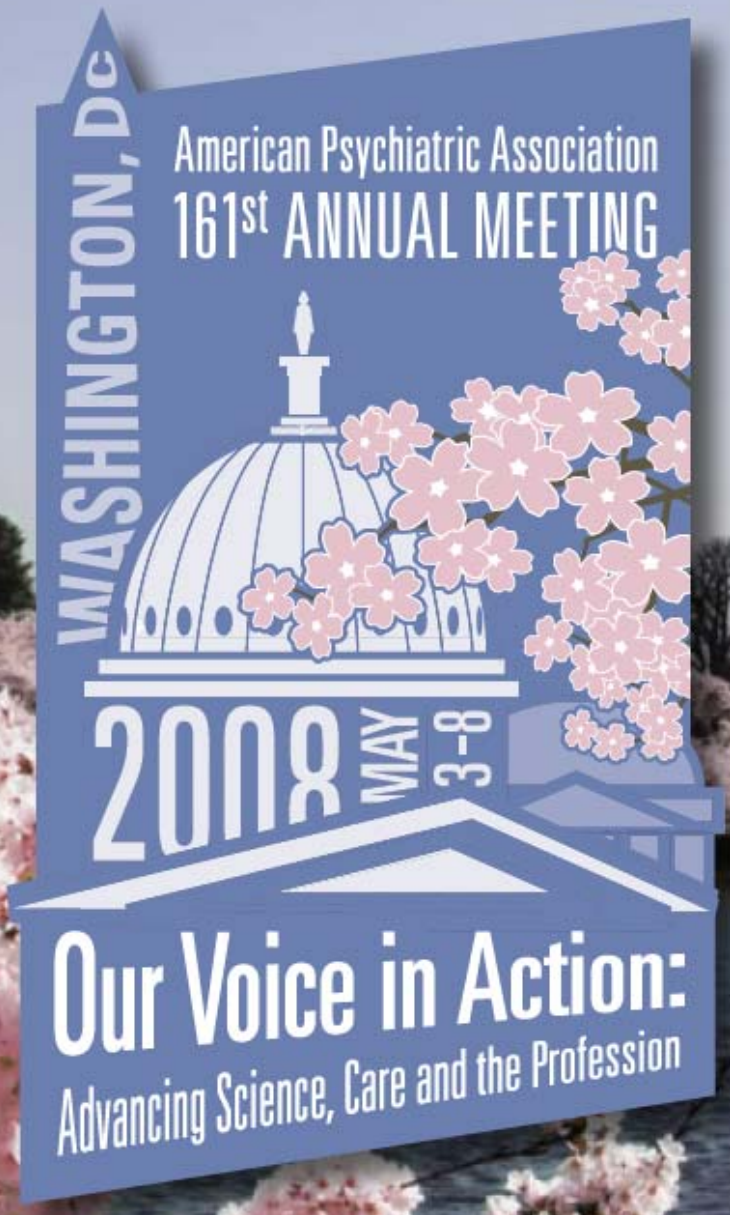
New Research Abstracts

New Research Abstracts

American Psychiatric Association

# 2008 Annual Meeting




Washington, DC • May 3–8, 2008

**NEW RESEARCH YOUNG INVESTIGATORS' POSTER SESSION 1**

**MONDAY, MAY 5, 2008 9:00 A.M. – 10:30 A.M. WEST LOBBY, LEVEL ONE, WASHINGTON CONVENTION CENTER**

**NR1-001**

## PERCEIVED IMPACT OF THE 2008 LEGISLATION ON INPATIENT TOBACCO SMOKING IN ENGLAND

*Cyrus A Abbasian, M.B.B.S 96 Mount Pleasant Rd., London NW10 3EJ, United Kingdom, John Stapleton, M.S.C., Gay Sutherland, M.P.H., Paddy Power, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to recognize the importance of staff attitudes towards inpatient tobacco smoking, particularly in light of any forthcoming legislation prohibiting smoking. Early measures to train staff in smoking cessation treatments and to improve their attitudes towards a non-smoking environment are essential for a smooth transition to smoke-free inpatient care.

**SUMMARY:**

Rationale: Tobacco smoking is extremely prevalent among psychiatric inpatients. Following English legislation banning smoking in public enclosed spaces in July 2007, a similar ban will apply to mental health institutions from July 2008. To assess the preparedness of staff we conducted a survey in a London Mental Health Trust.

Method: A Staff Smoking Attitudes Questionnaire was completed anonymously online. Personal emails invited all staff to complete the survey in October 2007, 8 months before the ban. Responses received during the first week were analyzed.

Results: of 683 responses received; 63% were female, 56% were under 40 years of age and 46% spent at least 20% of their time with inpatients. The staff tobacco smoking rate was 23%, with 27% being former smokers. 75% believed the ban would make it more difficult to care for patients, 73% believed it would be difficult to enforce and 72% had concerns about its potential hazards. 71% believed that the ban would increase patient aggression, 53% felt unqualified to use nicotine replacement therapy and 48% wanted training to manage tobacco withdrawal symptoms.

73 % of smokers, 43% of former smokers, and 30% of never-smokers did not agree with the ban ($p<0.001$). 72% of smokers, 43% of former smokers, and 33% of never-smokers believed patients have a right to smoke indoors ($p<0.001$). 59% of smokers, 42% of former smokers, and 32% of never-smokers believed its overall effect will be negative ($p<0.001$).

Conclusions: Our results show a high rate of disapproval with the forthcoming ban, significantly greater among smoking and former-smoking staff. More than 70% of staff believed that their caring for patients would be made more difficult and about 50% felt inadequate to help patients abstain. To protect patient care and staff well-being, psychiatric institutions should do more to help staff prepare for, and cope wit, inpatient smoking ban.

**REFERENCES:**

1. Lawn S, Pols R: Smoking Bans in Psychiatric Inpatient Set tings, Australian and New Zealand Journal of Psychiatry 2005; 39:866-885
2. National Institute on Drug Abuse (NIDA): Research Report Series, Tobacco Addiction, July 2006, http://www.nida.nih.gov/researchreports/nicotine/nicotine.html

**NR1-002**

## ARE SECOND GENERATION ANTIPSYCHOTICS ABUSABLE OR ADDICTIVE? A FOCUS ON QUETIAPINE

*Dwight Smith, M.D. Boston Medical Center, Dowling 7 850 Harrison Avenue, Boston, MA 02118, Ronald Bugaoan, M.D., John Renner, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to list common properties of addictive drugs which are not found in quetiapine and the other atypical antipsychotics. They should be able to identify characteristics frequently associated with quetiapine misuse.

**SUMMARY:**

Background: Quetiapine, a second generation antipsychotic approved for the treatment of schizophrenia and bipolar disorder, is widely used for these conditions and for its sleep-promoting and anxiolytic properties. It is not a controlled substance and in pre-clinical studies it did not show any addictive properties. This has led to its common use in substance abusing populations, in which it is acknowledged to have lower abuse liability than the benzodiazepines. However, a number of case reports and anecdotal clinical experience have emerged in which quetiapine is misused through either intranasal or intravenous administration, or in combination with other illicit drugs to produce varying psychoactive effects. This has led to increasing concern that quetiapine has the potential for abuse. Methods: A literature review of Medline from 1996 – 2007 was conducted with the keywords quetiapine, abuse, misuse, and dependence. Online sources in which individuals describe recreational experiences with quetiapine were searched and relevant reports noted. Manufacturer's data regarding the abuse potential of quetiapine was evaluated. Results: Five case reports and one article describing the misuse of quetiapine at a correctional institution were found. Three of the five case reports also involved incarcerated individuals. There were 24 online "testimonials" describing recreational drug use with quetiapine. The majority of online testimonials referred to their attempts at recreational experiences with quietapine as being unpleasant and dysphoric. Conclusions: Quetiapine does not have the euphoriogenic or reinforcing properties commonly associated with drugs of abuse or dependence. Given its widespread availability there exists some potential for diversion and misuse, especially among the incarcerated. However, true abuse or addiction seems unlikely. Further studies specifically addressing the abuse liability of quetiapine are called for.

**REFERENCES:**

1. Pinta, E. R., & Taylor, R. E. (2007). Quetiapine addiction? The American journal of psychiatry, 164(1), 174-5.
2. Morin, A. K. (2007). Possible intranasal quetiapine misuse. American journal of health-system pharmacy : AJHP : official journal of the American Society of Health-System Pharma cists, 64(7), 723-5.

**NR1-003**

**SMOKING PREVALENCE, REASONS FOR SMOKING AND MOTIVATION TO QUIT SMOKING AMONG PSYCHIATRIC OUTPATIENTS.**

*Luis R Patino, M.D. Ave México-Xochimilco 101, Colonia San Lorenzo Huipulco Tlalpan, México City Mexico 140370, Enrique Gaspar, M.D., Ricardo Nanni, M.D. M.Sc.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to have information regarding the smoking pattern, main reasons for smoking and motivation to quit smoking in psychiatric outpatients.

**SUMMARY:**

Introduction: Smoking carries a heavy burden in terms of morbidity and mortality. It is considered the most important cause of avoidable premature death worldwide. Studies have indicated that psychiatric patients show higher than expected rates of smoking and nicotine dependence than population and other clinical samples. However, there have been few studies conducted in developing countries. The aim of the current study was to present clinical data regarding smoking prevalence, smoking patterns, reasons for smoking and motivations to quit smoking in psychiatric outpatients classified by sex and psychiatric diagnosis. Methods: A random sample of psychiatric outpatients completed a questionnaire regarding demographic characteristics and smoking status. This questionnaire included the Fageström Test for Nicotine Dependence, the Reasons for Smoking Questionnaire and Richmond test for motivations to quit smoking. Participants were eligible if they were aged 13 years or older, attended the outpatient clinic at the Mexican National Institute of Psychiatry and gave informed consent (parent consent and patient assent if under 18 years of age). Results: A total of 300 questionnaires where handed out, 235 were returned (78%). Roughly 61% were female and average age was 40.84 (sd 16.12) years. About 63% of the patients reported having smoked in their lifetime, mean age at onset of smoking was 16.37 (sd 9.95) years, 29% said they had smoked daily at some point in their lifetime and 38% reported to have smoked in the past 12 months. Average Fagestrom score was 3.71 points. Of those currently smoking 88% said they would like to quit smoking if they found it easy, 44% said they had no interest or little interes in quiting smoking and 40% felt they most likely would be smoking in the next 6 months. Conclusions: Smoling rates in this psychiatric outpatient sample was above the observed in the Mexican general population.

**REFERENCES:**

1.Poirier MF: Prevalence of smoking in psychiatric patients. Prog Neuropsychopharmacol Biol Psychiatry 2002;26:529-537.

2. Grant BF: Nicotine dependence and psychiatric disorders in the United States: results from the national epidemiologic survey on alcohol and related conditions. Arch Gen Psychiatry 2004;61:1107-1115.

**NR1-004**

**EFFICACY OF VARENICLINE IN PSYCHIATRIC PATIENTS WITH CO-MORBID POLYSUBSTANCE DEPENDENCE.**

*Prashant Kaul, M.D. Department of Psychiatry, SUNY Upstate, 750 East Adams St., Syracuse, NY 13210., Syracuse NY 13210, Thomas Schwartz, M.D., James Megna,MD,Ph.D, Steven Batki,M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognise the pertinent issues involved in addressing cigarette smoking in a population sub-group consisting of patients with major psychiatric diagnosis in addition to other substance dependence problems.

**SUMMARY:**

Objective: This (initial) retrospective analysis of patients enrolled in a dual diagnosis, psychiatric and substance abuse program attempts to evaluate the efficacy and tolerability of varenicline, an alpha4beta2 nicotinic receptor partial agonist, recently approved for smoking cessation, in this difficult to treat group.

Methods: 30 consecutive patients receiving varenicline for smoking cessation in our substance abuse program were identified; their charts collected and reviewed. Parameters analysed included demographics, psychiatric diagnoses, medical co-morbidities, side effects, number of cigarettes used pre/post varenicline and the number of complete smoking cessation outcomes.

Results: From the initial 30, only 16 patients' data was pooled and able to be analyzed fully, for all the parameters. The average age of patients studied was 36 years. The average number of cigarettes smoked prior to varenicline was 25. The average number of cigarettes smoked after varenicline was 7.7/day. Average reduction in number of cigarettes used was 16/day or 64%. Four patients completely quit smoking cigarettes (25% of treatment completers) after intervention. In addition, five (31%) more patients were able to cut back cigarettes to 1 (or less) per day. An aggregate of 9 patients (56.3%) were able to cut down to 1 cigarette or less. This is a very significant in presence of multiple addictions and psychiatric co-morbidities. Psychiatric diagnoses included Depressive disorders–75% and Anxiety disorders–50%. Substance dependence diagnoses included Cocaine–68.75%, Opioid-62.5% and Alcohol-56.3%. Most patients were polysubstance dependent, in differing stages of sobriety.

Conclusion: This retrospective study of patients co-morbidly addicted to other substances and in presence of another major psychiatric diagnosis suggests a cessation rate of 25%, which we find remarkable in this typically difficult to treat population, where smoking cessation is rarely a high priority.

**REFERENCES:**

1. Stapleton JA: Varenicline in the routine treatment of tobacco dependence: a pre-post comparison with nicotine replacement therapy and an evaluation in those with mental illness. Addic tion. 2007 Nov 19;[Epub ahead of print]

2. Stack NM: Smoking cessation: an overview of treatment options with a focus on varenicline. Pharmacotherapy. 2007 Nov;27(11):1550-7.

**NR1-005**

**PREVALENCE OF CO-OCCURRING SUBSTANCE DEPENDENCE, PSYCHIATRIC DISORDERS, AND CHRONIC MEDICAL CONDITIONS IN A DETOX/RE-**

**HABILITATION SETTING**

*William J Meehan, M.D. Department of Psychiatry UMass Memorial Medical Center/ University of Massachusetts Medical School 55 Lake Avenue North, Worcester, MA 01655, Monika Kolodziej, Ph.D., Dorota Poluha, M.D., Ph.D., Paula Morrissette, Psy.D., L.M.H.C., Patrice Muchowski, Sc.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant will be able to do the following: recognize that co-morbid psychiatric disorders and chronic medical conditions appear to be highly prevalent in patients in substance detoxification/rehabilitation settings; identify some of the most commonly co-occurring psychiatric and medical disorders in this setting; become familiar with an integrated approach that screens for and manages these co-occurring conditions.

**SUMMARY:**

Epidemiologic surveys in the 1990s demonstrated that psychiatric disorders are common among patients with substance-related disorders. Moreover, many substance use disorders carry significantly increased risk of medical co-morbidities. In this study we simultaneously examined the prevalence of Axis I psychiatric disorders and chronic medical co-morbidities among patients who sought treatment in an inpatient detoxification and/or rehabilitation setting (AdCare Hospital, Worcester, MA). Portions of electronic medical records of 5,588 patients discharged from inpatient detoxification and/or rehabilitation during a consecutive 12-month period in 2005/2006 were converted to an SPSS database and analyzed. The most common substance-related disorders were dependence on opioids (47%), alcohol (44%), cocaine (25%), and sedative-hypnotic-anxiolytics (21%). 4,655 patients (83%) had at least one co-occurring major Axis I psychiatric disorder (mood disorders, anxiety disorders, schizophrenia and other psychotic disorders, eating disorders, or attention-deficit/hyperactivity disorder). 3,552 patients (64%) had at least one chronic medical condition. 54% of patients had both psychiatric and medical co-occurring disorders, while 29% had psychiatric disorders only and 9% had medical conditions only. Only 8% of patients had no co-occurring disorders. These findings suggest that patients presenting for inpatient detoxification and/or rehabilitation services carry strikingly high rates of psychiatric and medical co-morbidities. This underscores the importance of screening for these co-occurring disorders, and developing integrated treatment plans involving cross-disciplinary treatment teams for this patient population.

**REFERENCES:**

1. Kessler RC, McGonagle KA, Nelson CB, Hughes M, Eshleman S, Wittchen H-U, Kendler KS: Lifetime and 12-month prevalence of *DSM-III-R* psychiatric disorders in the United States: results from the National Comorbidity Survey. Arch Gen Psychiatry 1994; 51:8-19
2. Rehm J, Room R, Graham K, Monteiro M, Gmel G, Sempos CT: The relationship of average volume of alcohol consumption and patterns of drinking to burden of disease: an overview. Addiction 2003: 98:1209-1228

**NR1-006**

**GLOBAL DNA METHYLATION IS INFLUENCED BY SMOKING BEHAVIOR**

*Marc Muschler, Ludwig-Erhard-Strasse 5, Erlangen, Germany (west) 91052, Thomas Hillemacher, M.D., Helge Frieling, M.D., Michael Linnebank, M.D., Johannes Kornhuber, M.D., Stefan Bleich, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the end of this poster session the participants should recognize the association of smoking behavior and global DNA methylation. Furthermore they should learn about the importance of smoking induced methylation status alteration for a wide range of diseases.

**SUMMARY:**

The level of epigenetic DNA methylation is an important factor in the pathogenesis of various human diseases. As smoking may influence DNA methylation, we investigated the effect of smoking habits on global DNA methylation in 298 genomic DNA samples (73 fathers, 69 mothers and 156 offspring). We did not find a direct effect of smoking on global DNA methylation. However, there was an association of the offspring's DNA methylation with paternal DNA methylation that was strongest if both had never smoked (R2corr=0.41, Beta=0.68, P=0.02) and completely vanished if the offspring smoked or had ever smoked. These findings suggest an association between smoking behaviour and global DNA methylation, which may be of importance for a wide range of diseases.

**REFERENCES:**

1. Hillemacher T, Bayerlein K, Wilhelm J, Frieling H, Thürauf N, Ziegenbein M, Kornhuber J, Bleich S. Nicotine dependence is associated with compulsive alcohol craving. Addiction. 2006 Jun;101(6):892-7.
2. Bönsch D, Lenz B, Reulbach U, Kornhuber J, Bleich S. Homocysteine associated genomic DNA hypermethylation in patients with chronic alcoholism. J Neural Transm. 2004 Dec;111(12):1611-6.

**NR1-007**

**METHYLATION STATUS OF POMC PROMOTER IN ALCOHOL DEPENDENT PATIENTS**

*Marc Muschler, Ludwig-Erhard-Strasse 5, Erlangen, Germany (west) 91052, Helge Frieling, M.D., Bernd Lenz, M.D., Cornelia Kraus, Ph.D., Johannes Kornhuber, M.D., Stefan Bleich, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should recognize the necessity of investigations on HPA axis alterations in alcohol dependent patients.

**SUMMARY:**

Background: The precursor polypeptide proopiomelanocortin (POMC) is part of the hypothalamic-pituitary-drenal axis (HPA axis). POMC plays an important role in HPA-mediated-stress-response. Alterations in HPA axis in alcohol dependent patients were already shown in several publications. This investigation tries to answer the question whether central alterations in HPA axis are also displayed in peripheral blood cells.Methods:In this study the methylation status of the POMC gene promoter was displayed by sequencing sodium bisulfite treated DNA. Samples from 124 alcohol dependent patients and 39 healthy controls were included in this study.Results:The curves from patients and controls, obtained from the arithmetic mean over all

displayed CpG-positions, show no significant difference. In fact these curves are almost congruent. Thus the methylation status of POMC gene promoter is unaltered in patients and controls. The observed dyregulation in HPA axis is not identifiable in peripheral blood cells.Discussion:
To our knowlegde the POMC promoter was analysed for the first time in this context. Further investigations on alterations of HPA axis and POMC will follow.

**REFERENCES:**


1. Wurst FM, Rasmussen DD, Hillemacher T, Kraus T, Ramsk ogler K, Lesch O, Bayerlein K, Schanze A, Wilhelm J, Junghanns K, Schulte T, Dammann G, Pridzun L, Wiesbeck G, Kornhuber J, Bleich S. Alcoholism, craving, and hor mones: the role of leptin, ghrelin, prolactin, and the pro-opi omelanocortin system in modulating ethanol intake. Alcohol Clin Exp Res. 2007 Dec;31(12):1963-7.
2. Dai X, Thavundayil J, Santella S, Gianoulakis C. Response of the HPA-axis to alcohol and stress as a function of alcohol dependence and family history of alcoholism.
3. Psychoneuroendocrinology. 2007 Apr;32(3):293-305. Epub 2007 Mar 8.


**NR1-008**

**INHIBITING HIV BRAIN ENTRY**


*Ajay Bhatia, M.D. 1670 Upham Drive OSUMC Neurosciences Building, Columbus, OH 43210, Richard E. Kast, M.D., Hossam H. Guirgis, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to:1. Recognize importance of blood brain barrier (BBB) integrity loss in contributing to CNS pathology during HIV infection.2. Understand the role of NMDA-mediated glutamate signalling in HIV neuropathogenesis and in BBB integrity. 3. Consider potential for memantine to lower CNS complications from HIV.

**SUMMARY:**


Introduction: Two CNS sequelae of HIV, a] HIV-associated dementia (HAD) and b] Minor Cognitive Motor Disorder (MCMD) are related to BBB impairment. Low-risk prophylactic treatment with memantine may mitigate the course of a] and b] by strengthening BBB integrity. Methods: Literature analysis. Results: Presynaptic neurons regulate astrocytic control of CNS microcirculation and thereby BBB integrity. HIV infection compromises that integrity: 1] Basal levels of HIV infected CD4+ cells cross the BBB and 2] activate perisynaptic astrocytes which then enhance synaptic glutamate by reduced reuptake; 3] here, it binds NMDA receptors on presynaptic neurons, which in turn release glutamate themselves [glutamate amplification path]; this glutamate binds to pericapillary astrocyte metabatropic glutaminergic receptors (mGluR) releasing dilation factors at astrocytic endfeet surrounding CNS capillaries, and glutamate here binds to NMDA receptors on interneurons, releasing nitric oxide (NO); 4] released dilation factors and NO dilate capillaries, increasing BBB porosity, and 5] more HIV infected cells can enter the brain, leading to a second positive feedback cycle. Excess, prolonged dilation results in BBB disruption, allowing increased HIV brain entry, and ultimately HAD and MCMD. Discussion: BBB integrity may be strengthened in HIV with memantine. Memantine displaces and occupies Mg+2's site at the external Ca+2 channel opening of the NMDA receptor, forming a tighter plug than the more easily displaced Mg+2. This impedes Ca+2 entry per channel opening. By NMDA channel inhibition, memantine may help break both feedback loops, helping maintain BBB integrity. Conclusion: Psychiatrists should be aware of HAD and MCMD in HIV, that astrocytes are critical to BBB integrity, that memantine may represent benign prophylactic treatment helping to maintain BBB integrity. We declare no conflict of interest. The research for this project was unfunded.


**REFERENCES:**


1.Avison MJ, Nath A, Green-Avison R, et al: Neuroimaging cor relates of HIV-associated BBB compromise. J Neuroimmu nol 2004; 157: 140-6
2. Zonta M, Angulo MC, Gobbo S, et al.: Neuron-to-astrocyte signaling is central to the dynamic control of brain microcir culation. Nat Neurosci 2003; 6: 43-50


**NR1-009**

**PREVALENCE OF SUBSTANCE ABUSE AND COMPLIANCE TO TREATMENT IN PATIENTS WITH HUMAN IMMUNODEFICIENCY SYNDROME: A RETROSPECTIVE DATABASE ANALYSIS**


*Rachel A Houchins, M.D. 15 Medical Park Suite 141, Columbia, SC 29203, Kimberly B. Rudd, M.D., David Henderson, M.D., April Carpenter, M.D., Rukhsana Mirza, M.D., Heather Brown, Divya Ahuja, M.D., and Meera Narasimhan, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to determine the prevelance of substance abuse and psychiatric disorders in patients with HIV. Additionally they will be able to correlate partial or non compliance and the demographic and clinical characteristics associated with that compliance. The participant will be able to identify factors associated with compliance such as gender, diagnoses of psychiatric or substance abuse disorders, and co-morbid medical diagnoses.

**SUMMARY:**


High rates of substance abuse and psychiatric disorders among HIV-infected individuals have been consistently found across studies. Substance abuse in this population is frequently associated with co-morbid depression, anxiety and other severe mental disorders. These comorbidities not only increase the risk of transmitting HIV, but are also associated with decreased adherence to highly active antiretroviral therapy (HAART). A number of studies have found that active substance users are more likely to report HAART nonadherence and have lower reduction in HIV-RNA compared to former drug users or those who never used drugs. However, few studies have addressed gender, socio-demographic variables and their implications on treatment adherence.
In this study, a retrospective chart review of more than 500 HIV positive patients who were seen at least twice during the time period of 2004 to 2006 at the Ryan White Clinic will be completed. Data collected include age, gender, race, age HIV diagnosis, any additional medical or psychiatric diagnosis, income, medications, CD4 count, viral load, county of residence, and type, dose and quantity of medication prescribed and filled by the pharmacist. Compliance was defined as the

number of times prescriptions were filled by a pharmacist with a 30-day supply and the percentage of appointments kept. Preliminary results that are available from 361 charts reveal that this population is 62% male and 78% African American. The mean age of the population is 42. The prevalence of substance abuse diagnoses in this sample was 28.2%. The prevalence of other psychiatric disorders was 24.5%.For patients with a 50% or lower compliance rate, current data show a -.034 correlation with CD4 count in 2005 and a -.099 correlation in 2006. This indicates that compliance directly affects the biologic marker of CD4 count. The data also show a trend towards higher noncompliance rate the in group who are positive for a substance abuse diagnosis. Further review of the complete data will show more definite results including the correlation of race, gender, and comorbid medical diagnoses with CD4 and viral load outcomes. This will allow us as clinicians to better understand the approach to treatment and compliance of patients with HIV and comorbid substance and other psychiatric diagnoses.

**REFERENCES:**


1. Center for Disease Control and Prevention: Cases of HIV infection and AIDS in the United States, 2002. HIV/AIDS Surveillance Report 2002; 14:1-48.
2. Osterberg L, Blaschke T: Adherence to medication. N Engl J Med 2005; 353(5):487-497.


**NR1-010**

**ALCOHOL USE PATTERNS AMONG SCHOOL STUDENTS IN UIJONGBU CITY, SOUTH KOREA**


*Eunhyung Choi, M.D. Department of Psychiatry, The Catholic University of Korea The Uijongbu St.Mary's Hospital, Uijongbu Korea 480-717, HAE KOOK LEE, M.D., Ph.D., YOUNG SIL KWEON, M.D., Ph.D., CHUNG TAI LEE, M.D., Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand that intensive preventive early interventions are highly recommended for middle school students and secondary interventions are for female students from highly vulnerable groups such as industrial high school.

**SUMMARY:**


Objective:To better understand the Alcohol use patterns and the psychological status of adolescents living in Uijongbu city, along with the effective interventions, we investigated drinking habits including drinking rates for the previous year, drunkenness rates, drinking frequency, drinking extent by age and gender and drinking related psychopathology. Methods:Subjects were 4,228 students aged 10 to 17 who attended 5th through 12th grades. They were students of elementary(n=1,165), middle school(n=1,549) and high school(n=1,514). Students who consented to participate in this survey completed self-administered questionnaire focusing on alcohol use, drinking related factors, drinking related behavioral problems, CDI, BDI, RCMAS, K-YSR, IAS and demographic variables. Chi-square analysis was used to compare each group differences. Results:The drinking rates showed consistent increase as the students advanced from lower grades to higher grades, with a particularly large increase observed among female students attending industrial high schools. Factors such as whether living together with family, parental divorce and smoking status of the participants significantly affect current alcohol use. Adolescents living with single parents consumed more alcohol than those living with both parents. Juveniles with high monthly drinking frequency scored higher on the rating scales for the Internet addiction, depression, anxiety, and behavioral problems than those without. Conclusion:1.We found that the rates of adolescentsexperiencing drunkenness are generally increasing from middle school through high school and drinking patterns and Socio-economic factors are closely related, and drinking behavior is found to give rise to various psychopathologies. 2.Our Findings support that intensive preventive early interventions are highly recommended for middle school students and secondary interventions are for female students from highly vulnerable groups such as industrial high school.


**REFERENCES:**


1. Deas D, Brown ES: Review: Adolescent substance abuse and psychiatric cormobidities. J Clin Psychiatry 2006;67(7):e02
2. Toumbourou JW: Youth alcohol and other drug use in the United States and Australia: a cross national comparison of three state-wide samples. Drug and Alcohol review 2005;24: 515-523


**NR1-011**

**AN OUTCOME EVALUATION OF TREATMENT OF ALCOHOL AND SUBSTANCE ABUSERS IN A GENERAL HOSPITAL IN SANTIAGO DE CHILE**


*Katherine San Juan Brinck, M.D. Asturias 260 El Golf, Santiago Chile 999, Katherine C. San Juan, M.D; Ramon U. Florenzano M.D.,M.P.H.; Pamela Leiva, Lic.Psychologist; Martin Cassasus, Lic Psychologist; Claudia Scianca, Lic. Psychologist; Zapata Margarita, S.Worker*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to; 1) list the co-occurring disorders of substance abusers in Santiago de Chile; 2) recognize socio-demographics of addicted patients treated in a general hospital specialized unit; and 3) identify the changes in four dimensions (global mental health, symptoms, interpersonal relationships and social role performance) in a pre and post test application of the OQ 45.2 in treated cases;

**SUMMARY:**


The results of treatment of substance abusers is of progressive relevance, as mental health services increase coverage of tose conditions. The Chilean Ministry of Health has emphasized the measurements of outcome, and in this paper we present the results of the treatment in the Unidad de Farmacodependencias (UFD) at the Psychiatric Service in the Hospital del Salvador (SPHDS), a general hospital in Metropolitan Santiago de Chile, following national guidelines to treat dual and severe alcoholics and addicts. Most cases present a concurrent substance abuse and Axis I disorder. Treatment consists of weekly group therapies, with psychopharmacological treatment as hended. In this study we evaluate the efficacy of the treatment in this unit, applying the Outcome Questionnaire (OQ-45.2) designed by Lambert et al in the Chilean version validated by De la Parra and Von Bergen). In previous studies we have found a correlation between abstinence and changes in the OQ 45,2, as well as a good correlation between more changes in this

scale and improvement in quality of life measured with SF36, a generic instrument that characterizes health statuys in a multidimensional frame. We studied a total of 785 intakes at the UFD SPHDS between January 2004 y Octobre 2007, of whom 70,9% were men. The average age was 37,4 years (SD 11,7). Mean scores for the total group in OQ 45.2 decreased from 90,1 in the pre-treatment measurement (M1) (n=483), to 81,1 in the early treatment measurement M2 (n=104) and to 67,2 in the longer term follow up M3 (n=36). The Reliable Change Index in M2 was 9, and in M3 was 23,2. We conclude that the average patient treated at this specialized unit improves in the four dimensions measured by OQ 45.2 (overall mental health, symptoms, interpersonal relationships and social role. We also compared levels of improvement in dual cases. The discussion emphasizes the need for naturalistic studies of outcome of treatment of substance abusers.

**REFERENCES:**

1. American Psychiatric Association. Practice Guidelines for Treatment of Patients with Substance Abuse Disorders. American Psychiatric Press, Washington DC; 1995 Ogles BM, Lambert MJ y Fields SA. Essentials of Outcome Assess ment. John Wiley & Sons, Nueva York, 2002

**NR1-012**

## ASSOCIATION BETWEEN ALCOHOL-RELATED GENE POLYMORPHISMS AND ALCOHOLIC LIVER CIRRHOSIS IN KOREAN POPULATION

*Kyung-Tae Kim, M.D. Department of Psychiatry*
*The Catholic University of Korea The Uijongbu St.Mary's Hospital, Uijongbu City Korea 480-717, Hae-Kook Lee, M.D., Yong-Sil Kweon, M.D., Kyoung-Uk Lee, M.D., Chung-Tai Lee, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize several candidate genes recently under investigation as well as alcohol-related genetic polymorphisms. The participant should also be able to demonstrate the influence of drinking patterns possibly owing to enzymatic variation on certain types of health consequences, and determine who is at risk for developing alcohol-related problems.

**SUMMARY**: INTRODUCTION: Recent studies have implicated that genetic susceptibility play a major role in the development of alcoholic liver cirrhosis(LC) in alcohol-dependent patients. In this study, possible association between allelic variants of Glutathione S-Transferase M1(GSTM1), Cytochrome p450 2E1(CYP2E1), Manganese Superoxide Dismutase(MnSOD), Aldehyde Dehydrogenase 2(ALDH II) and Alcohol Dehydrogenase 2(ADH II) genotypes and alcoholic liver cirrhosis were investigated. METHODS: Peripheral blood samples were collected and white cell genomic DNA was extracted from 146 alcohol-dependent patients and 150 healthy controls, which was then studied for the genotypes GSTM1, CYP2E1, MnSOD, ALDH II and ADH II and the occurrence of allelic variants using allele-specific polymerase chain reaction amplification and restriction fragment length polymorphism analyses. The Student's T-test and Pearson's Chi-square test were used, both of which statistical significance was defined as an p value < 0.05. RESULTS: Demographic and clinical characteristics did not significantly differ between LC patients and non-LC patients regarding variables, such as age, sex, tobacco co-use and age of initial withdrawal symptoms underwent. C1/C1 of CYP2E1, V/V of MnSOD and 1*1 of ALDH II polymorphisms were presented frequently in Korean population with statistical significance(Table 1). However, no evidence was observed that the distribution of the GSTM1, CYP2E1, MnSOD, ALDH II or ADH II genotypes differed between the subjects with LC patients and non-LC patients, ALDH II and ADH II genotypes were associated with alcohol-dependent patients(Table 2 & 3, both $p < 0.01$). CONCLUSION: These findings indicate that the alcohol-related genetic polymorphisms currently suggested, were not associated with the development of alcoholic hepatic cirrhosis in Korean alcohol-dependent patients. Further investigations concerning other candidate genes as well as a study with a large population-based analyses is needed.

**REFERENCES:**

1. Stickel F, Osterreicher CH: The role of genetic polymor phisms in alcoholic liver disease. Alcohol Alcohol 2006; 41(3):209-224
2. Cichoz-Lach H, Partycka J, Nesina I, Celinski K, Slomka M, Wojcierowski J: Alcohol dehydrogenase and aldehyde de hydrogenase gene polymorphism in alcohol liver cirrhosis and alcohol chronic pancreatitis among Polish individuals. Scand J Gastroenterol 2007; 42:493-498

**NR1-013**

## GENDER DIFFERENCES IN THE RELATIONSHIP BETWEEN DEPRESSIVE SYMPTOMS AND CRAVINGS FOR ALCOHOL

*Nelli Boykoff, B.S. 2370 16th Avenue, San Francisco CA 94116, Terry Schneekloth, M.D., Daniel Hall-Flavin M.D., Larissa Loukianova M.D., Ph.D., Victor Karpyak M.D., Ph.D., Maureen Drews, B.S., Joanna Biernacka Ph.D., Mark A. Frye M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: better understand gender differences in people who are self-referred for alcohol treatment.

**SUMMARY:**

INTRODUCTION: The purpose of this study was to better understand the correlates of alcohol craving in men and women self-referred for alcohol addiction treatment. METHODS: We evaluated clinical data from patients who participated in the Intensive Addictions Program (IAP), a 28-day residential treatment program at the Mayo Clinic. This retrospective study was approved by the Mayo Institutional Review Board (PI: Frye). Age, clinical diagnosis [alcohol dependence (Etoh) and additional Axis I non-drug diagnosis (DualDx)], depressive symptoms as measured by the Beck Depression Inventory (BDI, Beck et al, 1996), and cravings as measured by the Pennsylvania Alcohol Craving Scale (PACS, Flannery et al, 1999) were retrieved from the electronic medical record. T-tests and spearman correlations were utilized to assess for demographic differences between groups and potential relationship between BDI and PACS.

RESULTS: The average age of the clinical cohort (n=364, 135F/229M) was 48±14 years (47±14 F / 48±14 M). There were 92 subjects with Etoh only (27F/65M) and 139 subjects with DualDx (62F/77M). On admission, all subjects in the DualDx group

had significantly higher BDI scores ($p < .0001$) and women overall had higher PACS ($p = .0021$) and BDI ($p = .0332$) scores compared to men. For women, there was a marked correlation between admission BDI and PACS in both Etoh only (BDI= 16.7±11.6, PACS=11.8±9.0, r=0.78, p<0.0001) and DualDx (BDI= 23.2± 10.1, PACS= 13.6±8.7; r=0.36, p=0.01) groups. This correlation was not significant in either the male Etoh (BDI=14.2±9.5, PACS=9.46±6.6; r=0.16, p=0.26) or DualDx (BDI= 20.9±9.5, PACS= 9.69±7.2; r=0.23, p=0.07) groups.

DISCUSSION: Craving is a complex set of cognitions and behaviors related to the desire for alcohol intake. This large, retrospective clinical data set suggests that depressive symptomatology in women, but not men, correlate to the degree of craving for alcohol. Further controlled, prospective study is encouraged.

**REFERENCES:**


1. Flannery BA, Volpicelli JR, Pettinati, HM, 1999. Psychomet ric Properties of the Penn Alcohol Craving Scale. Alcohol Clin Exp Res. 23(8):1289-95
2. Beck AT, Steer RA, Brown GK: Manual for Beck Depression Inventory II (BDI-II). San Antonio, TX, Psychology Corpora tion, 1996


**NR1-014**

## THE RELATIONSHIP BETWEEN ALCOHOL CONSUMPTION, ABSTAINING, HEALTH UTILITY AND QUALITY OF LIFE IN GENERAL POPULATION


*Samuli I Saarni, M.D. National Public Health Institute Dept. of Mental Health and Alcohol Research Mannerheimintie 166, Helsinki, Finland 00300, Kaisla Joutsenniemi, M.D., M.Soc. Sc., Seppo Koskinen, M.Soc.Sc., M.D., Ph.D., Jaana Suvisaari, M.D., Ph.D., Sami Pirkola, M.D., Ph.D., Harri Sintonen, Ph.D., Kari Poikolainen, M.D., Ph.D., Jouko Lönnqvist, M.D., Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to know a) how alcohol consumption is related to health utility, self-rated health and quality of life b) to understand, why it is essential to separate former drinkers from other abstainers in investigating the association between alcohol, health and well-being.

**SUMMARY:**


Introduction: Heavy alcohol use is a major public health problem, but also abstainers have increased mortality risk in comparison to moderate drinkers. Whether this J-curve holds for health utility and well-being is largely unknown. Aims: To examine associations between alcohol consumption and utility-based health-related quality of life (HRQoL), subjective quality of life (QoL), self-rated health (SRH), and mental distress. Design: Representative general population survey in Finland, comprising of 5871 persons aged 30-64

Measurements: HRQoL was measured with 15D and EQ-5D, QoL and SRH were measured with likert scales, and mental distress with GHQ-12. Past alcohol problems were diagnosed with a structured psychiatric interview (M-CIDI). Alcohol consumption was examined with a self-report questionnaire.

Findings: Abstainers who were former drinkers scored worst on most measures, even in comparison to the highest drinking decile. For men, all statistically significant associations between moderate drinking and well-being disappeared when sociodemographic factors and former drinkers were taken into account. For women, moderate alcohol use associated with better SRH and EQ-5D compared to abstainers. However, the possible health utility benefits associated with moderate alcohol consumption were of clinically insignificant magnitude. Negative associations between alcohol and well-being were observed on several measures for women consuming more than 173g and men more than 229g per week. Conclusions: The J-curve between alcohol consumption and well-being observed in raw scores was mostly explained by sociodemographic factors. Failure to separate former drinkers and other abstainers produces a significant bias favouring moderate drinkers. As the possible health utility benefits of moderate alcohol use were clinically insignificant, it probably suffices to investigate mortality when estimating the public health impact of moderate alcohol consumption.


**REFERENCES:**


1. Fillmore KM, Stockwell T, Chikritzhs T, Bostrom A, Kerr W: Moderate alcohol use and reduced mortality risk: sys tematic error in prospective studies and new hypotheses. Ann Epidemiol 2007; 17: S16-23.
2. French MT, Zavala SK: The health benefits of moderate drinking revisited: alcohol use and self-reported health status. Am J Health Promot 2007; 21: 484-91


**NR1-015**

## SCRUPULOSITY DISORDER: DIAGNOSIS, SYMPTOMATOLOGY, ETIOLOGY, AND TREATMENT


*Chris H Miller, B.A. 1094 W 1000 S, Springville, UT 84663, Dawson W. Hedges, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to (1) diagnose scrupulosity disorder (as well as differentiate between obsessive-compulsive disorder and scrupulosity disorder), (2) identify the most common symptoms of scrupulosity disorder, (3) explain the etiology of scrupulosity disorder, (4) identify potential treatment methods for scrupulosity disorder, and (5) indentify remaining research and clinical questions related to scrupulosity disorder.

**Summary:**


Scrupulosity is a psychological disorder primarily characterized by pathological guilt or obsession associated with moral or religious issues that is often accompanied by compulsive moral or religious observance and is highly distressing and maladaptive. This paper provides a comprehensive overview of scrupulosity and an original conceptualization of the disorder based on an exhaustive literature review to increase awareness of the disorder among practicing clinicians and stimulate further research. It explores the clinical features of scrupulosity, classified as cognitive, behavioral, affective, and social features, as well as the epidemiology, etiology, and treatment of the disorder. Additionally, it is suggested that scrupulosity, despite its similarity to OCD, may merit a distinctive diagnosis, particularly considering its unique constellation and severity of symptoms and its treatment refractoriness, as supported by statistical analysis. Finally, this paper presents a new instrument designed to identify scrupulosity's symptom dimensions and assess clinical severity, along with original data supporting the instrument's psychometric validity as well as clinical and

research utility.

**REFERENCES:**


1. Miller, C.H. & Hedges, D.W. (2007). Scrupulosity Disorder: An Overview and Introductory Analysis. Journal of Anxiety Disorders, currently in-press.
2. Tolin, D. F., Abramowitz, J. S., Kozak, M. J., & Foa, E. B. (2001). Fixity of belief, perceptual aberration, and magical ideation in obsessive-compulsive disorder patients. Journal of Anxiety Disorders, 15. 501-510.


**NR1-016**

**GENDER DIFFERENCES IN SYMPTOMATIC CHARACTERISTICS OF SOCIAL PHOBIA.**


*Hong-min C Choi, M.D. Psychiatry, Kangbuk Samsung Hospital 108 Pyung-Dong Jongno-Gu Seoul South Korea, 110 746, Na-Hyun Kim, M.D.,Eun-Ji Kim, M.D.,Han-Yong Chung, M.D.,Se-Won Lim, M.D., Kang-Seob Oh, M.D., Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize gender differences in symptomatic characteristics of social phobia.

**SUMMARY:**


Objectives : The purpose of this study was to understand the gender difference of symptomatic characteristics of social phobia. Potential differences in demographic characteristics, severity of anxiety, and situational fear and avoidance were examined.

Methods : Two hundred and ninety two outpatients diagnosed with social phobia at Kangbuk Samsung Hospital were included in this study. All subjects were investigated using Korean version of MINI International Neuropsychiatric Interview Plus. To evaluate the gender differences of both groups, Self-Report Questionnaires and Interviewer-Administered Instruments; Social phobia scale (SPS), Social Avoidance and Distress Scale (SADS), Anxiety Control Questionnaire (ACQ), State-Trait Anxiety Inventory (STAI), Anxiety Sensitivity Index (ASI), Appraisal of Social Concerns (ASC), Liebowitz Social Anxiety Scale (LSAS) were used. Results : Men reported significantly higher total score of SADS than women. Women scored higher on the item of trait anxiety of STAI and social helplessness of ASC than men. Conclusions : Gender differences among patients with social phobia are discussed in the context of traditional sex-role expectations.


**REFERENCES:**


1. Turk CL: An investigation of gender differences in social phobia.
2. J Anxiety Disord. 1998;12(3):209-223
3. Weinstock LS: Gender differences in the presentation and management of social anxiety disorder. J Clin Psychiatry 1999;60 Suppl 9:9-13


**NR1-017**

**COMPARISON OF CEREBRAL GLUCOSE METABOLISM MEASURED BY 18FDG-PET SCAN BETWEEN PANIC DISORDER PATIENTS AND NORMAL CONTROL SUBJECTS**


*Hyunwook Cho, M.D. Hanjin Apt 107-1004 HaengDang-Dong SungDong-Gu, Seoul Korea 133777, Kyung-Han Lee, M.D., Ph.D., Eun-Ho Kang, M.D., Young-Suk Cho, M.D., Joo-Eon Park M.D., Bum-Hee Yu, M.D., Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand the current and ongoing studies about certain activation patterns of brain neural circuits in panic disorder.

**SUMMARY:**


Introduction:The etiology of panic disorder is still yet to be known, although various hypotheses have been suggested. Due to the recent development of functional neuroimaging techniques, brain neural circuits which may be related to panic disorder is gaining interest. We planned an 18FDG-PET study comparing activation patterns of the brain between panic disorder patients and normal controls.

Methods: Ten treatment naïve panic disorder patients were recruited from the psychiatric outpatient clinic at Samsung Medical Center, and 10 normal control subjects were recruited as well. An 18FDG-PET scan and several psychological tests were done in both groups. The 18FDG absorption rates between the two groups were compared, and all the imaging analyses were done in the voxel level. Results:

Scores on the HAM-A, ASI-R, STAI-S, and HAM-D were significantly higher in the patient group (17.29 +- 7.25 vs 1.20 +- 1.93, $p = 0.000$; 58.43 +- 28.89 vs 15.60 +- 11.79, $p = 0.001$; 47.10 +- 7.92 vs 39.43 +- 5.74, $p = 0.045$; 13.29 +- 6.16 vs 0.60 +- 1.58, $p = 0.000$, respectively), while STAI-T showed no significant difference(47.57 +- 5.13 vs 45.00 +- 5.77, $p=0.360$, respectively). 18FDG absorptions in the bilateral white matter regions lateral to the posterior cingulates were significantly lower in the patient group(uncorrected $p < 0.001$, $k = 50$ voxels) and the white matter region of the right occipital cuneus was significantly higher (uncorrected $p < 0.001$, $k = 100$ voxels) in the patient group. Conclusion: Our results suggest that abnormal activation of the white matters lateral to both posterior cingulates and the right occipital cuneus may be related to panic disorder.


**REFERENCES:**


1. Gorman JM, Kent JM, Sullivan GM, Coplan JD: Neuroana tomical hypothesis of panic disorder, revised. Am J Psychia try. 2000;157:493-505
2. Sakai Y, Kumano H, Nishikawa M, Sakano Y, Kaiya H, Imabayashi E, Ohnishi T, Matsuda H, Yasuda A, Sato A, Dik sic M, Kuboki T: Cerebral glucose metabolism associ ated with a fear network in panic disorder. Neuroreport. 2005;16:927-931


**NR1-018**

**PSYCHIATRIC COMORBIDITY IN PANIC DISORDER - COMPARISON BETWEEN DEPRESSION AND ANXIETY DISORDER**


*Kim Eun Ji, Jongno-gu Pyung-dong Kangbuk Sanmsung hospital, seoulSouth Korea 110746, Na-Hyun Kim, M.D., Hong-min Choi, M.D., Han-Yong, Chung, M.D., Se-Won, Lim, M.D., Kang-Seob Oh, M.D., Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize that female gender is risk factor for depressive disorder comorbidity in panic disorder.

**SUMMARY:**

Objectives: Depressive and other anxiety disorders are commonly found to coexist with panic disorders. We investigated psychiatric comorbidity in panic disorder patient of South Korea, and compared panic disorder patients with comorbid depressive disorder and with comorbid anxiety disorder to document difference in clinical and symptom features. Methods: Three hundred-six patients participated in the study. All the patients were evaluated with clinical instrument for the assessment the presence of comorbid other psychiaric disorders and various clinical features; Korean version of Mini International Neuropsychiatric Interview plus, Questionnaires (Beck Anxiety Inventory, Beck Depression Inventory, Anxiety Sensitivity Index and State-Trait Anxiety Inventory) and clinical rating scale (Hamilton Anxiety Scale, Hamilton Depression Scale and Global Assessment of Functional score). Chi-Square test was used to determine the difference between depressive and anxiety disorder comorbidity in panic patients. Results: Forty percent of panic patients were found to at least one comorbid psychiatric diagnosis. There were no differences among the groups divided by number of comorbidity in sex, agoraphobia comorbidity, duration of panic disorder, except onset age of panic disorder(X2=17.289, df=8, p=0.027). Statistically significant differences were found between depressive disorder comorbidity group and anxiety disorder comorbidity group in gender (X2=5.762, df=1, p=0.016). We also found that female patients group in panic disorder group were more likely to have depressive disorder comorbidity (Odds Ratio=3.437, 95% Confidence Interval=1.230~9.602) than male patients group in panic disorder. Conclusions and Discussion: The results of our study are in keeping with previous data from other parts of the world. Our finding suggest that female gender is risk factor for depressive disorder comorbidity in panic disorder.

**REFERENCES:**


1. Apfeldorf WJ, Spielman LA, Cloitre M, Heckelman L, Shear MK: Morbidity of comorbid psychiatric diagnoses in the clinical presentation of panic disorder. Depress Anxiety 2000;12(2):78-84
2. Simon NM, Fischmann D: The implications of medical and psychiatric comorbidity with panic disorder. J Clin Psychiatry 2005;66 Suppl 4:8-15


**NR1-019**

## FACTOR STRUCTURE OF KOREAN VERSION OF STATE-TRAIT ANXIETY INVENTORY IN PATIENTS WITH ANXIETY DISORDER


*Kounseok Lee, M.D. Hanyang Univ. Guri Hospital Gyomun 1-dong, Guri-si, Gyeonggi-do [471-701] Korea, Guri-siSouth Korea 471701, Daeho Kim, M.D., Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to know factorial validity of STAI-form X for Korean patients with anxiety disorder.

**SUMMARY:**


Objective : This study sought the factorial validity of the Korean version of the State-Trait Inventory (STAI) Form X for clinical population. For this reason, authors investigated the factor structure and internal consistency of STAI from patients with anxiety disorder.

Method : By consecutive sampling, responses from STAI and Beck Depression Inventory were obtained from a final sample of 205 patients at psychiatric unit of university hospital. The initial factor structures of the State and the Trait Scales were separately analyzed using first exploratory factor analysis. Result : Three factor components 'State anxiety present', 'State anxiety absent' and 'Self-confidence' were extracted from State scale explaining 59% of total variance. Trait Scale extracted four factor solution, 'Trait anxiety and depression present', 'Trait anxiety and depression absent', 'Anxiety proneness' and 'Stability' (59% of total variance). Internal consistency of STAI and factors were satisfactory. All correlations among depressive symptoms and four factors were significant (P<.001). The goodness-of-fit indices also supported the factor solution from exploratory factor analysis. Conclusion : This study supported the factorial validity of STAI-form X for Korean patients with anxiety disorder. However, cautions should be made on our finding that this anxiety scale also measures depressive symptoms.


**REFERENCES:**


1. Spielberg CD, Gorsuch RL, Lushene RE: Manual for the State-Trait Anxiety Inventory, California, Consulting Psychologist Press, 1970.
2. Feldman LA: Distinguishing depression and anxiety in self-report : evidence from confirmatory factor analysis on non-clinical and clinical samples. J Consult Clin Psychol 1993; 61:631-638.


**NR1-020**

## ANXIETY LEVEL AMONGST MEDICAL STUDENTS


*Rishi Gautam, M.B.B.S B-157, 1st Floor East Of Kailash New Delhi, India, 110065, Kunal Bhatia M.B.B.S., Ila Jain M.B.B.S*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the causative factors for high anxiety levels amongst medical students and suggest measures to help them cope with the stress.

**SUMMARY:**


Introduction: Medical students represent a highly educated population under significant pressures. Their academic responsibilities are a major cause of stress and anxiety amongst them. Objectives: 1.To study the levels of anxiety amongst Medical Students 2.To compare these levels with different variables and causative factors. Materials and Methods: Cross Sectional study in a medical college using a standard anxiety questionnaire. 310 medical students of all the batches currently studying in the college were able to participate in the study. Results: Out of the 310 medical students who participated in the study, 150(48.4%) were found to have high anxiety levels. The prevalence of abnormally high anxiety levels was maximum in students belonging to the 3rd (66.1%), 5th (47%), 9th (49.3%) semesters. Anxiety levels were significantly higher amongst female students (61.3%) as compared to male students (43.2%) of who were having high anxiety levels($p<0.05$). Students living in the hostel had higher anxiety levels (56.1%) than students living at home(38.9%). 66.7% students cited Examinations as most important cause of high anxiety amongst them. No significant relationship was found between anxiety levels and their medium of schooling, or age. Conclusion: The findings point towards very high prevalence of anxiety amongst

medical students, with female students being more prone. Also, examinations instill enormous amounts of stress and anxiety which is clearly evident from very high anxiety levels amongst the students who had their examinations coming up (students belonging to the 3rd, 5th and 9th semesters).We would suggest a comprehensive evaluation of the students from a professional counsellor, as helping them tackle their anxiety might help them improve their academic performance.

**REFERENCES:**


1. Pratibha M. Vaidya et al, The Indian Journal of Occupational Therapy : Vol. XXXIX : No. 1 (April 2007 - July 2007)
2. Journal of Clinical Psychology: In Session Volume 60, Issue 8 Pages 853 - 865


**NR1-021**

**ARE SOME PANIC ATTACKS REALLY TEMPORAL LOBE SEIZURES (SIMPLE PARTIAL SEIZURES)?**


*Umesh Vyas, M.D. East Tennessee State University Department of Psychiatry and Behavioral Sciences, PO Box70567 Johnson City, TN, 37614, Norman Moore, M.D., Hetal Brahmbhatt, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize close association between Panic Attacks and Temporal Lobe Seizures (Simple Partial Seizures), they will also understand need for further investigation to know association and search for other treatment options.

**SUMMARY:**


Introduction and Hypothesis:

Anxiety disorders are among the most prevalent psychiatric disorder in general population. They are associated with marked impairment in physical and psychosocial function, as well as in quality of life. Panic Disorder is a syndrome characterized by recurrent unexpected panic attacks about which there is persistent concern. Life time prevalence of Panic Disorder is 1.5 to 3.5%.

Panic Attacks often have same clinical signs as Simple Partial Seizures (SPS) with psychic content. Four clinical signs suddenness, automatic nature, great intensity and strangeness are suggestive of SPS. Reports of concomitant Panic Disorder and Epilepsy are highly suggestive of an intimate relationship between them. EEG abnormalities have been infrequently reported in patients with Panic Disorder, although controlled studies are lacking. 20 to 40% of clinically proven Complex Partial Seizure patients have normal routine clinical EEG. Levetiracetam an Anti-Epileptic Drug (AED) is effective in Panic Disorder. SSRI's are currently the first-line agents for virtually all Anxiety Disorders; they are ineffective in approximately 40 to 50% of patients. Benzodiazepines are effective, are also anticonvulsants. Their long-term use may lead to tolerance, dependence and withdrawal. Method:Pubmed.gov was searched by using pre-determined key word: Panic Disorder, EEG, SPS.

Results: No definite data available therefore further investigation is warranted to determine association between them and in what circumstances AEDs should be used. Thus, randomized control trial with large number, head-to-head comparison with first-line treatment is desirable to establish relationship between them and use of AED.Conclusion:Author believes that some Panic Disorders are SPS, and those Panic Disorders which do not respond to standard treatment may benefit from AED.Author does not have any thing to disclose for this poster presentation.


**REFERENCES:**


1. Journal Article: S. Alvarez-Silva et al. Panic and Epilepsy, Journal of Anxiety Disorders 20 (2006) 353-362.
2. Journal Article: Laszlo A. Papp, M.D., Safety and Efficacy of Levetiracetam for Patients With Panic Disorder: Results of an Open-Label, Fixed-3. 3 3 Flexible Dose Study, J. Clin Psy chiatry 67:10, October 2006, 1573-1576.


**NR1-022**

**NON-PHARMACOLOGICAL THERAPEUTIC OPTIONS IN TREATMENT OF INSOMNIA**


*Umesh Vyas, M.D., East Tennessee State University Department of Psychiatry and Behavioral Sciences PO Box 70567 Johnson City, TN, 37614, Hetal Brahmbhatt, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to know different non-pharmacological therapeutic options available for use in their practice especially for chronic insomnia.

**SUMMARY:**


Introduction and Hypothesis:Insomnia is the most frequent sleep disorder. It is a symptom, and is defined as "chronic inability to obtain the amount of sleep needed for optimal functioning and well-being". Prevalence estimates indicate one third of adult population reports insomnia. Prevalence is higher among women, elders and patients with medical or psychiatric disorders. Insomnia is said to be persistent if it lasts from one to six months, and chronic if it lasts more than six months. Untreated insomnia is associated with significant morbidity and mortality.Thorough assessment of insomnia is essential in choosing the most appropriate strategy for management. If a cause of insomnia is identified, initial treatment should be directed at specific factor. Since insomnia is a chronic condition, long-term and safe treatments are warranted.

Non-pharmacologic options have been available for decades, but lack of physician awareness and training, difficulty in obtaining reimbursements and questions about efficacy have limited their use. These therapies offer the greatest potential for long term gains in preventing recurrence of insomnia.Pharmacological options are most useful for acute insomnia. They are commonly used but long term use of hypnotics can become complicated by drug tolerance, dependence or rebound insomnia.Method: Pubmed.gov was searched by using pre-determined key word: Insomnia.Results:Non-pharmacological interventions produce reliable and durable clinical benefits in the treatment of primary insomnia, insomnia associated with medical or psychiatric conditions and insomnia in elders. Additional research is still needed to develop and validate treatment algorithms that would optimize outcomes and reduce morbidity.Conclusion: Non-pharmacological therapies should always be a component in treatment of Insomnia.

Author does not have any thing to disclose for this poster presentation.


**REFERENCES:**


1. Journal Article: Charles M Morin, Ph.D., Nonpharmacologi cal Interventions for Insomnia: A Meta-Analysis of Treatment

Efficacy. Am J Psychiatry 1994; 151:1172-1180.
2. Journal Article: Timothy Morgenthaler, MD et al., Practice Parameters for the Psychological and Behavioral Treatment of Insomnia: An Update: An American Academy of Sleep Medi cine Report. Practice Parameter: SLEEP, Vol 29, No. 11; 2006, 1415-1419.

**NR1-023**

## THE PREVALENCE OF ADULT ATTENTION DEFICIT/HYPERACTIVITY DISORDER IN THE CANADIAN CORRECTIONAL FACILITY AND IN THE CANADIAN MENTAL HEALTH FACILITY.

*Mehrnaz Boroujerdi, M.D. 906-101 Cumberland Ave South, Saskatoon, SK Canada S7N 1L5, Declan Quinn M.B., F.R.C.P., Mansfield Mela M.B.B.S., F.R.C.P., Lilian Thorpe M.D., Ph.D, F.R.C.P., Twyla Boda, R.N.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1)To determine the prevalence of Adult ADHD symptoms in a Canadian Forensic Psychiatry prison setting through self reports and structured interview; 2) To think if treatment alters recidivism, as the implications of ADHD in the prison system is unclear; 3)To recognize comorbid psychiatric conditions in a Canadian Forensic Psychiatry setting;including, mood disorder, learning disabilities/ problems,substance use disorder.

**SUMMARY:**

Objective: To evaluate the prevalence of self reported Adult Attention Deficit Hyperactivity Disorder in a Canadian Psychiatric Forensic Correctional setting.Methods: This cross-sectional study was done at the Regional Psychiatric Center in Saskatoon, SK Canada. The Connors ADHD Adult Rating Scale, the Wender Utah Rating Scale, the Beck Depression Inventory and a demographic and social check list were given to 60 adult male offenders age 18-65.Results: Participants were adult males, with a minimum age of 19, maximum 61years of age. The largest number of participants came from Saskatchewan and Alberta, although most areas of Canada were also represented. Caucasian ethnicity was the most common (43%) followed closely by aboriginal ethnicity (42%). Learning disabilities were common, as more than half of participants either thought they had or were told they had learning disabilities. Grade 9-12 education was most common (20%) but 5% had some or complete post graduate training. Offenders had significantly ($p<0.005$) higher scores than the norm on the CAARS-DSM-IV Inattentive Symptoms score and the CAARS-DSM-IV Hyperactive-Impulsive Symptoms score. The WURS results were even more strongly positive for ADHD: 85% had scores above 46, suggesting a very high possibility of adult ADHD. Finally, depressive symptoms were very common, with above 50% of offenders scoring above the 12-13 point cutoff on the Beck Depression Inventory. Conclusion: Symptoms of ADHD, as well as likely diagnoses of ADHD are very common in this correctional facility, a regional psychiatric centre, but fewer are actually being treated for this. The high prevalence of depressive symptoms was unexpected, and a cause for concern.

**REFERENCES:**

1. Faraone SV, Biederman J, Spencer T, Wilens T, Seidman LJ, Mick E, Doyle AE: Attention-deficit/hyperactivity disorder in adults: An overview. Biol Psychiatry 2000; 48:9-20
2. Kessler RC, Adler L, Ames M, Barkley RA, Birnbaum H, Greenberg P, Johnston JA, Spencer T, Ustun TB: The preva lence and effects of adult attention deficit/hyperactivity disor der on work performance in a nationally representative sample of workers. J Occup Environ Med 2005; 47:565-572

**NR1-024**

## CLINICAL FEATURES OF MEXICAN ADULTS WITH ATTENTION-DEFICIT DISORDER.

*Mirna Trancoso, M.D. Instituto Nacional de Pediatria, Mexico-Mexico 03100, Diana Molina, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to to recognize some of the common clinical characteristics of a sample of adults with Clinical diagnosis of ADHD, plus support of rating scales.

**SUMMARY:**

Introduction. Objective: To describe the clinical characteristics of Adult ADHD in a Mexican Sample.
Methods: This is a clinical, prospective study in a sample of 78 ADHD adults, evaluated at the ADHD Clinic. All were evaluated with clinical structured interview, Wender Utah Rating Scale (WURS), for past ADHD symptoms and Weiss and Murray Rating Scale(WMRS) for childhood and current impairments.Results: WMRS positive items in 50% of patients or more were: for past history; complains about being a difficult child 51.3%, difficulties in school performance 50% and failing grades 50%. In current skills; difficulties as father or husband 69%, hyperactivity and impulsivity 67%, rage explosions 65.4%, substance abuse 60%, Mean jobs 2.5 + 1.9 and automobile accidents 1.6 + 3.1Mean for WURS ítems were; emotional troubles 16.5 + 5.9, Impulsivity and conduct 11.1 + 5.4, Impulsivity- hyperactivity 10.8 + 4.1 Total ADHD score 47.5 + 12.6 of a 32 cut-off score. Gender analysis of 55% men, 44% female, showed differences in WMRS for childhood hyperactivity-impulsivity ($p=.02$),complains as difficult child ($p=.01$) and history of being expelled at school ($p=.04$) more frequent in men. WURS scores showed differences in childhood for impulsivity-conduct disorders higher for men ( $p= .002$) and emotional difficulties higher in women ($p=.02$)Conclusions: WURS scores were higher in ADHD adults than expected for healthy adults.
More frequent WMRS positive items were past history of complains as difficult child, difficulties in school performance and failing grades. For current skills; difficulties as father or husband, hyperactivity, impulsivity, rage explosions, substance abuse.
Gender differences were founded in past history; higher in men for externalized symptoms and emotional difficulties more frequent in women. No differences were found in current symptoms

**REFERENCES:**

1.Weiss, Margaret M.D., Ph.D.; Hechtman, Lily M.D.; Weiss, Gabrielle M.D. ADHD in Parents. J Am Acad Child Adolesc Psychiatry. 2002. 39: 1059-1061.
2.Romero Teresita MD, Lara-Muñoz Carmen MD, Estudio fa miliar del trastorno por déficit de atención-hiperactividad. 2002. 25. No. 3,41-46.

**NR1-025**

## HOMER1A DIFFERENTIAL TOPOGRAPHIC DISTRIBUTION BY TYPICAL AND ATYPICAL ANTIPSYCHOTICS IN STRIATUM: ROLE OF DOPAMINE D2 RECEPTORS ANTAGONISM

*Carmine Tomasetti, Laboratory of Molecular Psychiatry and Psychopharmacotherapy, Department of Neuroscience, Section of Psychiatry, University 5. School of Medicine "Federico II", Naples, Italy 80131, Felice Iasevoli , M.D., Carmela Dell'Aversano, M.D., Andrea de Bartolomeis, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to identify genes putatively involved in typical and atypical antipsychotics mechanism of action

**SUMMARY:**

Homer1a, an inducible glutamatergic gene that is involved in synaptic plasticity, has been implicated in the pathogenesis of several neuropsychiatric disorders, such as schizophrenia. In previous works, we have demonstrated that Homer1a is induced by typical and atypical antipsychotics possibly according to their impact on dopaminergic neurotransmission. Here we tested by in situ hybridization, in two experimental paradigms, whether antipsychotics with different dopaminergic profile might induce a differential topographic expression of the gene and whether the pattern of Homer1a expression might be specifically linked to dopamine D2 receptors antagonism in striatum. First paradigm: rats were treated i.p. with typical (haloperidol, HAL 0.8mg/kg) and atypical (risperidone, RISP 3mg/kg; olanzapine OLA, 2.5mg/kg; sulpiride, SULP 50mg/kg) antipsychotics and killed 90 min after injection. Second paradigm: rats were treated i.p. with selective antagonists at each dopamine receptor subtype (D1, D2, D3, D4) at behaviorally active doses and sacrificed after 90 min. In the first paradigm, HAL-induced expression of Homer1a followed a dorsolateral-to-ventromedial distribution, with higher expression in motor-related regions (lateral striatum). Homer1a expression by RISP, OLA and SULP resembled this gradient but with an attenuated signal intensity in lateral striatum as compared to HAL and a propensity of induction of the gene in behavior-related regions (ventral striatum). In the second paradigm, Homer1a was significantly induced by the selective D2 receptor antagonist in the striatum with a dorsolateral-to-ventromedial signal distribution.The distribution of Homer1a expression may be related to dopaminergic profile of antipsychotics and may depend on the differential D2 antagonist activity of typical vs atypical antipsychotics in striatum. Thus, Homer1a topographic distribution profiling may help to discriminate typical from atypical antipsychotics in preclinical assessments.

**REFERENCES:**

1. de Bartolomeis A, Iasevoli F: The Homer family and the signal transduction system at glutamatergic postsynaptic density: potential role in behavior and pharmacotherapy Psychopharmacol Bull. 2003 Summer;37(3):51-83.
2. Tomasetti C, Dell'Aversano C, Iasevoli F, de Bartolomeis A: Homer splice variants modulation within cortico-subcortical regions by dopamine D(2) antagonists, a partial agonist, and an indirect agonist: Implication for glutamatergic postsynaptic density in antipsychotics action. Neuroscience 2007 150 (1):144-158

**NR1-026**

## EVIDENCE FOR AN EPIGENETIC MECHANISM UNDERLYING THE ANTIDEPRESSANT EFFECTS OF KETAMINE

*Christine Curcio, B.S. 13520 Hoover Avenue Apt. 2P, Kew Gardens NY 11435, Lauren Baldinger, B.S., Brian H. Hallas, Ph.D., Joerg R. Leheste, Ph.D., German Torres, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand the effects of ketamine on histone acetylation in the rat brain and be familiar with the proposed mechanism for the antidepressant effects of ketamine.

**SUMMARY:**

Ketamine is a glutamate receptor (N-methyl-D-aspartate) antagonist, often used as a dissociative anesthetic. Currently, there is growing interest in glutamate antagonists as therapeutic agents for psychiatric disorders, especially treatment-resistant depression. However, the exact molecular mechanisms for their therapeutic effects are unknown. One possibility is that epigenetic modification of histones and chromatin structure may be a mechanism by which ketamine exerts a rapid antidepressant effect. To test this possibility, we injected (IP) adult rats with a subanesthetic dose of ketamine (0.5 mg/kg or 30 mg/kg) either acutely (for 1 day) or chronically (for 15 consecutive days). To measure covalent modifications of chromatin in brain sites associated with affective disorders, Western blots using specific acetyl-Histone H3 antibodies were performed on the hippocampus and prefrontal cortex. Acute injections of ketamine induced an increase in the acetylation of histone H3 in both the hippocampus and prefrontal cortex, particularly at the high dose (30 mg/kg). This histone acetylation process was short-lived, as a decrease in acetylation was observed three hours post-injection. Chronic administration of 30 mg/kg ketamine had no effect on histone acetylation in either the hippocampus or prefrontal cortex. However, a low chronic dose of ketamine (0.5 mg/kg) downregulated histone acetylation in these brain areas. These results suggest that ketamine administration causes a swift and transient change in histone acetylation, which is consistent with the rapid onset of antidepressant effect. Furthermore, we show that the effect of ketamine on acetylation patterns is dose-dependent, suggesting that epigenetic modifications by glutamate antagonists are variable in their ability to induce gene expression in the brain.

**REFERENCES:**

1. Tsankova NM, Berton O, Renthal W, Kumar A, Neve RL, Nestler EJ: Sustained hippocampal chromatin regulation in a mouse model of depression and antidepressant action. Nat Neurosci 2006; 9:519-525.
2. Zarate CA Jr, Singh JB, Carlson PJ, Brutsche NE, Ameli R, Luckenbaugh DA, Charney DS, Manji HK: A randomized trial of an N-methyl-D-aspartate antagonist in treatment-resistant major depression. Arch Gen Psychiatry 2006; 63:856-864.

**NR1-027**

## INCREASED CHOLINE-CONTAINING COMPOUNDS IN THE ORBITOFRONTAL CORTEX AND HIPPOCAMPUS IN EUTHYMIC PATIENTS WITH BIPOLAR DISORDER

*Rhandi Senaratne, B.S.C. Department of Psychiatry and Behavioural Neuroscienes, Faculty of Health Sciences, McMaster University, F130A - 301 James Street South, Hamilton, Ontario, L8P 3B6, Canada, Andrea Milne, Ph.D. candidate, Glenda M. McQueen, M.D., Ph.D., Geoffrey B.C. Hall, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the importance of utilizing proton magnetic spectroscopy to assess neuronal abnormalities in psychiatric disorders In addition, participants will be able to identify the metabolic alterations and the brain regions that are implicated in the path physiology bipolar affective disorder.

**SUMMARY:**

ABSTRACT Background: The neuronal mechanisms underlying the pathophysiology of bipolar affective disorder (BAD) have not been fully characterized. Proton Magnetic Resonance Spectroscopy (H-MRS) permits in vivo analysis of brain metabolites and provides information about neuronal function. H-MRS detects n-acetyl-aspartate, choline, glutamate, creatine and myo-inositol. Abnormalities of these metabolites have been previously reported in patients with BAD (1). However, due to the limited number of H-MRS studies available, variability of brain regions studied and the heterogeneity of BAD, previous spectroscopic findings have been inconsistent. The aim of this study was to assess metabolite levels in the hippocampus and the orbitofrontal cortex in a homogenous population of patients with BAD.

Methods: Using a GE Signa, 3-Tesla scanner we performed H-MRS to examine metabolite levels in the hippocampus, orbitofrontal cortex and occipital cortex. Study population consisted of 12 euthymic BAD subjects and 12 age and gender-matched healthy control subjects.

Results: Choline-containing compounds were significantly increased in the hippocampus and the orbitofrontal cortex in BAD patients relative to control subjects. Elevations of glycerphosphocholine (GPC) and glycerophosphocholine+phosphocholine (GPC+PCh) were seen in the orbitofrontal cortex of BAD subjects. In addition, GPC+PCh/Creatine levels were increased in the hippocampus of BAD subjects.

Conclusions: This is the first study to report increased choline-containing compounds in the hippocampus and orbitofrontal cortex of BAD subjects. Choline is a marker of membrane phospholipid metabolism (2), therefore our results of elevated choline in BAD subjects may indicate increased membrane breakdown in the brain regions examined. Our results suggest abnormal neuronal loss within the hippocampus and orbitofrontal cortex, which further provides evidence that these brain regions are involved in the pathophysiology of

**REFERENCES:**

1. Yildiz-Yesioglu A & Ankerst DP: Neurochemical alterations of the brain in bipolar disorder and their implications for pathophysiology: a systematic review of the in vivo proton magnetic resonance spectroscopy findings. Prog Neuropsychopharmacol Biol Psychiatry. 2006; 30: 969-995.
2. Malhi GS, Valenzuela M, Wen W, Sachdev P: Magnetic resonance spectroscopy and its applications in psychiatry. Aust N Z J Psychiatry. 2002; 36(1): 31-43.

**NR1-028**

## THE SENSE OF REALITY DURING AUDITORY VERBAL HALLUCINATIONS

*Tuukka T Raij, M.D. Ehrensvärdintie 21 a 2 00150 HelsinkiFinland Europe, Minna Valkonen-Korhonen, M.D., Ph.D; Matti Holi, M.D., Ph.D; Sebastian Therman, M.Sc., Johannes Lehtonen, M.D., Ph.D; Riitta Hari, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to better understand brain mechanisms of auditory verbal hallucinations and the related distortion of the sense of reality.

**SUMMARY:**

Healthy perception of the external world is based on coherence of percepts. The coherence is distorted during hallucinations, when the percepts do not match with the reality observed by others. Here the distortion of subjective reality is the key of psychosis; hallucinations are psychotic symptoms if they are experienced as real percepts rather than perceptual disturbances. Neuronal correlates of the subjective reality of hallucinations (SRH), here of auditory verbal hallucinations (AVHs), have however, remained poorly understood. To better understand the SRH, we recruited 11 subjects (five females, mean age 35 years) who suffered from a psychotic disorder (most frequently schizophrenia in remission) and experienced intermittent AVHs that they were able to evaluate on visual analogue scales. The SRH varied from 9 to 86 on a 100-point scale, and it correlated at group level with the hallucination-related strengths of brain activation in the bilateral inferior frontal gyri (IFG, corresponding to Broca's region and its right homologue; $r = 0.89$, $p < 0.001$ and $r = 0.81$, $p < 0.001$, respectively). Covariation between signals from IFG and brain regions involved in execution and self-monitoring decreased during hallucinations. IFG includes a premotor speech area that is activated during inner speech (thinking in words) and verbal imagery, as well as during comprehension of others' speech. The motor theory of speech perception assumes the comprehension of others' speech to rely on subliminal matching to the listerner's own articulatory gestures which thereby involves activation of the IFG. The experienced difference between perceived and self-produced verbal material may then depend on other brain regions involved in execution and self-monitoring. We suggest that AVHs are experienced as real when the IFGs are activated during disruption of these neuronal networks that normally allow attribution of the source of the experience to self.

**REFERENCES:**

1. Woodruff PW: Auditory hallucinations: Insights and questions from neuroimaging. Cognit Neuropsychiatry 2004; 9:73-91 Atkinson JR: The perceptual characteristics of voice-hallucinations in deaf people: insights into the nature of subvocal thought and sensory feedback loops. Schizophr Bull 2006; 32:701–708

**NR1-029**

**PERFORMANCE OF SRQ (SELF-REPORTING QUESTIONNAIRE) AS PSYCHIATRIC SCREENING QUESTIONNAIRE**

*Daniel Gonçalves, M.D. Rua 28 de outubro, 662, Santa Cruz do Sul Brazil 96815710, Flavio Pereira Kapczinski, Ph.D., Airton Tetelbon Stein, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to use the SRQ-20 (Self-reporting Questionnaire-20 items) at clinical and research settings.

**SUMMARY:**

ntroduction: The SRQ-20 (Self-Reporting Questionnaire-20 items) is a psychiatric screening tool for mood, anxiety and somatoform disorders (MASD). The instrument was validated as a screening tool in the beginning of 1980th . The aim of this study is explore the performance of the Brazilian Portuguese (BrP) version of SRQ-20 as psychiatric screening tool in comparison with a current psychiatric diagnostic manual *DSM-IV-TR* (Diagnostic and Statiscal Manual of mental Disorders – 4th version reviewed ). Methods: The study was conducted in the South of Brazil. All participants answered the SRQ-20 and then they were interviewed by a psychiatrist using SCID-IV-TR (Structured Clinical Interview for DSM-IV-TR). Results: The sample was composed of 485 subjects (54.8% females; mean age of 40.04). Optimum cutoff value for SRQ-20 was 7/8 positive answers, with sensitivity of 86.33% and specificity of 89.31%. The discriminant power for MASD screening of SRQ-20 was 0.9. The alpha Cronbach´s coefficient was 0.86. Conclusions: we obtained good psychometric features for the SRQ-20 BrP version in terms of internal consistency and discriminant power for MASD screening. The sensitivity and specificity of SRQ-20 for MASD screening are higher than other available screening questionnaires. Therefore it can be an useful tool at clinical and research settings.

**REFERENCES:**

1. WHO (World Health Organization): A user's guide to the Self Reporting Questionnaire. Geneva, WHO, 1993.
2. Harding TW, De Arango MV, Baltazar J, Climent CE, Ibrahim HHA, Ladrido-Ignacio L: Mental disorders in primary health care: a study of their frequency and diagnosis in four developing countries. Psychol Med 1980; 10:231-41.

**NR1-030**

**VALIDATION AND NORMATIVE DATA FOR THE BRAZILIAN PORTUGUESE VERSION OF TEMPERAMENT AND CHARACTER INVENTORY – REVISED (TCI-R**

*Daniel Gonçalves, M.D. Rua 28 de outubro, 662, Santa Cruz do SulBrazil 96815710, Claude Robert Cloninger, Ph.D., Przybeck, Thomas, Ms.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to use the TCI-R Temperament and Character Inventory-Revised)as a personality assessment tool at clinical and research settings. The participants will be able to understand the TCI-R relationship with age, gender, depression symptoms, anxiety symptoms and life satisfaction. As second objective learning, the participant should be able to understand the validation methodology of psychiatry questionnaires.

**SUMMARY:**

Introduction: TCI-R (Temperament and Character Inventory-Revised) has four temperament factors (HA=harm avoidance, NS=novelty seeking, RD=reward dependence and PS=persistence) and three character factors (SD= self-directedness, CO=cooperativeness and ST=self-transcendence). This study aims to validate the Brazilian Portuguese (BrP) version of the TCI-R and explore the correlations between TCI-R scores and age, gender, Beck Depression Inventory (BDI), Beck Anxiety Inventory (BAI) and Satisfaction With Life Scale (SWLS). Methods: TCI-R was translated from English to Portuguese, back-translated to English, reviewed of back-translation by Dr Cloninger and his staff, and, after suggested modifications were made, the final version of TCI-R was applied to 311 subjects recruited from two cities in the South of Brazil. Results: CO and ST demonstrated positive correlation with age. Females showed higher scores in HA, RD and CO than males, but lower scores in PS. The Cronbach alpha coefficients for all dimensions were above 0.8, except for NS (0.73). We identified four factors in the principal component analysis extraction for temperament and three factors for character, as theoretically expected. BDI showed a moderate positive correlation with HA and an inverse moderate correlation with SD, PS and CO. BAI showed a positive correlation with HA and an inverse moderate correlation with SD and CO. SWLS showed a moderate inverse correlation with HA and positive moderate correlations with SD and CO. Discussion: we obtained good psychometric features for the BrP version of TCI-R. This study confirms that higher SD and CO scores are correlated with healthier personality, while the opposite occurs for HA higher scores. Females showed higher HA scores as well as higher prevalence of depression and anxiety. CO and ST increases with age, which means that these factors are correlated with the development of a mature character.

**REFERENCES:**

1. Cloninger CR: Feeling Good: The Science of Well-Being. New York, Oxford University Press, 2004.
2. Cloninger CR, Praybeck T, Svrakic DM, Wetzel R: The Tem perament and Character Inventory: A Guide to its Develop ment and Use. St Louis, MO, Center for Psychobiology of Personality at Washington University, 1994.

**NR1-031**

**PSYCHOMETRIC ANALYSIS OF THE KOREAN VERSION OF THE DISGUST SCALE–REVISED (DS-R)**

*Jee In Kang, Yonsei University College of Medicine,134 Sinchon-dong, Seodaemun-gu, Seoul, South Korea 120-752, Jee In Kang, M.D., Se Joo Kim, M.D., Ph.D., Hyong Jin Cho M.D., Ph.D., Hyung Yoon Chang, M.D. , Kyung-un Chung, M.D. , Su Young Lee, M.D., Eun Lee, M.D., Ph.D., Suk Kyoon An, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the concept of disgust emotion and to get the information of its measuring tool and cultural difference of disgust.

**SUMMARY:**

Objective:Disgust is a discrete emotion that involves feelings of revulsion and withdrawal behaviors from dangerous/infectious situations. The Disgust Scale-Revised(DS-R) measures responses to variable situations potentially disgust provoking and consists of 3 subscales of Core, Animal Reminder and Contamination-Based Disgust. The aim of this study was to examine psychometric properties of the DS-R in Korean population. Methods:A sample of 273 healthy volunteers completed self-questionnaires containing the 27-item DS-R, Temperament and Character Inventory(TCI) and State-Trait Anxiety Inventory(STAI). All subjects were also asked to rate how they perceived each affective words for 11 happy, 11 fearful and 11 disgust words selected from Korean Affective Word List, using a 7-point Likert scale. Principal component analysis with varimax rotation was conducted. Construct validity was assessed using Pearson correlation analysis for anxiety levels from TCI and STAI. In addition, correlations between the DS-R scores and rating scores for affective words were calculated. Results:The Cronbach's alpha for 3 original subscales of the DS–R ranged from 0.45 to 0.60 in our sample. Principal component analysis identified 7 factors. A scree plot identified 4 factors which accounted for 48% of total variance and it contained 20 items of original 25 items. The new 4 dimensions were described as Sensation-related Core, Death-related Animal Reminder, Body Product/Contamination-related Core, and Direct Contamination-Based Disgust. Cronbach's coefficients were 0.80, 0.64, 0.57 and 0.40, respectively. The DS-R had positive correlations with Harm Avoidance of TCI and STAI. In addition, subjects with higher DS-R score rated the Disgust words as higher disgust scores. There were no correlations between disgust scores and scores of other affective words. Conclusion:As a whole, the DS-R was a reliable and valid tool to measure disgust in Korean population. Cultural differences were discussed.

**REFERENCES:**


1. Haidt, J., McCauley, C., & Rozin, P. (1994) . Individual differences in sensitivity to disgust: A scale sampling seven domains of disgust elicitors. Personality and Individual Dif ferences, 16, 701-713.
2. Rozin, P., Haidt, J., McCauley, C., Dunlop, L., & Ashmore, M . (1999). Individual differences in disgust sensitivity: Com parisons and evaluations of paper-and-pencil versus behav ioral measures. Journal of Research in Personality, 33, 330-351.


**NR1-033**

## THE DIFFERENTIAL DIAGNOSIS OF SCHIZOPHRENIA AND BIPOLAR DISORDER IN BLACK AND WHITE PATIENTS


*Sherif Abdelmessih, M.A. 59 Willow Ridge Drive, SmithtownNY 11787, Barry Rosenfeld, Ph.D., Pamela DeRosse, Ph.D., Anil K. Malhotra, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be enable clinicians to better recognize variables that may serve as the basis for bias in the diagnosis of Schizophrenia and Bipolar disorder in Black and White patients.

**SUMMARY:**


Objective: Blacks are diagnosed with Schizophrenia more frequently and Bipolar disorder less frequently than Whites in clinical practice but not in research settings. These differential rates of diagnosis may be due to several factors including differences in symptom presentation. This study assessed whether race predicted diagnosis beyond discrepancies in symptoms commonly associated with Schizophrenia.
Method: Clinicians' chart diagnoses and research diagnoses were compared for 206 Black and White psychotic Bipolar and Schizophrenic patients recruited from inpatient and outpatient facilities. Logistic regression methods analyzed whether participant race influenced diagnoses beyond differences in symptom presentation as measured by the SCID, and whether this accounted for discrepancies between rates of diagnosis in clinical and research settings. Symptoms assessed included auditory hallucinations, Schneiderian first-rank symptoms, and negative symptoms. Results: Race significantly improved discrimination between clinical diagnoses of Schizophrenia and Bipolar disorder but not research diagnoses above and beyond differences in symptom presentation. Black patients were significantly more likely to be diagnosed with Schizophrenia by clinicians than White patients. However, neither race nor the symptoms assessed predicted diagnosis discrepancy for the two disorders. Conclusions: These data suggest that race does have an impact on differential diagnosis of Schizophrenia and Bipolar disorder in clinical practice, regardless of the presentation of "classic" symptoms of schizophrenia. Clinicians should be conscious of factors other than symptom type, such as socioeconomic status or race, which may affect their diagnostic decision-making when evaluating Black versus White patients.


**REFERENCES:**


1. Strakowski, S., Flaum, M., Amador, X., & Bracha, H. (1996). Racial differences in the diagnosis of psychosis. Schizophre nia Research, 21, 117-124.
2. Mukherjee, S., Shukla, S., Woodle, J., Rosen, A.M., & Ol arte, S. (1983). Misdiagnosis of schizophrenia in bipolar pa tients: A multiethnic comparison. American Journal of Psy chiatry, 140, 1571-1574.


**NR1-034**

## MENTAL DISORDERS, DISSOCIATION AND CHILDHOOD TRAUMA IN PATIENTS WITH CHRONIC HEADACHE


*Fisun Akdeniz, M.D. Ege Uni. Tip Fak. Psikiyatri Anabilim dali Bornova, Izmir 35100, Deniz Arik M.D., Figen Gokcay M.D., Hadiye Sirin M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand the occurrence of mental disorders and dissociative experiences in patients with chronic headache, and their relation with childhood trauma.

**SUMMARY:**


Objective: The aims of the study were to determine the occurrence of mental disorders and dissociative experiences in patients with chronic headache, and their relation with childhood trauma.Methods: 90 (85 female, 5 male) patients with chronic headache (69 with migraine, 21 with other) were interviewed and completed the Dissociative Experiences Scale (DES), the Somatization Dissociation Questionnaire (SDQ) and the childhood abuse and neglect questionnaire.

The patients with a score over 30 in DES were evaluated with Dissociative Disorders Interview Schedule (DISQ) and the Structured Interview for DSM-IV Dissociative Disorders (SCID-D).Results: The mean age of the group was 40.3±11.5 years. The mean scores for DES, SDQ and DISQ respectively were 14.4±14.4, 30.4±11.5 and 1.9±0.7. 42 (46.7%) patients had diagnoses of a mental disorder. Their DES, SDQ and DISQ scores were higher than the patients without any mental disorder's scores. This group reported childhood trauma more frequently (?2=7.242, p=0.010). There were correlations with presence of mental disorder and emotional and sexual trauma experiences. There were correlations with history of suicide attempts (n=19) and self-destruction (n=16) and experiences of trauma (physical and emotional trauma). One patient had multiple personality disorder, 10 patients had dissociative disorder NOS and 10 patients had conversion disorder.
Conclusion: Mental disorders, dissociative experiences and history of childhood trauma were common among patients with chronic headache.

**REFERENCES:**


1. Yucel B, Ozyalcin S, Sertel O et al. Childhood traumatic events and dissociative experiences in patients with chronic headache and low back pain. Clin J Pain 2002; 18:394-401.
2. Brown RJ, Schrag A, Trimble MR. Dissociation, childhood interpersonal trauma, and family functioning in patients with somatization disorder. Am J Psychiatry 2005; 162: 899-905.


**NR1-035**

## COMORBIDITY AND PREVALENCE OF EATING DISORDERS IN YOUNG ADULT POPULATION AND A VALIDATION OF SCOFF SCREEN


*Suoma E Saarni, M.D. National Public Health Institute, Department for Mental Health and Alcohol Research, Mannerheimintie 166, 00300 Helsinki, Finland, Sini Lähteenmäki B.M., Suoma Saarni M.D., B.A., Terhi Aalto-Setälä M.D.,Ph.D., Jaana Suokas M.D., Jonna Perälä M.D., Samuli Saarni M.D., M.Sc.S, Hillevi Aro M.D.,Ph.D, Jouko Lönnqvist M.D.,Ph.D,, Jaana Suvisaari M.D.,Ph.D,*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to reproduce prevalence estimates of eating disorders at population level. Participant should also know, that SCOFF screen is not suitable for eating disorder screening in general populations.

**SUMMARY:**


Introduction:There are only few population based studies with reliable diagnostics on the prevalence and comorbidity of eating disorders1,2. This is the first study in which the SCOFF is being evaluated among general population.
Aim:To describe the comorbidity and prevalence of eating disorders and validate SCOFF, a five question screen instrument.
Methods:We used a representative population based sample of 1894 young adults aged 18-30 years. Psychiatric disorders were diagnosed according to *DSM-IV-TR* criteria using M-CIDI interview for 12-month prevalence of affective, anxiety and alcohol use disorders, and a using a consensus procedure based on SCID-I interview, case note and register data for lifetime diagnoses of psychotic disorders.
Results:The lifetime and current prevalence of Anorexia Nervosa (AN) was 1.25(95%CI 0.7-2.4) and 0 .41(0.1-1.7), respectively. The corresponding numbers of Bulimia Nervosa (BN) were 1.11 (0.6-2.1) and 0.71(0.3-1.7), for EDNOS 0.97(0.5-1.8) and 0.24(0.1-1.0). Another AXIS-I lifetime diagnosis had 73.2% of AN, 64.4% of BN, and 65.6% of EDNOS cases. The prevalence of major depressive disorder was for AN 16.7(3.9-49.6), BN 47.7(21.0-75.8) and EDNOS 48.4(20.8-77.0), of anxiety disorders 26.7(8.2-59.8), 24.2(7.6-55.3) and 19.9(4.9-54.5), and of alcohol dependence or abuse 8.8(1.2-43.9), 10.0(1.4-46.9) and 10.3(1.4-47.9), and of psychotic disorders in AN 13.8(1.9-56.5). Using the SCOFF screen, the threshold of two positive answers presented the best ability to detect eating disorders, with a sensitivity of 75.0%, a specificity of 87.6%, a positive predictive value (PPV) of 8.3% and a negative predictive value of 99.6%.
Discussion:Due to their a significant psychiatric comorbidity, eating disorders carry more public health importance than could be thought based on their prevalence. Due to its very low PPV, SCOFF can not be seen suitable as a screening instrument of eating disorders in unselected population samples.


**REFERENCES:**


1. Hudson JI, Hiripi E, Pope HG, Kessler RC: The prevalence and Correlates of Eating Disorders in the National Comorbid ity Survey Replication. Biol Psychiatry 2007;61:348-358
2. Hoek HW, van Hoeken D:Review of the prevalence and inci dence of eating disorders. Int J Eat Disord 2003;34:383-39


**NR1-036**

## ASSOCIATION STUDY OF BDNF GENE AND SCHIZOPHRENIA: STRUCTURED ASSOCIATION ANALYSIS IN A CHILEAN POPULATION


*Aida Ruiz, M.D.., Avenida La Paz 1003 Santiago , Chile, Robin Murray, M.D., John Powell, Ph.D., Eduardo Miranda, M.D., Pak Sham, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand the most common study designs for genetic association analysis.

**SUMMARY:**


Introduction: Recent analyses have reported that genetic variants in the BDNF gene, on 11p13, are associated with schizophrenia. This possible association was studied in a Chilean admixed sample. Methods: The study was carried out in a case-control sample composed of 112 cases with DSM-IV schizophrenia, and 240 unaffected control subjects; and a sample of 44 DSM-IV schizophrenic families, recruited in Santiago, Chile. Four BDNF markers, previously associated with schizophrenia, and 10 ancestry-informative markers were genotyped. The data were analysed by means of the UNPHASED program. Single marker and haplotype associations were evaluated using the Pedigree Disequilibrium Test (PDT) and COCAPHASE. Analysis of population stratification, in the case-control sample, was carried out using L-POP software. The structured association analysis was performed with WHAP program. Results: Even though the analysis of population structure detected stratification in the case-control sample, cases and controls were well matched. All markers were in Hardy-Weinberg equilibrium. In both samples, none of the SNPs included in this analysis was found to be associated with illness (P>0.05), and no significant haplotypic asso-

ciation was observed (P>0.05). The structured association analysis did not show confounding effects of population stratification. Conclusion: No evidence was found to support an association between genetic variants in the BDNF gene and schizophrenia in this sample; ethnically different from populations examined in previous reports. Among other explanations, these results might be the consequence of inadequate statistical power.

REFERENCES:
1. Hall D, Dhilla A, Charalambous A, Gogos A, Karayiorgou M: Sequence variants of the brain-derived neurotrophic factor (BDNF) gene are strongly associated with obsessive –com pulsive disorder. Am J Genet 2003; 73:370-376.
2. Shoval G, Weizman A: The possible role of neurotrophins in the pathogenesis and therapy of schizophrenia. Eur Neuropsy chopharmacol 2005; 15:319-329.

**NR1-037**

## COMT GENE AND SCHIZOPHRENIA: ASSOCIATION STUDY IN A STRATIFIED CHILEAN POPULATION

*Aida Ruiz, M.D.., Avenida La Paz 1003 Santiago , Chile Robin Murray, M.D., John Powell, Ph.D., Eduardo Miranda, M.D., Pak Sham, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand genetic association analysis of complex disorders.

**SUMMARY:**

Introduction: Evidence for association between schizophrenia and genetic polymorphisms in the COMT gene, on chromosome 22q11, has been recently described. The aim of this study was to conduct an association analysis between schizophrenia and the COMT gene in a Chilean admixed population. Methods: Forty-four families affected by schizophrenia; and a case-control sample composed of 112 schizophrenic patients, and 240 unaffected control individuals, were collected in Santiago, Chile. Diagnosis was made according to DSM-IV criteria. Three COMT SNPs reported to be associated with schizophrenia, and ten ancestry-informative markers were selected for genotyping. The Pedigree Disequilibrium Test (PDT) and the COCAPHASE program were used to analyse single marker and haplotype associations. A population structure analysis was performed using the L-POP program, to detect hidden population stratification in the case-control sample. The WHAP program was used to carry out the structured association analysis. Results: The analysis of population structure showed evidence for population stratification; however, cases and controls were well matched. In both samples, no deviation from the Hardy-Weinberg equilibrium was found. No single marker achieved a significant allelic association (p>0.05), and tests for haplotype analysis showed no association (p>0.05). Structured association analysis of COMT gene did not detect possible spurious findings in the case-control sample. Conclusion: Association between COMT gene and schizophrenia was not confirmed in this sample. Methodological limitations of genetic association studies could explain these results.

**REFERENCES:**

1. Shifman S, Bronstein M, Sternfeld M, Pissante-Shalom A, Lev-Lehman E, Weizman A, Reznik I, Spivak B, Grisaru N, Karp L, Schiffer R, Kotler M, Strous RD, Swartz-Vanetik M, Knobler HY, Shinar E, Beckmann JS, Risch N, Zak NB, Darvasi A: A highly significant association between a COMT haplotype and schizophrenia. Am J Hum Genet 2002; 71:1296-1302.
2. Williams HJ, Glaser B, Williams NM, Norton N, Zammit S, Macgregor S, Kirov GK, Owen MJ, O'Donovan MC: No as sociation between schizophrenia and polymorphisms in COMT in two large samples. Am J Psychiatry 2005; 162:1736-1738.

**NR1-038**

## ASSOCIATION STUDY BETWEEN TUMORAL NECROSIS FACTOR (TNF) AND NUCLEAR FACTOR OF KAPPA LIGHT POLYPEPTIDE ENHANCER IN B-CELLS INHIBITOR-LIKE 1 (NFKBIL1) POLYMORPHISMS AND OCD

*Ana Hounie, Ph.D. Institute and Department of Psychiatry, School of Medicine, University of São Paulo, Rua Dr. Ovídio Pires de Campos, 785, 05403-010, São Paulo Brazil, Carolina Cappi, M.Sc., Quirino Cordeiro, M.D., Ph.D., Aline Sampaio, M.D., Ivanil Moraes, Psy.D., Luiza Guilherme, Ph.D., Selma Palácios, Ph.D., Maria Conceição Rosário-Campos, Ph.D., Roseli Shavitt, M.D., Ph.D., Jacqueline Siqueira-Roberto, M.D., Silvia Nishioka, Psy.D., Kátia Petribú, Ph.D., Rajen Ramasawni, Ph.D., Homero Vallada, M.D., Ph.D., Eurípedes Constantino Miguel, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to aknowledge that OCD may have an imunological component that is genetically mediated.

**SUMMARY:**

Introduction: Obsessive-compulsive disorder (OCD) is a psychiatric manifestation to which immunological mechanisms have been hypothesized. There are evidences that support immunologic involvement in OCD, such as coexistence of OCD and rheumatic fever (RF), OC symptoms triggered by strep infections (PANDAS) and familial evidence that OCD spectrum disorders aggregate in relatives of RF probands. Tumor necrosis factor alpha (TNF-alpha) is a proinflamatory cytokine involved in RF and several autoimmune diseases. Polymorphisms of the promoter region of the TNF alpha gene have been associated with clinical forms of RF. The nuclear factor of kappa light polypeptide gene enhancer in B-cells inhibitor-like 1(NFKBIL1) is suggested as a putative inhibitor of NFKB, modulating the immunological system. Thus, the aim of the present study was to evaluate polymorphisms of the TNF-alpha and NFKBIL1 genes as risk factors for OCD. Methods: The allelic and genotypic frequencies of -62A/T NFKBIL1 (rs2071592) polymorphism, and -308G/A (rs1800629) and -238G/A (rs361525) TNF-alpha polymorphisms were compared between 111 patients who fulfilled DSM-IV criteria for OCD and 365 healthy subjects. Results: There was a statistically significant association between OCD and the G allele of the TNF-238 when comparing OCD patients with controls: allelic (?2=20.79, p=0.000005, 1d.f.) and genotypic (?2=15.73, p=0.0003, 2d.f.) distributions. There was a trend to a significant difference in the allelic (?2=3.84, p=0.05, 1d.f.) and genotypic (?2=3.77, p=0.15, 2d.f.) distributions of the TNF-308 polymorphism. Regarding the -62A/T NFKBIL1 polymorphism, there were no statistical

differences in the allelic (?2=0.01, p=0.90, 1d.f.) and genotypic (?2=0.55, p=0.75, 2d.f.) distributions between OCD patients and controls. Conclusions and Discussion: TNF-alpha may be a susceptibility locus for OCD in this group. More studies with larger samples and ethnicity stratification are necessary to confirm these findings.

**REFERENCES:**


1.Sallakci N, Akcurin G, Koksoy S, et al. TNF-alpha G-308A polymorphism is associated with rheumatic fever and cor relates with increased TNF-alpha production. J Autoimmun 2005;25(2):150–4.

2. Ramasawmy R, Fae KC, Spina G, Victora GD, Tanaka AC, Palacios SA, Hounie AG, Miguel EC, Oshiro SE, Goldberg AC, Kalil J, Guilherme L. Association of polymorphisms within the promoter region of the tumor necrosis factor-alpha with clinical outcomes of rheumatic fever. Mol Immunol. 2006 Oct 30;


**NR1-039**

## NEUROCOGNITIVE PROFILE IN CHILDREN WITH 22Q11.2 DELETION SYNDROME: RISK FOR SCHIZOPHRENIA


*Andrew Ho, B.S.C. 1001 Queen St. W, Toronto Canada M6J 1H4, Sylvie Langlois, M.D., FRCPC, Anne Bassett, M.D., FRCPC, Donald Young, Ph.D., Ed.D., Eva Chow, M.D., M.P.H., FRCPC*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to gain an improved understanding of the neurocognitive features in children with 22q11.2 deletion syndrome and their potential use as risk indicators for schizophrenia

**SUMMARY:**


22q11.2 deletion syndrome (22q11DS) is a genetic syndrome associated with deletions in chromosome 22. Some of the most commonly reported features of the syndrome are intellectual disability, congenital cardiac defects and psychiatric disorders. Approximately 25% of adults with 22q11DS develop schizophrenia (SZ) (Bassett et al, 2005). A comprehensive study on the neurocognitive profile of 22q11DS adults reported no difference in IQ but greater impairments in motor function, learning and memory, verbal fluency and social cognition in subjects with SZ than those without SZ (Chow et al, 2006). In this study, we compared performance between children with 22q11DS and their non-deleted siblings in the 4 test variables with the greatest effect sizes from this study. Nineteen children with 22q11DS (9 M 10 F; age $\bar{x}$ = 10.1 years, SD = 1.7 years; IQ $\bar{x}$ = 67.4, SD = 13.5), and 10 non-deleted siblings (7 M, 3 F; age $\bar{x}$ = 10.6 years, SD = 1.6 years; IQ $\bar{x}$ = 105.4, SD = 15.3) were included in the study. All subjects were assessed with the Rey-Auditory Verbal Learning Test (RAVLT), the Purdue Pegboard Test, Animals naming, and the Theory of Mind (TOM) test. Performance on the 5-trial total recall of the RAVLT, bilateral dexterity in the Pegboard test, Animals naming and TOM were compared between the subject groups. The two groups differed significantly on multivariate analysis ($F(4, 24) = 3.97$, $p = 0.0013$), and post-hoc T-tests with Tukey-Kramer's corrections for multiple corrections yielded significant effects for all 4 tests: RAVLT total recall ($p = 0.0260$), Animal naming ($p = 0.0030$), bilateral dexterity score ($p = <0.0001$), and performance on TOM ($p = 0.0424$). Interestingly, 5 subjects (26%) in the 22q11DS group consistently performed poorly in at least 3 of the 4 test variables. These individuals may potentially be at the most risk for developing SZ in adulthood; follow-up studies with this sample will be needed to assess whether this relationship will come true.


**REFERENCES:**


1. Chow EWC, Watson M, Young DA, Bassett AS (2006). Neu rocognitive profile in 22q11 deletion syndrome and schizo phrenia. Schizophr Res 87: 270-8

2. Bassett AS, Chow EWC, Husted J, Weksberg R, Caluseriu O, Webb GD, Gatzoulis MA (2005). Clinical features of 78 adults with 22q11 deletion syndrome. Am J Med Genet A 138(4): 307-13


**NR1-040**

## LIMITED ASSOCIATIONS OF THE SEROTONIN TRANSPORTER GENE POLYMORPHISM (5HTTLPR) WITH CHARACTERISTICS OF DEPRESSED INPATIENTS


*Gen Shinozaki, M.D. 200 1st Street SW, Rochester MN 55905, Simon Kung, M.D., Renato D. Alarcon, M.D., M.P.H, David A. Mrazek, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to recognize the impact of the short and long alleles of serotonin transporter gene polymorphism (5HTTLPR) upon individual differences in response to stressful life event, selected psychiatric co-morbidities, and severity of illness, and how it might differ in the inpatient psychiatric setting compared to other reports.

**SUMMARY:**


Introduction: The serotonin transporter gene polymorphism (5HTTLPR) has been associated with individual stress response as well as to mental illnesses including depression, bipolar disorder, alcoholism, and personality disorder. Caspi et al. showed that individuals maltreated in childhood have higher rates of depression in later life if they are homozygous short (S/S) compared to homozygous long (L/L). We hypothesized that these findings would similarly extend to an inpatient psychiatric setting.

Methods: Retrospective chart review of patients hospitalized for depression on a Mood Disorders Unit from 2005-2007. Those who had serotonin transporter genotyping were included. The prevalence of past abuse, bipolar disorder, alcoholism, anxiety, personality disorder, suicide attempts, and treatment with ECT were calculated.

Results: Of the 320 patients genotyped, 43 were S/S, 191 were heterozygous (S/L), and 86 were L/L. For S/S versus L/L respectively, the prevalence of past abuse was 33% vs. 27%, bipolar disorder 28% vs. 29%, alcoholism 28% vs. 31%, anxiety 60% vs. 58%, personality disorder 37% vs. 31%, suicide attempts 30% vs. 36%, and treatment with ECT 51% vs. 30%.

Conclusions: Our findings showed mostly small differences between S/S and L/L with respect to past abuse and selected psychiatric co-morbidities. A large difference in prevalence was seen in patients with S/S receiving ECT more than those with L/L. The S/S genotype was not reliably associated with a more significant abuse history, bipolarity, alcoholism, anxiety,

personality disorder, or suicide attempts. Larger studies would better clarify these associations. While other studies have reported the importance of the serotonin transporter gene as one of the many factors affecting individual differences of vulnerability to psychiatric illnesses against stressful life event, our findings suggest there may not be many significant differences in an inpatient depression setting.

**REFERENCES:**


1. Caspi A, Sugden K, Moffitt TE, Taylor A, Craig IW, Har rington H, McClay J, Mill J, Martin J, Braithwaite A, Poulton R. Influence of life stress on depression: moderation by a polymorphism in the 5-HTT gene. Science. 2003;301:386-389.
2. Serretti A, Calati R, Mandelli L, De Ronchi, D. Serotonin transporter gene variants and behavior: a comprehensive review. Current Drug Targets 2006; 7(12):1659-69.


**NR1-041**

## FREQUENCY OF STIMULANT TREATMENT AND OF STIMULANT-ASSOCIATED MANIA/HYPOMANIA IN BIPOLAR DISORDER PATIENTS


*Aliza P Wingo, M.D. 2004 Ridgewood Drive, Atlanta GA 30322, S. Nassir Ghaemi, M.D., M.P.H*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to know more about how frequent stimulant is prescribed and the rate of stimulant-induced mania in bipolar disorder patients.

**SUMMARY:**


Objective: Stimulants have been used to treat ADHD or augment bipolar depression treatment in patients with bipolar disorder (BD). However, the effects of stimulant treatment in adult BD patients have been insufficiently studied. This study examined the frequency of stimulant treatment and of stimulant-associated mania/hypomania in BD patients. Method: Charts of patients evaluated at the Emory Bipolar Disorder Specialty Clinic from 7/05 to 10/07 and diagnosed with BD were randomly reviewed. Past diagnostic and treatment information were obtained from patient report and collateral information. Bipolar diagnosis and past stimulant-associated mania were assessed by a board-certified psychiatrist using DSM-IV-SCID-based interview. Methylphenidate, amphetamine, and modafinil were considered stimulants. Multivariate regression models were used to identify predictors of receiving stimulant treatment and of experiencing stimulant-associated mania. Results: Of the 137 BD patients (72% BDI; 28% BDII, NOS), 25% had prior stimulant treatment for ADHD or bipolar depression. Among those with prior stimulant treatment (21 with methylphenidate, 17 with amphetamine, and 6 with modafinil), 43% were treated with a concurrent mood stabilizer, and some were treated with 2 different types of stimulants. The overall rate of stimulant-associated mania/hypomania was 40%. Having axis-I comorbidity, absence of past substance addiction, and currently being unemployed were three factors significantly associated with prior stimulant treatment. After adjusting for important clinical variables, axis-I comorbidity was associated with less stimulant-induced mania. Conclusions: BD patients commonly receive stimulant treatment and often experience stimulant-induced mania/hypomania. More studies are needed to examine the safety and efficacy of stimulant treatment in BD patients.


**REFERENCES:**


1. El-Mallakh RS. An open study of methylphenidate in bipolar depression. Bipolar Disord. 2000;2(1):56-59.
2. Faedda GL, Baldessarini RJ, Glovinsky IP, Austin NB, Faedda GL, Baldessarini RJ, Glovinsky IP, Austin NB. Treat ment-emergent mania in pediatric bipolar disorder: a retro spective case review. J Affect Disord. 2004;82(1):149-158.


**NR1-042**

## EARLY CAREGIVER EXPERIENCE IN FAMILY-INCLUSIVE TREATMENT (FIT) FOR BIPOLAR DISORDER


*Annie K Steele, B.A. Beth Israel Medical Center, 317 E 17th St9 Fierman, New York NY 10003, Alexander Norinsky, Jacqueline Shafiroff, Simay Gokbayrak, Diana Hofshi, Tsega Abera, Lisa Cohen, Ph.D., Susan Tross, Ph.D., Igor Galynker, M.D., Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to discuss our findings regarding anxiety, depression and quality of life in caregivers of outpatients participating in Family-Inclusive Treatment (FIT) for Bipolar Disorder.

**SUMMARY:**


Objective: Research suggests that involving informal caregivers in the treatment of bipolar patients results in positive outcomes for both. To this end, we introduced Family-Inclusive Treatment (FIT) for Bipolar Disorder into a community hospital setting. FIT integrates standard psychopharmacological management with quarterly caregiver-patient visits, and as-needed communication between clinician and caregiver. Results of the first 3 months of caregiver participation are presented here. Methods: In 13 consecutive participating caregivers, we assessed symptoms of depression (CES-D), anxiety (STAI) and quality of life (Q-LES-Q) at baseline and 3-month follow-up. Results: Caregivers were predominately non-Hispanic (92%) and White (84%), with a mean age of 53(SD=11.7). Gender was evenly distributed (7 females, 54%). Mean length of education was 15.8 years (SD=2.89), and more than half worked full-time (54%). The majority of caregivers (62%) were married or engaged to the patient. At both time points, caregivers showed modest levels of anxiety, (M1=35.8,SD=8.6; M2=35.5,SD=8.3) and depression (M1=8.1,SD=8.5; M2=9.2,SD=7.6). Means did not exceed threshold on either scale. While both anxiety and depression remained statistically stable over time (tanx(21)=.096, p=n.s., tdepr(19)=-.3, p= n.s.), more than 60% of caregivers reported improvement in both at first follow-up. Caregivers reported high quality of life, with a mean of 55.2(SD=8.4) out of 75 points at baseline, and 57.1(SD=6.8) at follow-up. More than half of caregivers (54%) reported an increase in quality of life over time.
Conclusions: Caregivers enrolled in FIT thus far show modest levels of depressive and anxiety symptoms and a high quality of life on standardized measures. These traits remained stable over time, with the majority showing slight improvement. Our results detailing implementation experiences, caregiver impressions, and implications for the future of FIT will be discussed.


**REFERENCES:**


1. Miklowitz DJ, Simoneau TL, George EL, Richards JA, Kalbag A, Sachs-Ericsson N, Suddath R: Family-focused

treatment of bipolar disorder: 1-year effects of a psychoedu cational program in conjunction with pharmacotherapy. Biol Psychiatry 2000; 48(6):582-92.
2. Perlick, DA, Rosenheck, RA, Miklowitz, DJ, Chessick, C, Wolff, N, Kaczynski, R, Ostacher, M, Patel, J, Desai, R and the STEP-BD Family Experience Collaborative Study Group: Prevalence and correlates of burden among caregivers of pa tients with bipolar disorder enrolled in the Systematic Treat ment Enhancement Program for Bipolar Disorder. Bipolar Disorders 2007; 9:262-273.

**NR1-043**

## BMI CORRELATES OF BIPOLAR DISORDER: CAN BMI HELP PREDICT PROGNOSIS AND OUTCOME?

*Cynthia V Calkin, M.D. 1662 Edward St., Halifax, Nova Scotia Canada, Caroline Van de Velde, Ph.D., Claire Slaney, R.N., Julie Garnham, R.N., Martina Ruzickova, M.D., Martin Alda M.D.*

**EDUCATIONAL OBJECTIVE:**

The participant will learn that there is a higher prevalence of obesity in bipolar disorder and that obesity appears to be relevant to prognosis and outcome. Obesity was correlated with important clinical characteristics such as chronic clinical course, longer duration of illness, poorer functioning, and greater disability. Obesity was also associated with greater comorbid anxiety, type II diabetes, and hypertension. Obese bipolar patients were non-responsive to lithium.

**SUMMARY:**

Objective: Several papers have reported higher prevalence of obesity in patients suffering from bipolar disorder (BD). The possible links between these two disorders include treatment, lifestyle, comorbid binge eating, neuroendocrine and neurotransmitter dysfunctions, comorbid metabolic syndrome, and genetic predisposition. To study this relation more closely, we investigated whether there are any differences in the socio-demographic, clinical and medical characteristics of BD patients with higher body mass index (BMI).Method: We measured BMI of 276 subjects from the Maritime Bipolar Registry. Subjects were aged 16 to 83 years, with psychiatric diagnoses of BD I (n = 186), BD II (n = 85), and BD not otherwise specified (n = 5). The registry includes basic demographic data and details on the clinical course of bipolar illness, its treatment, and medical comorbidity. In a subsequent analysis using stepwise linear regression, we examined the variables showing a significant association with BMI. Results: The prevalence of obesity in our sample was 39.1% (n = 108). Higher BMI was observed in subjects who demonstrated a chronic course of BD ($P < 0.001$), longer duration of illness ($P = 0.02$), lower scores on the Global Assessment of Functioning Scale ($P = 0.02$), on disability due to BD ($P = 0.002$), comorbid subthreshold social ($P = 0.02$) and generalized anxiety disorders ($P = 0.05$), suffering from type II diabetes mellitus (DM II) ($P < 0.001$) and hypertension ($P = 0.001$). Duration of DM II correlated negatively with BMI ($P = 0.04$). Treatment with antipsychotics at time of interview was only marginally associated with higher BMI ($P = 0.07$). Whereas, subjects who demonstrated complete remission of symptoms on lithium, showed significantly lower BMI ($P = 0.01$), compared to those reporting no therapeutic effects. Conclusions: Our findings suggest that BD patients' BMI is relevant to their prognosis and outcome.

**REFERENCES:**

1. Fagiolini A, Kupfer DJ, Houck PR, Novick DM, Frank E: Obesity as a correlate of outcome in patients with bipolar I disorder. Am J Psychiatry 2003; 160:112-117 Elmslie JL, Mann JI, Silverstone JT, Williams SM, Romans SE: Deter minants of overweight and obesity in patients with bipolar disorder. J Clin Psychiatry 2001; 62:486-491

**NR1-044**

## STEREOTYPED RESPONDING IN MAJOR DEPRESSION

*Didier Schrijvers, M.D. Collaborative Antwerp Psychiatric Research Institute, University of Antwerp, Universiteitsplein 1B-2610 Antwerp Belgium, Wouter Hulstijn, Ph.D., Bernard G.C. Sabbe, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to recognize the manifestation of stereotyped responding in major depression and its relationship with psychomotor retardation and know how to measure it.

**SUMMARY:**

Introduction: The Stereotypy Test Apparatus (STA) is a newly designed computerized version of the Zeigeversuch, entailing the generation of a random sequence of button presses, and is used to assess stereotyped responding. Psychomotor retardation -one of the core symptoms of major depressive disorder (MDD)- and disturbances in random number generation have been reported for MDD, but it remains unclear whether both processes are related.The current study will investigate whether and to what extent MDD patients manifest stereotyped responding, and whether stereotyped responding and psychomotor slowing are associated in MDD.
Methods: We administered the STA in 20 MDD patients and 15 healthy controls. In addition, all participants performed a psychomotor battery of digitized figure-copying tasks, measuring fine motor performance. All measures entered an ANOVA and bivariate Pearson correlations were calculated between psychomotor variables and STA scores.
Results: The observed elevated STA scores for the MDD patients revealed significantly more stereotyped repetitive behaviour in the patient than in the control group. Patients performed much slower than controls on the psychomotor tasks. Additionally, strong correlations between STA performance and several psychomotor variables were found.
Conclusions: Substantial difficulties in generating random responses were observed for the MDD patients. This stereoptyped response pattern is highly likely the consequence of impaired executive functioning: a failure in frontal inhibition may lead to an activation of prepotent motor responses that induce stereotyped repetitive motor responses. The poor STA scores appear to be related to the present psychomotor slowing. Therefore, it can be suggested that psychomotor retardation and stereotyped responding are the reflection of the same, or at least overlapping, underlying pathophysiological processes with an important role for the well documented frontostriatal deficits in MDD.

**REFERENCES:**

1. Morrens M, Hulstijn W, Lewi PJ, De Hert M, Sabbe BGC: Stereotypy in schizophrenia. Schizophr Res 2006; 84: 397-

404.
2. Schrijvers D, Hulstijn W, Sabbe BGC: Psychomotor symp toms in depression: a diagnostic, pathophysiological and therapeutic tool. J Affect Disord; in press.

**NR1-045**

**REPRODUCTIVE CHARACTERISTICS OF BIPOLAR PATIENTS: DATA FROM A MOOD CLINIC**

*Ebru Aldemir, M.D. Ege University Department of Psychiatry Bornova/Izmir 35100 Turkey, Fisun Akdeniz M.D., Simavi Vahip M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to concern more about the reproductive disturbances and gender related issues in bipolar disorder.

**SUMMARY:**

Background: Abnormalities in the hypothalamic-pituitary-gonadal (HPG) axis have been reported in women and men with bipolar disorder. Distruption of the HPG axis usually results in reproductive dysfunctions in bipolar patients.

Objective: The objective of this study is to identify the reproductive function characteristics of bipolar patients.

Methods: The data is obtained from the interviews with bipolar patients who are followed up in a specialized mood clinic.

Results: 71 bipolar patients are included; 32 men (45.1%) and 39 women (54.9%); with a mean age of 45.2 ±11.2 years. Fourty-one of 71 patients are on mood stabilizers (combination or monotherapy) and 30 are on combination therapies of mood stabilizers, antidepressants, antipsychotics. 46 patients (26 men and 20 women) are married with a mean duration of 20.3±12.4 years.

Mean age of menarche is 13.1±1.3 years. Fifteen of all the women are on menopausal status. Five (20.8%) of nonmenopausal women have menstrual cycle irregularities (2 hypomenorrea, 2 methrorrhagia, 1 polymenorrhea). Mean number of pregnancies in women is 2.9±2.4; deliveries 1.4±1; abortus 0.5±1.2 and curettages 1.5±1.0. Mean age of puberty in men is 14.1±1.0 years.

In the comparison of two groups, there is a significant difference on marital status; bipolar women are more frequently single (unmarried, divorced or widowed) than bipolar men. Number of pregnancies in bipolar women are significantly higher than bipolar men's spouses' number of pregnancies. On the other hand, there is no significant difference on duration of marriage, contraceptive use and number of children between two groups.

Conclusion: Menstrual cycle irregularities are common in bipolar women. Despite the high rates of being single in life, bipolar women's number of pregnancies are higher than bipolar men's spouses' number of pregnancies.

**REFERENCES:**

1. Ozcan ME, Banoglu R. Gonadal hormones in schizophrenia and mood disorders. Eur Arch Pychiatry Clin Neurosci 2003; 253:193-196.
2. Matsunaga H, Sarai M. Elevated serum LH and androgens in affective disorder related to the menstrual cycle: with refer ence to polycystic ovary syndrome. Jpn J Psychiatry Neurol 1993; 47:825-842.

**NR1-046**

**A REVIEW OF PANIC AND SUICIDE IN BIPOLAR DISORDER: COMORBID ILLNESS INCREASES RISK FOR SUICIDE**

*Edward J Kilbane, M.D. Beth Israel Medical Center, 1st Ave. & 16th St., POSA-Bernstein 2nd Floor, New York City NY 10003, N. Simay Gokbayrak, B.A., Igor Galynker, M.D., Ph.D., Lisa J. Cohen, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

By the end of this presentation participants should appreciate the increased risk of suicide in people with Bipolar Disorder and comorbid Panic Disorder and evaluate literature that supports and refutes this claim.

**SUMMARY:**

Bipolar mood disorder carries a serious suicide risk. Panic disorder, which also confers an independent risk of suicide and psychiatric comorbidity, in general has been found to amplify suicidality in mood-disordered patients. Whether panic contributes to suicide risk in these patients is controversial and, given the increasing numbers of those diagnosed with Bipolar Disorder, it is important to review the current state of our knowledge on this subject. This review assesses the available literature on how panic and suicide relate to each other in bipolar mood disordered patients. Methods: We conducted a search on Medline and PsycINFO using the keywords "anxiety", "attempted suicide", "completed suicide", "mortality", "self-harm" in combination with "bipolar", "manic depression" and "panic". Twenty-four articles were included in the evaluation. Subtypes of bipolar disorder evaluated include: bipolar disorder NOS, bipolar-I depression and mania, bipolar-II depression and hypomania, bipolar disorder with mixed states, bipolar disorder with rapid mood switching, and bipolar disorder with psychosis. Some articles assessed more than one subtype and these are included separately in results. Results: 15 papers support increased risk of suicide, 10 papers do not support increased risk of suicide, and 3 papers are inconclusive. For papers supporting increased risk, lowest odds ratio = 2.1 and highest odds ratio = 21.5. Conclusion: Individuals with Bipolar Disorder and comorbid Panic Disorder have increased risk of suicide. Future research should study specific bipolar subgroups, focus on anxiety and panic symptoms rather than diagnosis, and look at the role of specific pharmacological treatment in patients with comorbid mood and anxiety disorders.

**REFERENCES:**

1. Dilsaver, S. C., Chen, Y. W., Swann, A. C., Shoaib, A. M., Tsai-Dilsaver, Y., Krajewski, J. (1997). Suicidality, panic dis order and psychosis in bipolar depression, depressive-mania and pure-mania. Psychiatry Research, 73: 47-56.
2. Frank, E., Cyranowski, J. M., Rucci, P., Shear, M. K., Fagiolini, A., Thase, M. E., Cassano, G. B., Grochcinski, V. J., Kostelnik, B., Kupfer, D. J. (2002). Clinical significance of lifetime panic spectrum symptoms in the treatment of patients with bipolar I disorder. Archives of General Psychiatry, 59: 905-911

**NR1-047**

**DEFINING MIXED DEPRESSION**

*Franco Benazzi, M.D. Hecker Psychiatry Research Center, Forli, Italy, University of California at San Diego collaborating center, Cervia RAItaly 48015,*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to diagnose mixed depression and improve its pharmacological treatment

**SUMMARY:**

Study aim was testing definitions of mixed depression (depression plus co-occurring manic/hypomanic symptoms). Consecutive 336 Bipolar II Disorder (BP-II), and 224 Major Depressive Disorder (MDD) outpatients cross-sectionally assessed for major depressive episode (MDE) and concurrent *DSM-IV* hypomanic symptoms when presenting for treatment of depression, by a mood psychiatrist using *DSM-IV* Structured Clinical Interview and Hypomania Interview Guide (HIG), in private practice. Mixed depression defined as co-occurrence of MDE and hypomanic symptoms. Early onset age (EO) (<21 y) used as diagnostic validator. Multivariable logistic regression of EO versus all within-MDE hypomanic symptoms, controlled for BP-II, showed no specific symptom independently associated with EO. By ROC analysis, best combination of sensitivity and specificity, and highest correctly classified, shown by cutoff number >=3 symptoms, and by cutoff HIG score >=8. Mixed depression defined by >=3 within-MDE hypomanic symptoms (A), or by HIG score >=8 (B), were more frequent in EO group versus LO group (A: 70.5% vs 49.8%; B: 60.7% vs 40.9%; p = 0.000), and in BP-II versus MDD (A: 72.3% vs 39.7%; p = 0.000; B: 63.9% vs 29.0%; p = 0.000). Findings could support mixed depression definitions based on cutoff number/score of within-depression hypomanic symptoms.

**REFERENCES:**

1. Benazzi F. Bipolar disorder--focus on bipolar II disorder and mixed depression. Lancet. 2007 Mar 17;369(9565):935-45. Review
2. Benazzi F. Bipolar II disorder : epidemiology, diag nosis and management. CNS Drugs. 2007;21(9):727-40. Review.

**NR1-048**

## THE RELATIONSHIP BETWEEN HEART RATE VARIABILITY AND DEPRESSIVE SYMPTOM IN A RURAL AREA RESIDENTS

*Hee-Sang Lee, M.D. Hanyang Univ. Hospital Haengdang 1-dong, Seongdong-gu, Seoul, 133792 South Korea Seok-Hyun Kim, M.D., Ph.D., Ji-Young Jung, M.D., Kounseok Lee, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to know HRV reflects depressive symptom severity grades.

**SUMMARY:**

OBJECTIVES

Depression is associated with an increased risk of cardiovascular mortality, due to the reduction of vagal activity to the heart. Previous reports have shown HRV to be reduced in depression. But most of studies were for depressive patient, not for general population. The purpose of this study is investigation of relationship between HRV(Heart Rate Variability) and depressive symptoms in general population. This study was designed to examine the correlation of HRV and depressive symptom in general population.

METHODS

In 155 participants lived in the anonymous rural area of Kyoung-Gi-do, Korea, they participated health promotion program that include short term electrode HRV test and BDI (Beck's Depression Inventory) self-report. 2 participants were excluded due to fail to make out BDI and 58 participants were excluded due to various heart problems through electrocardiogram and echocardiography belong to health promotion program. We analyze relationship between HRV and BDI of remaining 95 subjects.

RESULTS

HRV correlate negatively with BDI score. SDNN(Standard Deviation of the Normal to Normal Interval), pNN50 (the proportion derived by dividing the number of interval differences of successive Normal to Normal intervals greater than 50ms by the total number of Normal to Normal intervals), Total Power(TP), Low frequency(LF) high frequency(HF) are significantly reduced as BDI score. Also HF, LF and RMSSD(The Square Root Of The Mean Squared Differences Of Successive Normal To Normal Intervals) are significantly continuous with BDI severity grades.

CONCLUSIONS

In the findings of this study, subjects with lower BDI were decreased in HRV like patients with depressive disorder. Also, HRV reflects depressive symptom severity grades.

**REFERENCES:**

1. Yergani VK, Pohl R, Berger R, Balon R, Ramesh C, Glitz D, et al.: Decreased HR variability in panic disorder patients: A study of power spectral analysis of HR. Psychiatry Res 1993; 46:89-103.
2. Yeragani VK, Pohl R, Balon R, Ramesh C, Clitz D, Jung I, et al.: Heart rate Variability in patients with major depression. Psychiatry Res 1991; 37:35-46.

**NR1-049**

## DEPRESSED MOOD INVERSELY CORRELATES WITH COGNITIVE FUNCTIONING IN HEALTHY COLLEGE STUDENTS

*Jared L Moreines, P.O. Box 123068, AtlantaGA 30322, Joseph Mosley, B.A., Anthony Gennace, B.A., Bruce J. Diamond, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to describe the prevalence of depressed mood in college students, identify the direct correlation between depressed mood and cognitive impairments, and appreciate the adverse implications of depressed mood, even without a formal *DSM-IV-TR* diagnosis of depression.

**SUMMARY:**

Major depressive disorder (MDD) is often accompanied by cognitive impairments that interfere with an individual's ability to perform the tasks of daily life (1) with resulting deleterious implications ranging from personal hardships to financial burdens on the national economy (2). However, focusing on only clinically diagnosed depression ignores potential cognitive impairments associated with depressed mood. The current study looked at both the prevalence of depressed mood in a college population, and the relationship between symptom severity and

cognitive performance. In this study, depressed mood, measured by Beck Depression Inventory-I scores (BDI-I), was correlated with anxiety, measured by the State-Trait Anxiety Inventory (STAI), and scores on computer and paper-pencil measures of working memory, processing speed and executive functioning in 313 healthy college students. Depressed mood ranging from mild to severe levels was found in 30.4% of subjects, with 7.1% exhibiting moderate to severe levels of depressed mood. Anxiety directly correlated with depressed mood ($r = .462$, $p < .001$). Additionally, greater depressed mood was associated with poorer performance on measures of attention, working memory, processing speed, and simple reaction time. These results show the prevalence of depressed mood in a sample of healthy college students and that depressed mood is associated with impaired cognitive functioning. It is important to note that none of these participants had been diagnosed or treated for clinical depression at the time of testing. Therefore, there may be a large population of students who are not identified as depressed, but who may still be functioning at less than optimal cognitive and functional levels due to depressed mood.

**REFERENCES:**


1. Reischies FM, Neu P: Comorbidity of mild cognitive disorder and depression - a neuropsychological analysis. European Ar chives of Psychiatry & Clinical Neuroscience 2000; 250(4):186
2. Kessler RC, Akiskal HS, Ames M, Birnbaum H, Greenberg P, Hirschfeld RMA, Jin R, Merikangas KR, Simon GE, Wang PS: Prevalence and Effects of Mood Disorders on Work Performance in a Nationally Representative Sample of U.S. Workers. Am J Psychiatry 2006; 163(9):1561-1568


**NR1-050**

## THE ASSOCIATION BETWEEN SMOKING AND MOOD SYMPTOMS IN BIPOLAR DISORDER: A LONGITUDINAL ANALYSES OF STEP-BD PATIENTS


*Jeanette A Waxmonsky, Ph.D. University of Colorado Denver 4455 E. 12th Ave, A011-11Denver, CO 80220, Marshall R. Thomas, M.D., Michael H. Allen, M.D., David J. Miklowitz, Ph.D., L. Miriam Dickinson, Ph.D., Chad D. Morris, Ph.D., Mandy Graves MPH, Mark Fossey, M.D., Michael Ostacher, M.D., and Cheryl Chessick, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to:

1)Understand the association between depressed, manic, and mixed symptom severity and amount of tobacco smoking for patients with bipolar disorder.

2)Recognize the differences among smoking patterns for patients with bipolar disorder and how this may impact smoking cessation attempts.

**SUMMARY:**


Introduction:

Tobacco use is prevalent among persons with bipolar disorder; with 60.6% current smokers and 81.8% past smokers in a national sample (Lasser et al, 2000). Bipolar disorder has been associated with heavy smoking, (Hughes et al., 1986). This study examined the association between changes in smoking and mood symptoms for patients with bipolar disorder over time.

Hypotheses: 1) Smoking amount decreases over time as the patients' mood episodes resolve; 2) Mood symptoms predict smoking amount; and 3) The trajectory of depressive and manic symptoms will differ across groups of smokers.

Method: We examined longitudinally smoking and mood symptoms in a sample of 828 patients with bipolar disorder who were enrolled in the Systematic Treatment Enhancement Program for Bipolar Disorder Program (STEP-BD). The study included current or past smokers who were experiencing a depressive, manic, or mixed episode upon entry into the STEP-BD.

Results: In a longitudinal ordinal regression model with smoking as the outcome measure, improved clinical status ($t=4.81$, $p<.01$) as well as decreased depressive and manic symptoms were significantly associated with less smoking concurrently ($t=4.48$, $p<.001$ and $t=3.32$, $p<.001$). Clinical status at the previous study visit predicted levels of smoking at the next study visit ($t=4.08$, $p<.01$). Among different groups of smokers (e.g., smokers, initiators, quitters) overall depression and mania scores are significantly associated with smoker group ($p=.0036$ and $p=.0001$). Conclusion: Changes in clinical status and mood symptoms are associated with changes in smoking over time. Decreases in depressed and manic symptoms, and improved clinical status predicted reduced smoking at subsequent visits. Depressed and manic symptoms were associated with smoker group (smoker, initiator, quitter) over time.

Discussion: These findings have implications for smoking cessation strategies with bipolar patients.


**REFERENCES:**


1. Lasser K, Boyd JW, Woolhandler S, Himmelstein DU, Mc Cormick D, Bor DH. Smoking and mental illness: A popula tion based prevalence study. JAMA 2000; 284(20):2606-2610.
2. Hughes JR, Hatsukami DK, Mitchell JE, Dahlgren LA. Preva lence of smoking among psychiatric outpatients. Am J Psy chiatry 1986; 143(8):993-997.


**NR1-051**

## RECENT SUBSTANCE USE DISORDER, NOT GENERALIZED ANXIETY DISORDER, INTENSIFIES LITHIUM-INDUCED TSH INCREASE IN RAPID-CYCLING BIPOLAR DISORDER


*Keming Gao, M.D. 11400 Euclid Avenue, Suite 200, Cleveland-OH 44106, David E. Kemp, M.D., Joseph R. Calabrese, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to to understand the different effects of lithium on thyroid function in patients with bipolar disorder and different comorbid conditions.

**SUMMARY:**


Objective: The relationship between thyroid function and rapid cycling bipolar disorder (RCBD) is still controversial (1, 2). In this study, both the baseline thyroid stimulating home (TSH) values and the degree of change in TSH were compared among lithium-treated RCBD patients with or without a recent substance use disorder (SUD) or generalized anxiety disorder (GAD).

Methods: All patients were openly treated with lithium (0.5 – 1.2 mEq/L) and divalproex (60 μg/ml) for up to 12 weeks prior

to randomization to lamotrigine or placebo. TSH was obtained prior to or shortly after initiation of treatment (baseline) and repeated prior to or shortly after randomization. A "recent" SUD was defined as meeting abuse or dependence criteria for a substance(s) in the last 6 months with a diagnosis of substance dependence or meeting substance abuse criteria in the last 3 months with a diagnosis of substance abuse.
Results: The baseline TSH was1.79±1.04 for those with a recent SUD (n=46) and 1.97±1.16 for those without a recent SUD (n=89), with no significant difference between the two groups. The mean change in TSH levels from baseline to randomization was 3.86 ± 2.86 (p <0.001) for patients with a recent SUD (n=21) and 2.37 ± 2.13 (p<0.001) for patients without a recent SUD (n=63). The change was significantly higher in those patients with a recent SUD as compared to those without a recent SUD (p=0.015). There was no significant difference in the baseline TSH levels between patients with GAD (n=77) and those without GAD (n=37) although the mean change from baseline to randomization was significantly increased in both groups, 2.54 ± 2.52 (<0.001) for those with GAD (n=58) and 2.97±2.05 (<0.001) for those without GAD (n=28). However, in patients without recent SUD, those without GAD (n=40) tended to have a higher increase in TSH than those with GAD (n=20), 2.07±2.03 vs.3.20±216 (p=0.09).
Conclusion: Recent SUD intensifies the TSH increase associated with lithium treatment.

**REFERENCES:**


1. Bartalena L, Pellegrini L, Meschi M, Antonangeli L, Bogazzi F, Dell'Osso L, Pinchera A, Placidi GF: Evaluation of thyroid function in patients with rapid-cycling and non-rapid-cycling bipolar disorder. Psychiatry Res 1990; 34:13-17.
2. Gyulai L, Bauer M, Bauer MS, García-España F, Cnaan A, Whybrow PC: Thyroid hypofunction in patients with rapid-cycling bipolar disorder after lithium challenge. Biol Psychiaty 2003; 53:899-905.


**NR1-052**

## FACTORS THAT INFLUENCE ECT REFERRALS: A SURVEY OF VIRGINIA PSYCHIATRISTS


*Laura E Dauenhauer, M.D. 2955 Ivy Road, Charlottesville, VA 22902, Bruce Cohen, M.D.*


**EDUCATIONAL OBJECTIVE:**

Participants should be able to recognize several major barriers to appropriate ECT referrals. They also should be able to identify the relationship between attitudes toward and knowledge of ECT and ECT referral patterns.

**SUMMARY:**


Introduction: ECT is the most effective treatment of Major Depressive Disorder. It is one of few treatments shown to decrease suicidality in depressed patients and has few contraindications. Despite this, it is vastly underutilized. In this survey, we examine factors that may prevent appropriate ECT referrals. Methods: A self-administered survey designed to gather demographic data and information on attitudes and knowledge of ECT was distributed to Virginia psychiatrists via email. Responses were collected anonymously on-line. Results: Most respondents scored well on the knowledge portion, with 54% answering more than 75% of questions correctly. None of the respondents who answered less than half of the questions correctly had referred more than 5 patients for ECT in the past 5 years, while of those who answered more than 75% of the questions correct, the majority (63%) had referred more than 5 patients. Most respondents had a positive attitude towards ECT. However, psychiatrists who reported no ECT referrals tended to agree with the statement "ECT should be used only as a last resort." Psychiatrists who had made ECT referrals tended to disagree with this statement. Variables identified as having prevented ECT referrals include co-morbid personality disorder on the part of the patient, no ECT provider nearby, financial limitations, most psychiatrists have an adequate fund of knowledge about ECT, those that do not tend not to refer patients. ECT was generally viewed as being safe and effective, but a minority of clinicians view ECT as a treatment of last resort and these clinicians refer patients sparingly. Several factors prevent clinicians from referring otherwise appropriate patients for ECT, the most notable being patients' negative attitude, logistics of arranging care and financial limitations.


**REFERENCES:**


1. UK ECT Review Group: Efficacy and safety of electrocon vulsive therapy in depressive disorders: a systematic review and meta-analysis. Lancet 2003; 361:9360, 799-808
2. Kellner CH: Relief of Expressed Suicidal Intent by ECT: A Consortium for Research in ECT Study. AM J Psychiatry 2005; 162:977-982


**NR1-053**

## VALIDATION OF PSYCHOLOGICAL PROCESSING VELOCITY SCALE


*Márcio Gerhardt Soeiro de Souza, M.D. Av Portugal 231 apt 152 Brooklyn, São Paulo, Brazil 04559000, Aline Schoedl, Psy. D; Fernando Sargo Lacaz, M.D; Marcelo Feijó de Mello, M.D Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to consider The Psychological Processing Velocity Scale a useful tool for evaluation of afective disorders´, neurobiological and clinical studies.

**SUMMARY:**


Hypothesis: The Psychological Processing Velocity Scale (PVS) was designed to serve as a reliable instrument to measure a specific dimension of the psychological activity .The velocity of psychological processing is a basic concept for classical and modern authors. Acceleration of the psychological processing is associated with anxiety disorders; while deceleration is more commonly related to patients whose diagnose are depressive disorders. Methods: trained psychiatrists evaluated 25 patients with depression and 10 controls. They received a *DSM-IV* and a dimensional diagnostics (DD) using corresponding definitions. They were evaluated by raters using HAM-D, HAM-A, and the PVS. Results: There is a concordance of the PVS results with the DSM-IV diagnostics, according with the theoretical background of both scales. The Pearson's correlation among the PVS and dimensional diagnostics were significant (PVS=0.344). The PVS cut-point for depression was >-2 (depression) and 6 for depression plus anxiety). Conclusions: The PVS is a validate scale that could be useful for affective disorders', neurobiological and clinical studies. This psychopathological dimension is an open field to explore those prevalent disorders.

**REFERENCES:**
1. Sobin C, Sackeim HA. Psychomotor symptoms of depression. Am J Psychiatry. 1997 Jan;154(1):4-17.
2. Dantchev N, Widlöcher DJ. The measurement of retardation in depression.J Clin Psychiatry. 1998;59 Suppl 14:19-25.

**NR1-054**

## CLINICAL SIGNIFICANCE OF LIFETIME PANIC DISORDER IN THE COURSE OF BIPOLAR DISORDER TYPE I

*Ricardo R Toniolo, M.D. Rua Dr. Ovídio Pires de Campos, 785 PROMAN, Sao Paulo, Brazil 05403-010, Ricardo Alexandre Toniolo, M.D.; Sheila C. Caetano, M.D.; Patrícia Viana da Silva; Beny Lafer, M.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to recognize lifetime panic disorder comorbidity as an indicator of a poorer prognosis of bipolar disorder type I.

**SUMMARY:**
Objectives: To study the impact of lifetime panic disorder (PD) diagnosis in a sample of bipolar I disorder (BPI) patients evaluating clinical and demographic variables.
Methods: Ninety-five (95) outpatients from the Bipolar Disorder Research Program at the Institute of Psychiatry of the University of Sao Paulo Medical School were enrolled. All patients were interviewed by trained psychiatrists with the SCID/P. Twenty-seven (27) BPI patients with PD were compared to 68 BPI patients without any anxiety disorders regarding clinical and demographic variables.
Results: Compared to BPI patients without any anxiety disorders, patients with BPI+PD presented significantly higher number of mood episodes (18.9±13.8 versus 8.5±7.8; $p<0.001$), depressive episodes (10.8±8.2 versus 4.6±4.8; $p=0.001$) and manic episodes (7.4±7.3 versus 3.6±3.6; $p=0.008$). Patients with BPI+PD had more frequently a depressive episode as their first one compared to BPI patients without anxiety disorders (94.1% versus 57.5%; $p=0.011$). Patients with BPI+PD had more comorbidity with lifetime diagnosis of drug abuse or dependence (33.3% versus 8.8%; $p=0.010$) and eating disorders (29.6% versus 6.0%; $p=0.004$).
Conclusions: The higher number of mood episodes in general presented by patients with BPI + PD when compared with BPI patients without any anxiety disorders, along with the higher frequencies of drug misuse and eating disorders, indicate that PD comorbidity is associated with a poorer course and outcome of BPI. The higher frequency of depression as the onset mood episode and the higher number of mood episodes, particularly manic, in the group with PD may have important treatment implications, such as the risk of manic switching and cycle acceleration with the use of antidepressants, and this should be further investigated.

**REFERENCES:**
1. Simon NM, Otto MW, Wisniewski SR et al. Anxiety disorder comorbidity in bipolar disorder patients: data from the first 500 participants in the 2. 2. 2. Systematic Treatment Enhance ment Program for Bipolar Disorder (STEP-BD). Am J Psy chiatry 2004; 161: 2222-2229.
2. . McIntyre RS, Soczynska JK, Bottas A et al. Anxiety dis orders and bipolar disorder: a review. Bipolar Disord 2006; 8: 665-676.

**NR1-055**

## DEPRESSIVENESS IN MEDICAL AND LAW STUDENTS

*Rudolf Ljubicic,M.D. Clinical Hospital "Sestre milosrdnice",Department for Psychiatry Vinogradska Cesta 29 10000 Zagreb, Croatia, Ivana Ljubicic Bistrovic M.D., M.Sc.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this presentation, the participant should be able to recognize importance for implementing prevention of depression disorder at universities, because our research are showing presence of depression in students population.

**SUMMARY:**
INTRODUCTION:University education has commonly been regarded as highly stressful, resulting in increased risk for psychological and physical well being of students.The Department of psychiatry,School of medicine,University of Rijeka,offers a number of elective subjects,one of them being the subjects titled "Depression".With the awareness of the facts about the incidence and under treatment of depressive disorders we have hypothesized that the overwhelming interest might reflect applicant's personal agenda, possible mean of self-help within the given options.Therefore,we have decided to measure the level of depressiveness in third year medical students and compare it to the level of depressiveness in matching population of law students.
METHODS:Our subjects were third year medical (N=89) and law (N=60) students enrolled in their respective undergraduate programs.The level of depressiveness was measured using 21-item Beck's self-evaluation depression questionnaire at a single time point.
RESULTS:There was no statistically significant difference in the level of depressiveness between students.Gender difference in the level of depressiveness was also tested, and no statistically significant difference was found.Medical students were found to have more mild depressiveness,and were less frequently not depressed at all, or severely depressed.Law students were more frequently not depressed at all,or severely depressed. Statistically significant differences were found in the item XIV. Negative self-image, and in the item XV.Work incompetence. Law students scored significantly higher in the item XIV,while medical students scored significantly higher in the item XV.
CONCLUSION AND DISCUSSION:Although there was no difference in the overall level of depressiveness between medical and law students,the structure of the depressiveness was different.Medical students were found to have more mild depressiveness,while low students were more frequently not depressed.

**REFERENCES:**
1. Ko SM, Kua EH, Fones CS: Stress and the undergraduates. Singapore Med J 1999; 40:627-30
2. Mosley Th, Perrin SG, Neral SM, Dubbert PM, Grothues CA, Pinto BM: Stress, coping and well-being among third year medical students. Acad Med 1994; 69:765-7

**NR1-056**

**COGNITIVE PERFORMANCE AND QUALITY OF LIFE IN BIPOLAR DISORDER**

*Sofia Brissos, M.D. Rua do Conde Redondo 8 3º dt 1150-105 Lisbon Portugal, 1150-105, Sofia Brissos, M.D., Vasco Videira Dias Psy.D., Flávio Kapczinski M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participants should gain knowledge on the clinical Implications of cognitive dysfunction for quality of life in patients with bipolar disorder, and that interventions directed to the cognitive rehabilitation of these patients may help achieve better quality of life.

**SUMMARY:**

Objective: In bipolar disorder (BD) patients, quality of life (QoL) scores have been largely attributed to mood symptoms. However, impairments in QoL may occur even in euthymia, and differential factors have been put forward as important determinants of QoL. The present study was designed to assess the role of cognitive performance in self-reported QoL in BD patients.

Method: This cross-sectional study examined the relationship between cognitive variables and self-reported QoL in 55 bipolar I euthymic patients and 50 healthy subjects. Participants were administered the World Health Organization Quality of Life Assessment – Abbreviated version (WHOQOL–BREF) and a battery of neuropsychological tests.Results: BD patients showed lower scores in all QoL domains as compared to control subjects. Poorer self-reported QoL correlated significantly with worse cognitive performance, especially on tests of executive functioning and verbal abstraction. A linear regression model revealed that all QoL domains were significantly predicted by cognitive variables, with variances ranging 12–37%, and between 24–54% when clinical variables were added to the model.

Conclusions: The present study showed that deficits in executive functioning and verbal abstraction were strong predictors of poor self-reported QoL. Our findings suggest that along with mood stabilization, adequate cognitive functioning is desirable for achieving better QoL. Cognitive functioning should be assessed in the context of the clinical evaluation of BD patients, and our findings suggest that cognitive rehabilitation may be an important factor for restoring QoL to baseline levels among BD patients.

**REFERENCES:**

1.Namjoshi MA, Buesching DP: A review of the health-related quality of life literature in bipolar disorder. Qual Life Res. 2001;10:105-115.

2. Piccinni A, Catena M, Del Debbio A, et al: Health-related quality of life and functioning in remitted bipolar I outpa tients. Compr Psychiatry. 2007;48:323-328.

**NR1-057**

**ARE PATIENTS WITH MANIA ENROLLED IN TREATMENT TRIALS REPRESENTATIVE OF PATIENTS IN CLINICAL PRACTICE?**

*Talamo Alessandra, M.D. McLean Hospital, Belmont, MA 02478, Alessandra Talamo, M.D., Ross J. Baldessarini, M.D., Franca Centorrino, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant may be able to compare subjects included/excluded from RCTs for new antimanic treatments with clinical patients testing potential clinical generalizability of research findings.

**SUMMARY:**

Introduction: Although evidence-based therapeutics requires that research findings have relevance to broad clinical populations, it is uncertain whether subjects in modern randomized, controlled clinical trials (RCTs) are representative of clinical patients and their clinical treatment-responses.

Methods: We derived representative inclusion/exclusion criteria from 21 recent RCTs for new antimanic treatments, and, with McLean Hospital IRB approval, we applied them to 67 hospitalized patients meeting *DSM-IV-TR* diagnostic criteria for type I BPD, in current manic or mixed states, and compared characteristics of those meeting all exclusion criteria to those who did not.

Results: Only 22% of included patients (n=15) met all exclusion criteria (potential "research subjects"); remaining "clinical patients" (n=52) differed markedly on exclusion criteria, with more psychiatric co-morbidity, recent substance abuse, and suicidal or violent acts, as expected. However, the groups were very similar in demographic, illness-history, and current symptomatic, as well as in treatment responses and initial outcomes, except that "clinical patients" were somewhat more likely to have had medical illnesses and to receive =2 psychotropic agents ("polytherapy") at discharge, whereas initial and final morbidity ratings, and their improvemesnt, were remarkably similar between groups.

Conclusions: These findings, though based on small samples in brief hospitalizations, suggest that manic patients likely to be included in modern RCTs may be more similar to clinical samples than expected, including in short-term response to antimanic treatments. The findings encourage further comparisons of subjects included/excluded from RCTs to test potential clinical generalizability of research findings.

**REFERENCES:**

1.Baldessarini RJ. Treatment research in bipolar disorder: issues and recommendations. CNS Drugs 2002; 16:721–729.

2.Licht RW. Limits of the applicability and generalizability of drug trials in mania. Bipolar Disord 2002; 4 (Suppl 1):66–68.

**NR1-058**

**DIRECT AND INDIRECT COSTS FOR OUT-PATIENT OF MAJOR DEPRESSION IN KOREA : PREPARATORY SURVEY**

*Yi S Sanggon, M.D. Psychiatric Part Presbyterian Medical Center, Jeonju City South Korea 560-750, Sanggon Yi, M.D., Jungil Gu, M.D., Hasung Yun, M.D., Hunjung Eun, Ph.D., Malrye Choi, Ph.D*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the economic burden of depression to Korean society and to help constructing data base of public health administration for utilization and effective distribution of medical resources.

**SUMMARY:**

Objectives : The aims of this study were to estimate Direct

and Indirect costs for Out-patient of Major depression and Coronary artery disease, the economic burden of depression to Korean society, and to help constructing data base of public health administration for utilization and effective distribution of medical resources.
Methods : We investigate costs of illness for 51 patients with Major depression who were treated over 6 months in Psychiatric department of Presbyterian Medical center and for 23 patients with coronary artery disease who were treat over 6 months in Cardiac department of Presbyterian Medical center, measuring both the direct cost of providing health care to depressive patients and the indirect costs as the value of production that is lost.
Results : The mean total cost per patient during 6 months is more expensive in major depression : direct costs is 2.4 times, indirect cost is 2.1 times.
Conclusion : Major depression has more much medical costs in similar income. In Korea, it needs recognitions for Indirect costs of illness. This fact will make it a major public health concern for the individuals afflicted, carers and decision makers.

**REFERENCES:**


1. Isacson D, Bingefors K, von knorring L. The impact of de pression is unevenly distributed in the population. Eur psy chiatry 2005;20:205-212
2. Hu TW (2006) An international review of the national costs of mental illness, 1990-2003. J Ment5al health Policy Econ 9:3-13


**NR1-059**

## CORTICAL EXCITABILITY IN SOCIAL ANXIETY DISORDER, A TMS STUDY UNDER ANXIOUS STIMULUS: PRELIMINARY DATA


*Bernardi Silvia, M.D. silvia.bernardi@gmail.com Florence Italy 50122, Ilenia Pampaloni, M.D., Sarah Antonini, Stefano Pallanti, M.D., Ph.D*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should know the meaning and neuropsychiatric employment of TMS measures of cortical excitability. Partecipants also will understand the hypothesis and the meaning of the link betwee anxiety and motor symptoms, facilitated by the neurobiological and clinical suggestion.

**SUMMARY:**


Transcranial magnetic stimulation(TMS)brief interference has allowed mapping of many sensory,motor,and cognitive functions,also probing brain mechanism of pharmacology, providing contributes to refinement of pathophysiological models.TMS can also be applied to explore cortical excitability of different regions.Altered cortical excitability has been found as linked to several anxious related emotion or disease: obsessive-compulsive disorder(1),panic disorder.Anxiety personality traits and worry have been linked to facilitation of corticospinal motor response,highlighting a theoretic association between anxiety and motor preparation(2).
Eligible patients were six right-handed outpatients aged 18-70, with a diagnosis of Social Anxiety Disorder(SAD),according to the DSM-IV TR criteria. Patients were drug free for at least 3 months. Psychiatric and medical comorbidities has been excluded. Six normal controls matched for sex and age have been enrolled. Single pulse TMS has been applied on Primary Motor Cortex in order to study neuronal excitability and cortical inhibitory mechanisms.These has been achieved by examining EMG recording MEP amplitude and Cortical Silent Period (CSP). Data were recorded during resting condition, during a math task and during anxiety induction with auditory paradigm related to social exposition.
TMS-induced larger MEP peak amplitudes for anxiety inducing task than math and resting conditions in both groups (resting m(ds):30,9(1,33); math task:33,6(2,46); anxious paradigm: 40,25 (6,73) t= 80,14; 20,71; 47,37 all df:11 p <.001). Differences were significant also between groups (resting F: .499 t: 2,21 df: 10 p:.051; math task: F:1,25 t:3,16 df: 10 p: .01; anxious paradigm F:5,16 t: 2,59 df: 10 p: .027).No differences have been found in other parameters. These results support the theoretically link between anxiety and action preparation, observation empirically supported by the involvement of dopamine system in SAD neurobiology.


**REFERENCES:**


1. Greenberg BD, Ziemann U, Corá-Locatelli G, Harmon A, Murphy DL, Keel JC, Wassermann EM.Altered cortical excit ability in obsessive-compulsive disorder.Neurology. 2000 Jan 11;54(1):142-7.
2. Oathes DJ , Bruce JM , Nitschke JB . Worry facilitates cor ticospinal motor response to transcranial magnetic stimula tion. Depress Anxiety. 2007 Nov 28


**NR1-060**

## NEUROCHEMICAL MECHANISMS OF AFFECT CONTROL DYSREGULATION IN BORDERLINE PERSONALITY DISORDER: INVOLVEMENT OF THE ENDOGENOUS OPIOID SYSTEM


*Alan R Prossin, M.B.B.S 205 Zina Pitcher Place, Ann Arbor, MI 48103, Kenneth R. Silk, M.D., Tiffany F. Love, BS, Robert A. Koeppe, Ph.D., Jon-Kar Zubieta, M.D., Ph.D.*


**EDUCATIONAL OBJECTIVE:**

Recognize the involvement of the endogenous opioid system in the regulation and dysregulation of affect in people with Borderline Personality Disorder. Describe the neuroanatomic structures involved in the affective dysregulation in Borderline Personality Disorder. Discuss the clinical implications of the dysregulation of emotion processing circuitry and neurotransmitters in Borderline Personality Disorder.

**SUMMARY:**


Introduction: To date no neuroimaging studies have outlined the role of the endogenous opioid system (OS) in the affective dysregulation, which is central to the morbidity and mortality of borderline personality disorder (BPD)1. The role of the OS in the regulation of affect in Major Depression (MDD) has been proposed2. We hypothesize a differential utilization of the OS in the regulation of affect in BPD's as compared to healthy controls.
Methods: Participants: 18 female BPD's and 14 healthy controls of similar age, gender, and education
Setting: Neuroimaging facilities at a university medical center.
Procedure: Using PET in association with the μ-opioid receptor (μOR) selective radiotracer [11C]carfentanil, measures of μOR availability were obtained during both sustained neutral and sadness states, as previously described in healthy subjects and

patients with MDD2. Subtraction analyses of binding potential (BP ˜ Bmax/Kd) maps were then performed within subjects, between conditions, on a voxel-by-voxel basis using SPM99 and correction for multiple comparisons at p<0.05.Results: At baseline, the BPD's showed greater μOR BP than controls in the left and right orbito-frontal cortex (OFC), but lower μOR BP in the left and right posterior thalamus. When comparing the sad state to the neutral state, the BPD's evidenced activation of the μOR in the right nucleus accumbens, right ventral pallidum, left caudate, left amygdala, and the left posterior thalamus. The controls evidenced activation in the left amygdala. Conclusions:These data demonstrate differences in μ-opioid receptor availability at baseline in brain regions involved in emotion regulation (posterior thalamus) and in decision-making and motivated behavior (OFC) between BPD and controls. In addition, a more pronounced response of the OS during an emotional challenge was observed in BPD's. These results implicate an important role of the OS in the pathophysiology of BPD.

**REFERENCES:**


1. Lis E, Greenfield B, Henry M, Guile JM, Dougherty G: Neuroimaging and genetics of borderline personality disor der: A review. J Psychiatry Neurosci 2007; 32(3):162-73.
2. Kennedy SE, Koeppe RA, Young EA, Zubieta JK:Dysregu lation of endogenous opioid emotion regulation circuitry in major depression in women. 3. 3.Arch Gen Psychiatry 2006; 63(11):1199-208.


**NR1-061**

**CONTROL OF IMPULSIVENESS WITH ARIPIPRAZOLE IN PERSONALITY DISORDERS-CLUSTER B**


*Juan Carlos Navarro-Barrios, M.D. Dept. of Psychiatry- Hospital of Motrill (Granada) Spain 18007, Esteban-Pinos Inmaculada, M.D., Canabate-Prados A, M.D., Gonzalez Maria Luisa N., Carretero Dolores N.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: identify the probable utility of Aripiprazole in control of impulsiveness in patients with Personality disorders Cluster B.

**SUMMARY:**


Personality disorders are defined by the American Psychiatric Association as "an enduring pattern of inner experience and behavior that deviates markedly from the expectations of the culture of the individual who exhibits it". Personality disorders (PD) type Cluster B (dramatic, emotional, or erratic disorders) are: Antisocial, Bordeline, Histrionic and Narcissistic personality disorder.

The dimension Impulsiveness - Aggressiveness is a frequent motive of consultation in the patients with Personality Disorders. This study shows the probable utility of the Aripiprazole (a novel atypical antipsychotic drug) in this field. Objectives: To evaluate the effectiveness of Aripiprazole in the control of the impulsiveness in Personality Disorders Cluster B. Methods: Aripiprazole was used as pharmacological treatment in 12 subjects, with diagnosis of Borderline Personality Disorder (n=8), Antisocial Personality (n=2), and Histrionic Personality Disorder (n=2), with ages between 18 and 59 years, associated with bosses of acting-out. The average dose of the Aripiprazole was of 15 mg/day. In some moment of the treatment 75 % of the patients received benzodiazepines, and 41,6 % received an SSRI. We not utilized antipsychotic or other anti-epileptic. The instrument utilized for to evaluate the impulsiveness was Barratt's Scale to the beginning and to 20 weeks of treatment. For this study we valued as improvement for the control of the symptoms the reduction of 20 % of the total punctuation of the subscales, to 20 weeks of treatment, with relation to the basal. Results: We founded improvement in Barratt's Scale at the week 20 of treatment, in 58.3 % of the subjects (n=7) .The subscale with more improvement was the Motorboat Subscale. Conclusions: Aripiprazole can be useful for control of the acting-out in the Personality Disorders, needing open study and double-blind.



* Supported in part by an unrestricted educational grant from Bristol-Myers Squibb Spain.


**REFERENCES:**


1. Kellner M: Aripiprazole in a therapy-resistant patient with borderline personality and post-traumatic stress disorder. Pharmacopsychiatry 2007; 40(1):41.
2. Nickel MK, Loew TH, Pedrosa GilF: Aripiprazole in treat ment of borderline patient, part II: a 18-month follow-up. Psychopharmacology 2007;191 (4):1023-6.


**NR1-062**

**NEIGHBORHOOD INFLUENCE ON DIAGNOSIS AND TREATMENT USE IN PERSONALITY DISORDERS: COLLABORATIVE LONGITUDINAL PERSONALITY DISORDER FINDINGS**


*Zach Walsh, M.S. 111 John St Providence, RI 02906, Providence, RI 02906, M. Tracie Shea, Ph.D., Shirley Yen, Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) recognize the importance of neighborhood factors when evaluating potential barriers to treatment use; and 2) recognize that neighborhood factors might underlie apparent socioeconomic and ethnic differences in treatment use.

**SUMMARY:**


Introduction: Neighborhood factors have been found to predict psychopathology and treatment use in children and adults. However, little research has examined the influence of neighborhood among personality disorder (PD) individuals. This study aimed to determine whether members of four different PD groups differed with regard to neighborhood socioeconomic status (NSES). The study also aimed to determine the extent to which NSES predicted treatment use, both independently and in combination with other sociodemographic factors.
Method: This longitudinal study examined relationships among NSES, PD diagnosis and treatment use among 165 adults from four personality disorder diagnostic groups: Avoidant, Borderline, Schizotypal and Obsessive Compulsive. Supplemental analyses examined interrelationships among study variables and other sociodemographic factors. The use of several forms of mental health related services was assessed for a minimum two-year follow up period. Results: Diagnostic groups differed with regard to NSES, such that the Obsessive Compulsive Personality Disorder group was higher NSES than the other four groups. Lower NSES predicted less use of mental health services in general and individual therapy in particular. This relationship was stable across diagnostic groups. The

relationship between NSES and treatment use remained after controlling for individual socioeconomic status (ISES) and ethnicity. Relationship between treatment use and both ISES and ethnicity were mediated by NSES. Discussion: This study is the first to identify relationships between neighborhood factors and PD. Our findings provide further evidence for the importance of considering neighborhood factors among barriers to treatment of psychopathology. Indeed, NSES was a better predictor than established individual sociodemographic predictors such as socioeconomic status and ethnicity. Moreover, our findings suggest that the influence of these individual factors is mediated by NSES

**REFERENCES:**


1. Leventhal T, Brooks-Gunn J: The neighborhoods they live in: The effects of neighborhood residence in child and adolescent outcomes. Psyc Bull 2000; 126: 309-337
2. Bender DS, et al: Ethnicity and Mental Health Treatment Uti lization by Patients with Personality Disorders. J Consult Clin Psychol in press.


**NR1-063**

## EXECUTIVE FUNCTION ASSESMENT IN ATTENTION DEFICIT HYPERACTIVITY DISORDER NAIVE CHILDREN BEFORE AND AFTER METYLPHENIDATE TREATMENT


*Belén M Rubio, Hospital Universitario de Canarias38205 La Laguna, Tenerife, Canary Islands, Spain, La Laguna, TenerifeSpain 38205, Raquel Martín, Psy.D., Pedro González-Pérez, Psy.D., Oscar Herreros, Psy.D., Sergio Hernández, Psy.D., Itziar Quintero, Psy.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to; recognize the potential effect of methylphenidate-oros to increase the performance in executive function in ADHD children.

**SUMMARY:**


Objectives: To assess if methylphenidate-oros has a potential effect increasing the performance in executive function in ADHD children, and to determine if initial difference between ADHD and control groups disappear after one month daily methylphenidate-oros treatment. Methods: Participants were 20 ADHD children (according to *DSM-IV-TR* criteria), and 20 control group children (age 7-12 year). Both groups were matched in age, IQ, school grade, and social-demographic stratus. We used the D2 Brickenkamp Attention Test; Working Memory Test; Tower of Hanoi; Wisconsin Card Sorting Test; Digits of WISC-R; Visual Memory Span WMS-III; COWAT Test; Stroop Test; ADHD-RS-IV (DuPaul et. al, 1998); Conners Rating Scale; WISC-R, K-BIT; and the Harris Tests of Lateral Dominance. These neuropsychological tests were administered three times in naive ADHD patients: before treatment, after the first methylphenidate-oros dose and after one month of daily treatment. At the same time, these tests were administered to the control group. Data was analyzed using ANOVA and MANOVA statistical package.

Results: Statistically significant differences were found in executive performance after one month daily treatment with methyphenidate-oros, and in Attention parameters after only one dose in the ADHD group. Differences between the naive ADHD and control group in executive function were statistically significant before treatment but not after one month daily treatment. Conclusions: Our results suggest the potential effect of methylphenidate in improving neuropsychological parameters of executive function and some attention parameters related with executive functioning.


**REFERENCES:**


1.Greenhill, L.L., 2001. Clinical effects of stimulant medication in ADHD. In: Solanto, M.N., Arnsten, A.F.T., Castellanos, F.X. (Eds.), Stimulant Drugs and ADHD. Oxford University Press, New York, pp. 31–71
2. Mehta, M.A., Owen, A.M., Sahakian, B.J., Mavaddat, N., Pickard, J.D., Robbins, T.W., 2000. Methylphenidate enhances working memory by modulating discrete frontal and parietal lobe regions in the human brain. Journal of Neuroscience 20, RC65.


**NR1-064**

## CHARACTERISTICS OF ANTIPSYCHOTIC POLYPHARMACY AT DISCHARGE: CHART REVIEW OF INVOLUNTARY PSYCHOTIC DISORDER PATIENTS AT A COUNTY PSYCHIATRIC HOSPITAL


*Daniel K Merrill, M.D. 570 West Brown, Mesa AZ 85201, Esad Boskailo, M.D.; Alfredo Velez, M.D.; Joanna Kowalik, M.D., M.P.H.; John Kingsley, M.D.; Gilbert Ramos, M.A.; Kathleen Mathieson, Ph.D.; Tuan-Anh Nguyen, M.D., M.P.H.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) Determine the prevalence and patterns associated with the use of multiple psychotropic pharmacotherapy; and 2) Identify factors associated with the use of multiple psychotropic medications.

**SUMMARY:**


Introduction: to determine characteristics of patients on single versus multiple antipsychotic medications at discharge.

Methods: Chart review conducted for 1,423 involuntary patients at a county inpatient psychiatric hospital, discharged with a primary psychotic disorder from January 1, 2003 to December 31, 2004 with one or more antipsychotic medications. Descriptive statistics such as means, standard deviations, and proportions were calculated on sociodemographic and clinical characteristics. Single and multiple medication groups were compared using chi-square for categorical variables, and t tests for continuous variables.

Results: Of the sample, 28% were discharged on multiple antipsychotic medications (MAM) with a mean age of 36.97 years (p=0.04). Mean age of single antipsychotic medication (SAM) group patients was 39.05 years. By gender, 30% of male patients were on MAM, compared to 25% of females (p=0.05). MAM patients made up 36% of those discharged to residential placement (p=0.02) and 56% of discharges to the state hospital (p=0.00). Mean GAF score was 47.5 in the MAM group, and 49.3 in the SAM group (p=0.01). Mean length of stay was 25 days in the MAM group and 17 days in the SAM group (p = 0.00). Of patients using mood stabilizers, 35% were on MAM (p=0.01). Of anxiolytic users, 33% (p=0.01) were on MAM. Thirty-five percent of schizophrenia paranoid type patients (p=0.00), 34% of schizoaffective patients (p=0.02), and 40% of mental retardation patients (p=0.02) were on MAM. Discharge

antipsychotic polypharmacy was not associated with patient race, chemical dependence, antidepressant use, or personality disorder.
Conclusion: MAM is widely prevalent and more likely prescribed to more severely ill, younger, male patients. Those on MAM are more likely to be on a mood stabilizer or anxiolytic medication and are more likely to stay longer in the hospital and to be discharged to residential placement or a state hospital than to be discharged to home.

**REFERENCES:**


1. Ganguly R, Kotzan JA, Miller LS, Kennedy K, Martin BC: Prevalence, trends, and factors associated with antipsychotic polypharmacy among Medicaid-eligible schizophrenia pa tients, 1998-2000. J Clin Psychiatry 2004; 651(10): 1377-1388
2. Kreyenbuhl JA, Valenstein M, McCarthy JF, Ganoczy D, Blow FC: Long-term antipsychotic polypharmacy in the VA health system: patient characteristics and treatment patterns. Psychiatric Services 2007; 58(4): 489-495


**NR.1-065**

## NEW INDICATIONS OF ANTIEPILEPTIC DRUGS IN A SPANISH ACUTE INPATIENT WARD.


*Eva Roman Mazuecos, M.D. Hospital Universitario La Paz Servicio de Psiquiatria.Pso Castellana 261, Madrid Spain 28045, Alejandra García Rosales, M.D., Juan José De Frutos Guijarro, M.D. (presenting), Belén Bardón Rivera M.D., Santiago Kassem Vargas M.D., Jesús Javier Marín Lozano M.D., Marife Bravo Ortiz M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to know the prescription of antiepileptic drugs in a Spanish acute inpatient ward.

**SUMMARY:**


IntroductionAntiepileptic drugs (AED) have been used for more than two decades to treat psychiatric disorders. At the beginning, they were prescribed for mood stabilization. Later on, they were also prescribed for impulse control, personality and eating disorders. These drugs are increasingly recommended and new molecules have been released.Material and MethodsThe authors reviewed the discharge summaries of all the patients admitted to the ward, from December 2002 to November 2007. They collected the following data: socio-demographic characteristics (including age, sex and length of inpatient stay), *DSM-IV-TR* diagnosis and dosages of all medications prescribed at discharge. They then studied the sub-population that had been prescribed AED. A bibliographical research was performed in Pubmed with the following keywords "Antiepileptic AND psychiatry".Results AED are used to treat: binge eating in patients with eating disorders, impulsivity in patients with personality disorders, drug withdrawal and relapse prevention as well as anxiety in patients that cannot be prescribed benzodiazepines. Sometimes, AED can be quite helpful in controling irritability and aggressive outbursts. Conclusions AED seem to be a quite good therapeutic option for prominent psychiatric disorders such as personality disorders, eating disorders, dual pathology, addictive behaviors in general, agitation, impulsivity or aggressiveness associated to another disorder. They appear to be a valuable alternative to conventional treatments and less associated with stigma, from the patients' viewpoint. Some AED may also be used in patients with comorbid organic disorders safely. Further studies are required to broaden the spectrum of indications of AED.


**REFERENCES:**


1. Goedhard LE, Stolker JJ, Heerdink ER, Nijman HL, Olivier B, Egberts TC. Pharmacotherapy for the treatment of aggres sive behavior in general adult psychiatry: A systematic review. J Clin Psychiatry. 2006 Jul;67(7):1013-24.
2. vsiew F. Antiepileptic drugs in psychiatry. J Neurol Neuro surg Psychiatry. 2004 Dec;75(12):1655-8.


**NR1-066**

## 2008 REVISION OF THE DEPRESSION PSYCHO-PHARMACOLOGY ALGORITHM AT THE HARVARD SOUTH SHORE DEPARTMENT OF PSYCHIATRY


*Hesham M Hamoda, M.D. Brockton VA Medical Center and Harvard Medical School, 940 Belmont Street Brockton, MA, 02301, Brockton, MA 02301, Mathews Thomas, M.D., David Osser, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to:1)Utilize an evidence based approach to the treatment of non-psychotic depression; and 2) Utilize an evidence based approach to the treatment of psychotic depression.

**SUMMARY:**


Background: This is the 2008 version of the web-based algorithms for major depression and dysthymia of the Psychopharmacology Algorithm Project at the Harvard South Shore Psychiatry Department. Earlier versions are available at www.mhc.com/Algorithms. The website has won awards including the 2004 Lundbeck International Neuroscience Foundation Award for excellence in postgraduate education in psychiatry and neurology. In this revision, we continue to emphasize cost-effectiveness and have incorporated findings from recent studies.
Methods:
The current algorithms and associated texts were evaluated. Evidence-based Medicine searches were done to answer questions relevant to each algorithm node. Based on these evaluations, we determined if there was justification for a change in the recommendations.
Results:
Major Depression: SSRIs (generics preferred) & bupropion are still 1st line options. Bupropion is more costly but would be preferred if sexual SEs are important to avoid. Two adequate monotherapy trials are recommended from the same or different antidepressant class. If the patient completes the 2nd trial with no significant response, we propose a 3rd monotherapy trial. With a partial response in the 2nd trial that is unlikely to be a placebo response, we propose that the patient make the choice between augmentation or a switch. STAR*D data suggest most partially responsive patients will prefer an augmentation. ECT can be a first-line option for high risk patients.
Psychotic Depression (PD): The 1st line treatment for inpatients with severe PD is ECT. The 1st line psychopharmacological treatment is a combination of an antidepressant & an antipsychotic (AP) (TCA/AP) or SSRI/AP). If either combination failed, switch to the combination with the other antidepressant. If both failed, reconsider ECT or lithium

augmentation. Other options include clozapine or augmentation with methylphenidate or thyroid hormone. If this is a moderately-ill outpat

**REFERENCES:**

1. Adli M, Bauer M, Rush AJ. Algorithms and collaborative-care systems for depression: are they effective and why? A systematic review. Biol Psychiatry 2006;59:1029-1038Cami niti C, Scoditti U, Diodati F, Passalacqua R. How to promote, improve and test adherence to scientific evidence in clinical practice. BMC Health Services Research 2005;5:62: access at www.biomedcentral.com/1472-6963/5/62

## NR1-067

## PRESCRIBING PATTERNS AND THE USE OF THERAPEUTIC DRUG MONITORING OF PSYCHOTROPIC MEDICATION IN A PSYCHIATRIC HIGH-SECURITY UNIT

*Ingrid Castberg, M.D. St. Olav University Hospital, Trondheim-Norway 3008, Olav Spigset, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should have gained insight into the use of therapeutic drug monitoring, polypharmacy and high doses in a high-security psychiatric unit. The participant should also be able to reflect on the similarities and diffences in adherence and drug metabolism in two different groups of psychiatric patients.

**SUMMARY:**

Objective: The aim of this study was to investigate the use of psychotropic medication and therapeutic drug monitoring in a high-security psychiatric unit, and to compare doses and serum concentrations both to those in a control group as well as to the generally recommended dose and serum concentration intervals.
Method: 132 patients were admitted to the unit in the period from January 2000 to December 2005. The control group consisted of other patiens on psychotropic drugs from whom samples for therapeutic drug monitoring had been sent to our laboratory. All samples were analysed by LC-MS.
Results: A total of 459 routine therapeutic drug monitoring analyses of 27 different drugs in samples from 8 females and 73 males were included. The median number of analyses per patient was 4 (range 1-29). Thirty-seven of the 81 patients (46%) used two or more antipsychotics at the same time. Clozapine, lamotrigine, olanzapine, quetiapine, ziprasidone and zuclopenthixol were often given in doses above those recommended. The serum levels were above the recommended intervals for clozapine, olanzapine, quetiapine, risperidone, ziprasidone and zuclopenthixol. The doses were significantly higher in the study group than in the control group for clozapine, lamotrigine and zuclopenthixol, whereas the serum levels were significantly higher for clozapine, lamotrigine, quetiapine and zuclopenthixol. The concentration-to-dose ratio was significantly higher in the study group than in the control group for quetiapine, but significantly lower for olanzapine.
Conclusions: The non-evidence-based practice of high dose polypharmacy with several antipsychotics was widely used in this unit. The use of higher doses in the study group than in the control group was not caused by differences in metabolism or adherence to treatment between the two groups. The frequent use of therapeutic drug monitoring did not seem to have a great impact on the prescribed doses.

**REFERENCES:**

1. Baumann P, Hiemke C, Ulrich S, et al. The AGNP-TDM expert group consensus guidelines: Therapeutic drug monitor ing in psychiatry. Pharmacopsychiatry 2004;37:1-23
2. Bengtsson F. Therapeutic drug monitoring of psychotropic drugs. TDM “noveau”. Ther Drug Monit 2004;26:145-51

## NR1-068

## METABOLIC DISORDERS INDUCED BY PSYCHIATRY DRUGS

*Juan Jose De Frutos Guijarro, M.D. Hospital Universitario La Paz.Servicio de Psiquiatria., Pso Castellana 261, Madrid, Spain 28046, Alejandra García Rosales, M.D., Belén Bardón Rivera, M.D., Eva Román Mazuecos, M.D., Jesús Javier Marín Lozano, M.D., Santiago Kassem Vargas, M.D., Marife Bravo Ortiz, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize metabolic disorders induced by psichiatry drugs.

**SUMMARY:**

Introduction Psychopharmacological treatment is a common cause of hyperprolactinemia, that may induce galactorrhea. Women may suffer amenorrhea, irregular menses and anovulation, whereas men may feature erectile dysfunction, azoospermia, gynecomastia with or without galactorrhea. Neuroleptic medication is usually the principal culprit, but other psychotropic medications may produce similar inconvenient side effects.New drugs may induce hyperprolactinemia, but generally no overt alterations are detected in a routine physical assessment.
When drugs are administered on a long-standing basis, weight gain and cholesterol metabolism disorders (e.g. low blood HDL levels) may become an issue.The purpose of this study is to determine the frequencies of prolactin and cholesterol metabolic disorders in the population belonging to the catchment area of La Paz University hospital. Material and Methods Over a year period, patients, both belonging to our catchment area and receiving psychiatric treatment (antidepressants, neuroleptics, mood stabilizers, benzodiazepines or drug combinations), were randomly selected. Blood was extracted from each patient. Blood prolactin and HDL levels were determined. Sociodegromaphic data and diagnosis at discharge were recorded. This study is ongoing at the moment.
Results.
Our preliminary results show that 83% of the sample has hyperprolactinemia and 72% has lowered HDL cholesterol blood levels. Some patients have complained of overt side effects such as weight gain, menstrual cycle distrubance, gynecomastia. No critical events have been reported up to now.
Discussion
Even though new drugs seem to be associated with less overt physical side effects, significant metabolic changes do occur. These changes may have important consequences on the long run. Neuroleptic drugs have traditionnaly been associated with these alterations, yet we must bear in mind that antidepressants can also potentially induce these very same side effects.

**REFERENCES:**

1. Cortet-Rudelli C, Sapin R, Bonneville JF, Brue T.Etiological diagnosis of hyperprolactinemia. Ann Endocrinol (Paris).

2007 Jun;68(2-3):98-105.
2. Molitch ME.Medication-induced hyperprolactinemia.Mayo Clin Proc. 2005 Aug;80(8):1050-7.

**NR1-069**

**QUETIAPINE VERSUS CLOMIPRAMINE AUGMENTATION OF SELECTIVE SEROTONIN REUPTAKE INHIBITORS FOR OBSESSIVE-COMPULSIVE DISORDER PATIENTS**

*Juliana B Diniz, M.D. R Dr Ovidio Pires Campos, 785 3o andar CEAPESQ sala 705403-010,São Paulo SP, São PauloBrazil 05403-010, Roseli Gedanke Shavitt, Ph.D., Ana Gabriela Hounie, Ph.D., Sonia Borcato, Psy.D, André Augusto Seixas, M.D., Janaina Cecconi, M.D., Izabel Pimentel, Euripedes Constantino Migue, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to report the results of an open trial comparing quetiapine augmentation with clomirpamine augmentation of SSRIs for obsessive compulsive disorder patients.

**SUMMARY:**

Background: Second line treatment strategies are necessary for obsessive compulsive disorder (OCD) patients that do not present a satisfactory response to current first line treatments. So far, the augmentation of serotonin reuptake inhibitors (SRIs) has been the most studied pharmacological second line treatment. Clomipramine augmentation of selective SRIs (SSRIs) has also been raised as a possible alternative to antipsychotics. However, no previous studies have compared these strategies. The objective of this study was to compare quetiapine augmentation versus clomipramine augmentation of SSRIs efficacy during 12 weeks for OCD patients that failed to respond to a SSRI. Methods: A randomized open trial with blinded raters was performed. The analysed sample comprised 8 patients in the clomipramine group and 11 in the quetiapine group. Mann-Whitney test was used to compare mean YBOCS scores and chi-square to compare the frequency of CGI 'much improved' and 'very much improved' between groups. An intention to treat, last observation carried forward was used. Results: There was a significant difference between initial and final YBOCS scores for both groups (p=0,017). The only trend of difference between groups in YBOCS scores was evident at week 4 (p=0,06) but not at weeks 8 and 12. CGI scores of 'much improved' and 'very much improved were more frequent in the quetiapine group but with no statistical difference between groups. Conclusion: Both augmentation strategies were effective in reducing YBOCS scores after 12 weeks, however initial response was better among SSRI plus quetiapine users. Clinicaltrials.gov registration NCT00564564.

**REFERENCES:**

1. March JS, Frances A, Kahn DA, Carpenter D (1997). The Expert Consensus Guideline series: treatment of obsessive-compulsive disorder. J Clin Psychiatry 58 (suppl):1–72.Pal lanti S, Hollander E, Goodman WK. A qualitative analysis of nonresponse: management of treatment-refractory obsessive-compulsive disorder. J Clin Psychiatry. 2004;65 Suppl 14:6-10.

**NR1-070**

**ITHIUM: DURATION ON TREATMENT AND CORRELATION WITH RENAL IMPAIRMENT**

*Susan Moore, M.D. 4 Cenacle Grove, Killiney,Co. Dublin, Ireland., Vidis Donnelly M.D., Mary Anderson, B.A., Niamh Farrelly, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the importance of regular monitoring of renal function regardless of age and duration on lithium treatment. We also hope to highlight the value of eGFR (estimated glomerular filtration rate) in assessing renal function in patients on lithium.

**SUMMARY:**

Introduction: Impaired renal function is a well established effect of lithium treatment. However, the evidence linking duration of lithium exposure and renal impairment is less well documented. This study aims to determine the length of time on lithium and risk of renal impairment. Methods: Computer records of all patients on lithium attending St. Patrick's psychiatric hospital, Dublin in 2006 (in/out patients) were evaluated (n=1281). Creatinine levels were obtained and an eGFR calculated using the abbreviated MDRD (sex, gender). Normal renal function was taken as eGFR > 80ml/min/1.73m2, mild renal impairment 60-80, moderate 30-59, severe <30. Duration of lithium exposure was obtained through a targeted chart review and assigned lithium reference number. Correlation coefficients were calculated using Microsoft Excel.Results: N=1280, male=45.6%.Duration on lithium, (eGFR): >10years n=353 (eGFR<30, severe=1.7%, 30-59, moderate=49.3%, 60-80, mild=45%, >80, normal=4%). 6-10years n= 235 (eGFR <30, severe=0.8%, 30-59, moderate=33.6%, 60-80, mild=57.4%, >80, normal=8.1%). 3-6 years n= 212 (eGFR <30, severe=0.5%, 30-59, moderate =34.4%, 60-80, mild =54.3%, >80, normal=10.8%). 18 months-3years n= 149 (eGFR <30, severe=0%, 30-59, moderate=30.2%, 60-80, mild =53.7%, >80, normal=16.1%). 0-18 months n= 331 (eGFR <30=0%, 30-59=33.5%, 60-60-80=53.5%, >80=13%). Normal renal function was found in 9.7% of total, mild renal impairment 52%, moderate 37.7%, severe 0.6%. Pearson value between duration and eGFR was -0.23 (p=0.000).Age had a moderate negative correlation with eGFR (Pearson value -0.557, p=0.000).There was an absense of correlation between eGFR and duration. Conclusion: Our study showed a moderate correlation between age and eGFR. We did not find a correlation between duration and eGFR. This confirms the importance of regular monitoring of renal function regardless of duration on lithium. Frequency of monitoring needs to be further establi

**REFERENCES:**

1. Levey AS, Greene T, Kusek J and Beck G: A simplified equa tion to predict glomerular filtration rate from serum creati nine. J Am Soc Nephrol. 2000; 11:155
2. Lepkifker E, Iancu I, Horesh N, Strous RD, Kotler M: Renal insufficiency in long-term lithium treatment. J Clin Psychia try. 2004; 65(6):850-6.

**NR1-071**

**PRIAPISM ASSOCIATED WITH QUETIAPINE DOSE INCREASE**

*Xiangyang Zhao, M.D. 11732 Lake Ave #105, Lakewood, OH 44107, Aashish Patel, M.D., Toni L. Johnson, M.D., Robert T. Segraves, M.D., Ph.D., Sherif Solomon, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) be aware of priapism as the infrequent side effect of quetiapine; and 2) be vigilant and educate patients esp. young adults about the symptoms of pripism.

**SUMMARY:**

Introduction: priapism, which is a persistent, painful penile erection usually not associated with sexual stimuli. Here, we report one case of priapism associated with quetiapine dose increase. Case: Mr. K, a 24 yr Caucasian male, brought to Metrohealth Medical Center Emergency room for prolonged, painful penile erection. Mr. K had a history schizoaffective disorder with a recent acute decompensation, for which he was admitted to the psych unit of another hospital. During the hospitalization, quetiapine was gradually increased to from 250mg to 600mg daily with escitalopram 10mg daily concurrently. In the past a few of days prior to this visit, he was awoken by painful penile erections in the morning with the 1-4 hours duration accompanied by dysuria. Penile detumescence achieved spontaneously. Patient denied genital trauma and had no similar episodes in the past. Physical exam revealed a healthy, not distressed young man with stable VS and unremarkable lung& heart. Genital exam revealed detumescent penile without trauma and lesion. In MSE, patient was oriented. He was a reliable informant. He was non-depressed. He denied auditory and visual hallucinations with chronic delusions of the same features as before. No pharmacological and surgical interventions were administered due to spontaneous penile detumescence. Patient was educated about the symptoms of priapism and was discharged with diagnosis of priapism secondary to psychotropics. We postulated that quetiapine was the primary causative agent due to its weak a-2 receptor antagonism effect for which quetiapine was replaced with Aripiprazole and Escitalopram was continued. No painful penile erection was observed since then. Discussion: In conclusion, priapism is an infrequent adverse effect of quetiapine with possible, severe sequela. Adequate patient education of prodromal symptoms of priapism is justified before the administration and dose adjustment.

**REFERENCES:**

1. Compton, M.T. and A.H. Miller, Priapism associated with conventional and atypical antipsychotic medications: a review. J Clin Psychiatry, 2001. 62(5): p. 362-6 Richelson, E., Recep tor pharmacology of neuroleptics: relation to clini cal effects. J Clin Psychiatry, 1999. 60 Suppl 10: p. 5-14.

**NR1-072**

## PREVALENCE OF METABOLIC SYNDROME IN SCHIZOFRENIC PATIENTS IN MAINTENANCE WITH ATYPICAL ANTIPSYCHOTICS

*Aline Serrano, M.D. Hospital Fray Bernardino Alvarez, mexico City Mexico 03100, Diana Molina, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize to the importance of antipsychotics as risk factors for Metabolic Syndrome.

**SUMMARY:**

Introduction: Metabolic Syndrome (MS) consists of a big risk factors constellation for cardiovascular diseases and metabolic abnormalities. In the Mexican general population it appears with prevalence or 21, 4%. In schizophrenic patients it has been observed that the life expectancy is reduced up to 20%; and close to 60% of the deaths in schizophrenia is caused by cardiovascular diseases, duplicating the prevalence of the MS in this population. Objective: To determine frequency of metabolic syndrome in a sample of adult schizophrenics, in maintenance phase with 4 atypical antipsychotics; Quetiapine, Risperidone, Olanzapine and Clozapine. Methods: Clinical evaluation of a sample of 40 schizophrenic patients diagnosed by DSM-IV criteria, in maintenance phase for more than 6 months. Laboratory studies included plasmatic glucose levels, triglicerides and HDL levels. Diagnosis of MS was made using the OMS and ATP III criteria. Results: 45% (18 patients) of the studied population presented MS. Frequency of MS by gender was 44% men, 32% women, with no significant differences by sex ( p=0. 59), neither by antipsychotic kinds ( p= 0.93), hereditary history (p=.05), tobacco ( p= 0 .75) or Mass Index (p= 0.31). mean age 31.6+6.8. Mass Index 27.8 + 3.8kg/m2 , glucose levels 98.4 + 15.8mmg/dl, Triglicerides 161 + 71.7 mg/dl, HDL 43.7 + 10.1mg/dl, Abdominal circumference 94.6+ 10.7cm.Glucose levels were significantly higher with olanzapine in comparison with the other groups ( p= 0.0001). There was not a significant difference towards the kind of antipsychotic and the presence of Metabolic Syndrome. Conclusions: Abdominal circumference turn to be the most significant criteria for MS in these patients showing direct relationship with intolerance to the glucose, hipertrigliceridemia, low HDL, and presentation of MS. A larger sample and follow up study is needed for more accurate conclusions.

**REFERENCES:**

1. Allison DB, Casey DE: Antipsychotic-induced weight gain: a review of the literature. J Clin Psychiatry 2001; 62(suppl 7):22-31.
2. Meyer J. Effects of Atypical Antipsychotics on weight and serum lipid levels.. J. Clin. Psychiatry 2001; 62: 27– 34.

**NR1-073**

## A CASE OF AGGRESSIVE AND VIOLENT PATIENT WITH TREATMENT-RESISTANT SCHIZOPHRENIA TREATED WITH LONG-ACTING INJECTABLE RISPERIDONE

*Bae Kyung Yeol, M.D. Psychiatry department, Chonnam National University Hospital, 8 Hakdong, donggu, Gwangju, Korea 501-757, Youn T, M.D.,Ph.D., Yoon JS, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize that continuous psychotic symptoms by non-compliance have made many therapists misdiagnose responsive schizophrenia as treatment-refractory, and long-acting injectable risperidone may have advantage in these cases.

**SUMMARY:**

Aggressive and violent behaviors are an important problem in psychiatric department. Treatment-resistant schizophrenia with aggressive and violent behavior is more and more growing problem in treatment and management. A 45-year-old treatment-

resistant schizophrenic male patient with aggressive and violent behavior was treated with long-acting injectable risperidone, added to previous antipsychotic medication. After adding long-acting injectable risperidone, his violent and aggressive behavior had been much improved. Patient's poor drug compliance was are improved, which is associated with frequent seclusion or restraint, and sedation induced by antipsychotic injection. This case shows the benefit of long-acting injectable risperidone, for aggressive and violent schizophrenic patient with treatment-resistant feature. In addition, this case proposed that the difficulty of administering antipsychotics to uncooperative patients with any cause, such as none of insight for diseases or aggressive and violent behavior, is added to the definition of drug compliance or adherence.

**REFERENCES:**


1. Kane J, Honigfeld G, Singer J, Meltzer H: Clozapine for the treatment-resistant schizophrenic. A double-blind comparison with chlorpromazine. Arch Gen Psychiatry 1988;45:789-796.
2. Keith SJ, Pani L, Nick B, Emsley R, San L, Turner M, et al: Practical application of pharmacotherapy with long-act ing risperidone for patients with schizophrenia. Psychiatr Serv 2004;55:997-1005.


**NR1-074**

**IMPROVING QUALITY AND CORRESPONDENCE OF CARE IN PATIENTS WITH SEVERE AND PERSISTENT MENTAL ILLNESS AND CO-OCCURRING DIABETES MELLITUS**


*Cheryl Graber, M.D. 671 Hoes LaneRoom C-205, Piscataway NJ 08854, Anthony Tobia, M.D., Carol Brooks, R.N., Danielle Fitzhenry, L.S.W., Katie Hilton, M.A., Theresa Miskimen, M.D., Gladys Tiu, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1)Recognize the importance of addressing co-occurring diabetes mellitus (DM) in individuals with severe and persistent mental illness (SPMI); 2)Identify important goals pertaining to diabetic status; 3) Identify the potential role antipsychotics play in the control of DM; amd 4)Discuss how participation in a specialized medication group improves coordination of care of individials with SPMI and co-occuring DM.

**SUMMARY:**


Introduction: It is well recognized that there is an increased incidence of type 2 diabetes in people with severe and persistent mental illness (SMPI). The reasons for this are multi-factorial, and include poor access to healthcare. This often leaves psychiatrists in the de facto role of coordinating care for co-occurring medical conditions such as diabetes. To date, no standardized model exists for coordinating care with outside providers such as endocrinologists. An efficient and effective model of coordinating care of illnesses like diabetes would greatly impact the general health and quality of life of individuals afflicted with SPMI.

Methods: 15 patients with schizophrenia attending a Partial Hospital program were asked to participate in this pilot study. All patients had a comorbid diagnosis of diabetes mellitus (DM). Baseline data were taken for three parameters including a) Health-Related Quality of Life Questionnaire b) Client Satisfaction Survey and c) a "Pre-Test" assessing the individual's knowledge of his or her medical illness (DM). Patients were asked to participate in a medication group focusing on their mental hygiene and comorbid DM. During the group, patients received medication management as well as education about DM and its treatments. At 12 months, the patients again completed the three surveys to evaluate the impact of this specialized medication group on their psychiatric and medical illness.

Results: Patients attending a specialized medication group were found to have improved knowledge of their medical illness and greater rates of follow-up with their endocrinologists. A review of the data revealed improved scores on the Health-Related Quality of Life Questionnaires and Client Satisfaction Surveys.

Conclusions: Treating psychiatrically ill patients in a medication group setting, specifically focused on medical comorbidity, is a unique and efficient model lending to improved quality of care and patient satisfaction.


**REFERENCES:**


1. Brown, S., Barraclough, B. & Inskip, H. (2000) Causes of the excess mortality of schizophrenia. British Journal of Psychia try, 177, 212 -217.
2 Lieberman JA, et al.: Clinical Antipsychotic Trials of Inter vention Effectiveness (CATIE) Investigators. Effectiveness of Antipsychotic Drugs in Patients with Chronic Schizophrenia. N Engl J Med. 2005 Sep 22;353(12):1209-23.


**NR1-075**

**DURATION OF UNTREATED PSYCHOSIS: A QUALITATIVE PHENOMENOLOGICAL ANALYSIS**


*Constantin Tranulis, M.D. 641 Huntington Avenue, Boston, MA 0211, Lawrence Park, M.D., Oliver Freudenreich, M.D., Laura F. Delano, B.A., Donald C. Goff, M.D., Byron J. Good, Ph.D.*


**EDUCATIONAL OBJECTIVE:**

The duration of untreated psychosis is of great clinical importance. At the conclusion of this presentation, the participant should be able to recognize the common signs and symptoms of the initial stages of psychosis and to understand the utility and challenges of retrospective assessments. Finally, the participant will have an enhanced capacity to evaluate critically the growing literature on early intervention in psychosis.

**SUMMARY:**


INTRODUCTION The duration of untreated psychosis (DUP) in a first episode of psychosis is an important concept for early intervention strategies and has prognostic implications. Assessment of DUP is most often done retrospectively, despite the inherent difficulty of this method. OBJECTIVE: To enrich and critique the assessment of DUP using phenomenological and illness narrative analyses.

METHODS We performed in-depth interviews (4-5 sessions) of 20 first episode psychosis patients and their caregivers, exploring the onset of psychosis and its context. Interviews were transcribed and coded using Atlas.ti for content analysis. These illness narratives were compared with the Interview for the Retrospective Assessment of Onset of Psychosis (IRAOS),which is arguably the gold-standard for DUP estimation.

RESULTS IRAOS-measured mean DUP was 232 +/- 482 days and median DUP was 41 days. Long DUPs were prevalent in

our urban sample, despite the relative availability of treatments and public understanding of mental illness. Subjective changes in self, in social experiences and in worldview sometimes predated positive psychotic symptoms or the psycho-social dysfunction. DUP changed in some cases when the illness narratives evolved during the study. In one striking example, the initial narrative stressed the role of a recent drug use into the etiology of psychosis, with a corresponding DUP was of only 3 days. However, at the end of the fifth interview the patient relabeled his years of struggling with spiritual quests into psychotic symptoms, with a self-report of a DUP of 2 years. CONCLUSION Illness narratives influence the way subjective experiences are appraised and transformed into psychiatric symptoms, thereby determining the assessment of DUP. In this sense, DUP is not a simple and static construct, thus good clinical skills with a focus on the individual's subjective experience are essential in its assessment.

**REFERENCES:**


1. Hafner HA, Riecher-Rossler A, Hambrecht M et al.: IRAOS: an instrument for the assessment of onset and early course of schizophrenia. Schizophr Res 1992; 6(3): 209-23
2. Marshall M, Lewis S, Lockwood A et al.: Association be tween duration of untreated psychosis and outcome in cohorts of first-episode patients: a systematic review. Arch Gen Psy chiatry 2005; 62(9): 975-83.


**NR1-076**

## CHROMATIN REMODELING AND CANDIDATE GENE REGULATION IN SCHIZOPHRENIA


*David P Gavin, M.D. The Psychiatric Institute University of Iioisat Chicago, 1601 W. Taylor St., Chicago, IL 60612, Cherise Rosen Ph.D., Saritha Kartan B.S., Robert Marvin M.D., Rajiv P. Sharma M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to better understand the mechanisms of epigenetic gene regulation, as well as the evidence supporting the role of chromatin remodeling abnormalities theorized to be present in schizophrenia. The potential diagnostic and therapeutic applications of agents that alter chromatin structure will be discussed.

**SUMMARY:**


Histone deacetylases (HDAC) induce a restrictive chromatin state which has been implicated in schizophrenia. GAD67 is an epigenetically regulated schizophrenia candidate gene. HDAC inhibitors, such as trichostatin A (TSA) and vaproic acid (VPA), increase acetylated histone 3 (acetylH3) protein levels and GAD67 mRNA expression in patients and in cultured lymphocytes. Lymphocytes were isolated from 21 normal, 11 bipolar, and 24 schizophrenic subjects. Diagnoses were confirmed using SCID and symptoms rated with PANSS. Cells were incubated with 100nM TSA or vehicle (DMSO) for 24 hours. GAD67 mRNA expression was measured using realtime RT-PCR, and acetylH3 by Western blot analysis. We found schizophrenic subjects to have lower baseline acetylH3 levels compared to bipolar or normal subjects (0.90 vs. 2.73 and 1.44; $p<0.004$), and to show smaller increase in GAD67 mRNA expression after TSA treatment (23% vs. 953% and 158%; $p<0.03$). GAD67 and acetylH3 were significantly correlated in TSA-treated cells among normal subjects ($r=0.682$; $p<0.03$), but not in schizophrenia ($r=0.167$; p=ns). We also found a significant correlation between negative symptoms and baseline acetylH3 levels ($r=-0.378$; $p<0.04$). Our results confirm previous findings that schizophrenic chromatin is generally more rigid, and that HDAC inhibitors are less effective at inducing chromatin remodeling. The expected positive correlation between acetylH3 and GAD67 levels in TSA-treated cells was found only among normal subjects. Intriguingly, we found a correlation between negative symptoms and restrictive chromatin. Taken together, these results provide further evidence of the association between schizophrenia and chromatin remodeling abnormalities, and suggest that these differences are more profound in a subset of schizophrenic patients. Further study of the use of chromatin remodeling agents for both diagnostic and therapeutic purposes in schizophrenia, particularly for negative symptoms is warranted.


**REFERENCES:**


1. Sharma RP, Grayson DR, Gavin DP: Histone deactylase 1 expression is increased in the prefrontal cortex of schizophre nia subjects: Analysis of the National Brain Databankmicro array collection. Schizophr Res. 2007; In press.
2. Sharma RP, Rosen C, Kartan S, Guidotti A, Costa E, Gray son DR, Chase K: Valproic acid and chromatin remodeling in Schizophreniz and bipolar disorder: preliminary results from a clinical population. Schizophr Res. 2006; 88:227-31.


**NR1-077**

## PERFORMANCE IN TESTS OF FACIAL EMOTION RECOGNITION AND THEORY OF MIND IN PROBANDS WITH SCHIZOPHRENIA AND THEIR UNAFFECTED FIRST-DEGREE RELATIVES


*Delfina de Achával, B.A., FLENI Instituto "Raúl Carrea" Montañeses 2325 8th floor , Buenos Aires , C1428AQK, Argentina , Elsa Y. Costanzo, M.D., Ignacio Jáuregui, María E. Martin, B.A., Liliana Sabe, B. Sc., Rodolfo D. Fahrer, M.D., Ph.D., Inés Vázquez, Ramón C. Leiguarda, M.D., Salvador M. Guinjoan, M.D., Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) describe the deficits of individuals with schizophrenia in the performance of both verbal and visual tasks of social cognition; 2) extend such observations to first-degree relatives of probands with schizophrenia who are unaffected by the disease; 3) elaborate a hypothesis that accounts for the link between observations in both groups; and 4) understand the potential of social cognition deficits as vulnerability markers.

**SUMMARY:**


Background: Social cognition is affected in individuals with schizophrenia. It is unclear to what extent the deficits are shared by unaffected family members and the nature of the relationship between deficits in different paradigms of social cognition performance.

Methods: We tested the performance in tests of recognition of emotions in faces and eyes (Baron Cohen, 2001), in a test of social faux pas (Stone et al 1998) and in theory-of-mind stories (Happé, 1999) in 16 individuals with chronic, stable schizophrenia attending the outpatient clinic of FLENI, 19 first-degree relatives of such patients, and in 20 healthy persons. A

one-way ANOVA was used to compare the groups, followed by a Tukey´s test as post hoc method.
Results: Patients had a poorer overall performance in recognition of faux pas stories (F=4.851, p=0.018) and Happe´s theory-of-mind stories (F=3.411, p=0.032), but in our sample there were no significant differences in the recognition of emotions in eyes and faces. First-degree relatives of schizophrenic probands showed an impaired recognition of faux pas stories when compared with healthy persons (p=0.044). We observed no significant differences in performance in social cognition tests between probands and their relatives. Performance in visual and verbal tests of social cognition were correlated in relatives (r=0.77, p<0.001) and probands with schizophrenia (r=0.493, p=0.052), but not in healthy individuals.
Conclusion: Our results suggest that individuals with schizophrenia and their first degree relatives display a similar pattern of social cognition information processing, although social cognition deficits seem less intense in the latter.

**REFERENCES:**


1. Baron-Cohen, S., Wheelwright, S., Hill, J., Raste, Y., Plumb, I. (2001). The 'Reading the mind in the eyes' test revised ver sion: A study with normal adults, and adults with Asperger Syndrome or High-Functioning autism. Journal of Child Psy chology and Psychiatry Aliied Disciplines, 42, 241-252.
2. Stone, V.E., Baron-Cohen, S., Knight, R.T. (1998). Frontal lobe contributions to theory of mind. Journal of Cognitive Neuroscience, 10, 640-656


**NR1-078**

## AN INNOVATIVE MODEL FOR THE MANAGEMENT OF CO-OCCURRING MEDICAL CONDITIONS IN PATIENTS WITH SEVERE AND PERSISTENT MENTAL ILLNESS


*Gladys T Tiu, M.D. 671 Hoes Lane Room C-205, Piscataway NJ 08854, Cheryl Graber, M.D, Carol Brooks, R.N., Danielle Fitzhenry, L.S.W., Katie Hilton, M.A., Theresa Miskimen, M.D., Anthony Tobia, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to ; 1)Recognize the importance of addressing co-occurring medical illness in individuals afflicted with severe and persistent mental illness; 2)Identify important goals pertaining to physical health status that need to be addressed by the psychiatrist; and 3) Discuss how the application of the specialized medication group model improves coordination of care lending to improvements in physical health.

**SUMMARY:**


Objective: To study the impact of a specialized medication group on the physical health status of individuals with severe and persistent mental illness (SPMI) and co-occurring medical conditions attending a partial hospital program.
Methods: At the Acute Partial Hospital (APH) program in Monmouth Junction, NJ, patients have their medications monitored in a medication group setting. Approximately 50 patients with schizophrenia and co-occurring medical conditions took part in this pilot study to test if participation in a group comprised of patients with similar medical illness resulted in more efficient coordination of care and improvement in physical health status. Patients met inclusion criteria if they attended the APH, and if they carried a diagnosis of either a) viral hepatitis infection, b) obstructive sleep apnea, or c) diabetes mellitus. Baseline data were taken for general knowledge of their particular medical illness and a checklist of items considered to be the standard of care. At 12 months, data were collected on all patients to evaluate the impact of this specialized medication group on the identified parameters.
Results: After 12 months of participating in the specialized medication group, patients were found to have greater knowledge of their medical illness and improved global functioning. Their clinical psychiatric stability was unaffected or improved as measured by Clinicians' Rating Scales. The impact of nursing and case management resulted in more efficient coordination of care with primary providers and specialists which was reflected in the number and quality of diagnostic tests and routine (per treatment guidelines) assessments obtained.
Conclusions: The assignment of mentally ill patients to a medication group according to their physical illness is a unique and efficient model lending to improved quality of care, patient satisfaction and overall well being.


**REFERENCES:**


1. Centers for Disease Control and Prevention. Recommenda tions for prevention and control of hepatitis C virus infec tion and HCV-related chronic disease. MMWR Recomm Rep. 1998; 47: 1-39.
2. Yaggi, HK, et al.: Obstructive Sleep Apnea as a Risk Factor for Stroke and Death. N Eng J Med 2005; 353(19): 2034-2041.


**NR1-079**

## PERIODS OF RECOVERY IN DEFICIT SYDROME SCHIZOPHRENIA: A 15-YEAR MULTIFOLLOWUP STUDY


*Gregory P Strauss, M.A. University of Illinois at Chicago 912 South Wood Street, Chicago, IL 60612, Martin Harrow, Ph.D. Cherise Rosen, Ph.D., Linda S. Grossman, Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to have greater understanding of the value of negative symptoms as predictors of functional outcome and periods of recovery over a 15- year period for patients with schizophrenia.

**SUMMARY:**


Periods of recovery were examined in patients with and without deficit syndrome schizophrenia. Participants included 33 patients with schizophrenia who were divided into deficit and non-deficit syndrome schizophrenia subtypes using a proxy method, and 39 non-psychotic depressive comparison patients. Patients were taken from the Chicago Follow-up Study, which prospectively examined patients at regular intervals over a 15-year period. Recovery was examined at five time points measured at 2, 4.5, 7.5, 10, and 15 years post index. Patients were evaluated for recovery for 1 or more years using an operational definition of recovery. Cumulatively, over the 15-year period only approximately 13% of patents classified as meeting criteria for the deficit syndrome showed one or more periods of recovery, in comparison to 63% of non-deficit patients and 77% of patient controls. These results indicate that the deficit syndrome represents a particularly chronic

sub-sample of schizophrenia patients, with continuous social, occupational, and symptom impairment. In contrast, non-deficit syndrome schizophrenia patients showed at least some periods of remission or recovery, with the likelihood of these periods increasing as they get older. Findings have implication for rehabilitation programs, as they suggest that deficit syndrome status may require services that differ from those applied to most schizophrenia patients if social and occupational functioning is to be improved. Additionally, findings provide further support for the validity of the deficit syndrome subtype and suggest that deficit status is characterized by a chronic course of illness and particularly poor long-term prognosis.

**REFERENCES:**


1. Carpenter WT Jr, Heinrichs DW, Wagman AM: Deficit and nondeficit forms of schizophrenia: the concept. Am J Psychia try 1988; 145:578–583
2. Fenton WS, McGlashan TH: Antecedents, symptom progres sion, and long-term outcome of the deficit syndrome in schizophrenia. Am J Psychiatry 1994; 151:351–356


**NR1-080**

## A BRIEF COGNITIVE ASSESSMENT TOOL FOR SCHIZOPHRENIA (B-CATS): VALIDATION AND RELATIONSHIP TO A MEASURE OF FUNCTIONAL CAPACITY


*Irene Bratti, M.D. 11301 Wilshire Blvd WLA VAHCS B151-H, Los Angeles CA 90073, Joseph Ventura, Ph.D., Stephen R. Marder, M.D., Richard S.E. Keefe, Ph.D., Steven P. Reise, Ph.D., Robert M. Bilder Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to identify the items used in the B-CATS and understand the relationship between B-CATS scores, MATRICS scores, and UPSA scores. The participant should recognize the relevance of a brief cognitive assessment for schizophrenia, and its utility in clinical practice.

**SUMMARY:**


Introduction: The cognitive deficits associated with schizophrenia are profound, enduring, and contribute substantially to chronic disability and unemployment. New treatments are being developed for cognition in schizophrenia, but clinicians are limited in their ability to assess cognition due to a lack of brief and easily administered instruments. We have assembled a very brief and easily administered battery composed of existing cognitive tests that generates a summary score representing global cognitive function. We expect the B-CATS to correlate highly with a more comprehensive neuropsychological battery and to correlate in the low to moderate range with a measure of functional capacity.
Methods: Data collection is ongoing. Outpatients with schizophrenia as diagnosed by SCID (current N=31) were administered the B-CATS, a comprehensive neuropsychological battery (MATRICS battery), and a measure of functional capacity, the UCSD Performance-Based Skills Assessment (UPSA). The B-CATS was correlated with the MATRICS battery, and will be correlated with the results from the UPSA. Administration times of the MATRICS battery and B-CATS were compared.
Results: Preliminary analyses demonstrate a correlation of 0.82 ($p<0.001$) between the B-CATS and the MATRICS battery. Administration times for the B-CATS range from 9-14 minutes, while the MATRICS battery takes an average of 64 minutes to complete. Analyses of the relationship between the B-CATS and the UPSA are ongoing and will be presented.
Conclusion: The B-CATS correlates highly with the MATRICS battery and explains 70% of the variance of the MATRICS global score. We expect that the B-CATS will provide clinicians with information about functional capacity. The B-CATS can serve clinicians and researchers who want an estimate of global cognitive function without requiring a full neuropsychological battery.



This project is partially sponsored by a 2007 NARSAD Young Investigator Award awarded to Irene Bratti.


**REFERENCES:**


1. Green MF, Kern RS, Braff DL, Mintz J. Neurocognitive defi cits and functional outcome in schizophrenia: are we measur ing the “right stuff”? Schizophr Bull. 2000;26(1):119-136.
2. Dickinson D, Ragland JD, Calkins ME, Gold JM, Gur RC. A comparison of cognitive structure in schizophrenia pa tients and healthy controls using confirmatory factor analysis. Schizophr Res. Jul 2006;85(1-3):20-29.


**NR1-081**

## GALANTAMINE TREATMENT OF COMORBID NICOTINE DEPENDENCE IN PATIENTS WITH SCHIZOPHRENIA OR SCHIZOAFFECTIVE DISORDER


*James P Kelleher, M.D. St. Vincent’s Hospital- Westchester 275 North Street, Harrison, NY 10528, James P. Kelleher, M.D., Michal R. Shinnar, B.A., Vladimir Olshanskiy, M.D., Anil Malhotra, M.D., John Kane, M.D., Michelle Sonnenberg, B.A., Steven Lascher, D.V.M., M.P.H.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able o explain how galantamine was compared with placebo for the treatment of nicotine dependencein patients with schizophrenia or schizoaffective disorder, that galantamine was not found to be superior to placebo for nicotine dependence and that galantamine appears relatively safe for use in this population.

**SUMMARY:**


Nicotine dependence through cigarette smoking is estimated to affect 58-88% of patients with schizophrenia, compared with 25% of the general population, leading to significant medical morbidity and mortality. We evaluated whether galantamine, a cholinesterase inhibitor approved for the treatment of Alzheimer’s disease (AD), is beneficial in the treatment of nicotine dependence in patients with schizophrenia or schizoaffective disorder. Seventeen subjects with schizophrenia of schizoaffective disorder, with Fagerstrom Tests of Nicotine Dependence (FTND) greater than or equal to 5, were randomly assigned to receive double blind treatment with galantamine for a total of 12 weeks, starting at 8 mg/day, and increasing to 16 mg/day and 24 mg/day at weeks 5 and 9 respectively, according to the AD treatment guidelines. Treatment response was assessed using percent of carbon monoxide in expired air (%CO) and FTND scores as primary variables. Impact on positive, negative and cognitive symptoms was assessed using Brief Psyhiatric Rating Scale and Scale for the Assessment of Negative Symptoms, and a battery of tests including the

Wisconsin Card Sorting Test. Safety was assessed using the UKU side effect profile and other measures. Results showed that, used in this way, galantamine treatment was not superior to placebo in decreasing nicotine dependence, although it appeared to be relatively safe. Pending further analyses, psychosis and cognitive measures do not appear to have been significantly impacted by this treatment.

**REFERENCES:**


1. Diehl A, Nokovics H, Croissant B, Smoklka MN, Batra A, Mann K: Galantamine reduces smoking in alcohol-dependent patients: a randomized, placebo-controlled trial. Int J Clin Pharmacol Ther 2006; 44:614-622
2. National Institute on Drug Abuse/College on Problems of Drug Dependence: Consensus statement on evaluation of outcomes for pharmacotherapy for substance abuse/depen dence. Washington DC, April 1999 http://views.vcu.edu/cpdd/reports/nida_cpdd_report.pdf


**NR1-082**

## DIFFERENCES IN TP53, APC GENE POLYMORPHISMS BETWEEN KOREAN SCHIZOPHRENIA AND COLON CANCER PATIENTS


*Jiah Lee, M.D. Department of psychiatry, Dong-A University Medical Center, Dongdaesin-dong 3ga-1, Seo-gu, Busan, South Korea, 602-715, Beom-mo Kang, M.D., Byeong-moo Choe, M.D., Seong-Hwan Kim, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize that the APC polymorphisms in schizophrenic patients, especially those found in males, may be associated with reduced vulnerability to colon cancer.

**SUMMARY:**


Compared with the general population, lower incidence of cancers in schizophrenic patients has been observed. It has been proposed that genetic predisposition toward schizophrenia is associated with reduced vulnerability to cancer. Both TP53 and adenomatous polyposis coli (APC) genes are tumor suppressor genes. Furthermore, both genes are involved in colorectal tumorigenesis as well. Studies on the their own functions, associations on neurodevelopmental process, and location of these two genes imply that both TP53 and APC genes may be involved in the pathogenesis of schizophrenia. Therefore, in order to examine to the role of TP53 and APC genes in the pathogenesis of schizophrenia and genetic difference, the polymorphisms of both genes were studied in Korean schizophrenic patients (SPR), colon cancer patients (CA) and normal controls (No. of each group=248; male 139, female 109). Three SNPs (rs1042522, rs2078486, rs8064946) on the TP53 gene and seven SNPs (rs2439591, rs2546117, rs1816769, rs2439595, rs1914, rs2229992, rs465899) on APC were investigated. There were no significant differences between all three groups on the three TP53 polymorphisms. Also the APC gene polymorphisms in SPR were not significantly different from those of the controls. However, in the comparison of the genotype frequencies, the rs2439591 and rs2229992 of APC polymorphisms in the male CA were significantly different from those of controls. The T allele of rs2439591, T of rs2229992, and G of rs465899 displayed significantly lower frequencies in the male CA than controls. In the dominant model, the male CA showed significantly lower frequencies of CT/TT genotype of rs2439591, CT/TT of rs2229992 and GA/GG of rs465899 than in controls after adjusting for age (Odds Ratio(OR)=0.53; 95% Confidence Interval(CI) 0.31-0.91, OR=0.61; 95% CI 0.37-0.99, OR=0.56; 95% CI 0.32-0.97). When compared with CA, the male SPR showed the significant differences regarding the APC polymorphisms.


**REFERENCES:**


1. Levav I, Lipshitz I, Novikov I, Pugachova I, Kohn R, Barch ana M, Ponizovsky A, Werner H: Cancer risk among parents and sibling of patients with schizophrenia. Br J Psychiatry 2007; 190:156-161
2. Cannon TD, Kaprio J, Lönnqvist J, Huttunen M, Koskenvuo M: The genetic epidemiology of schizophrenia in a Finn ish twin cohort. A population-based modeling study. Arch Gen Psychiatry 1998; 55:67-74


**NR1-083**

## EFFECT OF POLYMORPHISMS OF DOPAMINE SIGNALING ON PREPULSE INHIBITION IN SCHIZOPHRENIA


*Jodi D Krumrine, B.A. Schizophrenia Related Disorders Program Maryland Psychiatric Research Center, University of Maryland School of Medicine P.O. Box 21247, Baltimore, MD 21228, Ikwunga Wonodi, M.D., L. Elliot Hong, M.D., O. Colin Stine, Ph.D., Jada Lewis M.S., & Gunvant K. Thaker, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) discuss the significance of the PPI deficit endophenotype in schizophrenia research; and 2) understand the role of DAT1 and COMT functional polymorphisms in dopaminergic signaling and their influence on PPI in individuals with schizophrenia.

**SUMMARY:**


Objective: Prepulse inhibition (PPI) deficit is a schizophrenia endophenotype extensively used in animal models of psychosis. PPI is under substantial genetic control, and extensive pharmacological profiling supports a complex role of dopamine in modulating its neurobiology. We present preliminary findings on the effects of the DAT1 variable number of tandem repeats (VNTR) polymorphism and COMT val158met polymorphism on PPI in schizophrenia compared to healthy control subjects. Functional polymorphisms in the DAT1 and COMT genes have been shown to modulate cortical dopamine and performance on neurocognitive endophenotypes of schizophrenia. We hypothesized that DAT1 10/10 and COMT met/met genotypes, which increase extracellular dopamine would affect PPI individually and/or additively. Method: Startle response to PPI was measured in 136 unrelated individuals (92 with schizophrenia). DAT1 genotyping was available in a subgroup of 96 subjects (63 with schizophrenia) and COMT genotyping was available in 65 subjects (45 with schizophrenia). Data on both DAT1 and COMT genotyping was available in a subgroup of 51 subjects (35 with schizophrenia). We compared the individual and combined effects of DAT1 10/10 and COMT met/met genotypes on PPI and on PPI by diagnostic groups. Results: PPI deficit approached a significant association with schizophrenia ($p = 0.07$). Separately, DAT1 10/10 genotype and COMT val/met polymorphisms were not associated with

schizophrenia or PPI measures. Combined effects of DAT1 10/10 and COMT met/met genotypes showed a trend toward association with PPI and PPI by diagnostic groups. Discussion: This is an ongoing study and data from a larger sample will be presented. This line of work could help to further characterize the neurobiology of aberrant genes in schizophrenia, explore their functional paths, and identify novel molecular targets for drug development.

**REFERENCES:**


1. Anokhin AP, Heath AC, Myers E, Ralano A, Wood S: Genetic influences on prepulse inhibition of startle reflex in humans. Neurosci Lett 2003; 355:45-48.
2. Thaker GK, Wonodi I, Avila MT, Hong LE, Stine OC: Catechol O-methyltransferase polymorphism and eye tracking in schizophrenia: a preliminary report. Am J Psychiatry 2004; 161:2320-2322.


**NR1-084**

**AFFECTIVE SYMPTOMS AS AN INDEPENDENT RISK FACTOR FOR METABOLIC SYNDROME IN PATIENTS WITH SERIOUS MENTAL ILLNESS**


*Joshua S Kane, M.D. 345 Blackstone Blvd, Providence RI 02906, Mark S. Bauer, M.D., Sameed Khitana, B.S., Wen-Chih Wu, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to 1. Recognize the high risk of metabolic syndrome in patients with bipolar disorder and schizoaffective disorder as well as schizophrenia. 2. Consider the potential risk of anticonvulsants as well as antipsychotics in planning treatment for patients with these disorders.

**SUMMARY:**


Objective: To compare the prevalence and identify correlates of metabolic syndrome in patients with schizophrenia, schizoaffective disorder and bipolar disorder.

Methods: The investigators retrospectively identified all patients treated at the Providence VA with a diagnosis of schizophrenia, schizoaffective disorder or bipolar disorder during 2005-2006 (N = 1411) and extracted demographic and clinical data, including components of the metabolic syndrome, utilizing the electronic medical record.

Results: The rate of metabolic syndrome was highest among patients with bipolar disorder (46.61%, N=686) and schizoaffective disorder (45.5%, N=323), and lowest in patients with schizophrenia (36.5%, N=189). The difference in prevalence of metabolic syndrome was statistically significant between bipolar disorder and schizophrenia (p=0.0125) and schizoaffective disorder and schizophrenia (p=0.0458). Multivariate regression modeling, including clinical and demographic variables, medication use, and diagnosis, indicated that only diagnosis of bipolar disorder (p=0.01) or schizoaffective disorder (p=0.03), but not neuroleptic use, were significant predictors of metabolic syndrome; anticonvulsant use was significant at a trend level (p=0.06).

Conclusions: The rate of metabolic syndrome in this sample was highest among patients with bipolar disorder and schizoaffective disorder. These two diagnoses were the only independent predictors of metabolic syndrome in this population. This study revealed an alarmingly high prevalence of metabolic syndrome in patients with bipolar disorder and schizoaffective disorder as well as schizophrenia, and reinforces the need for rigorous screening and aggressive treatment of cardiovascular risk factors in this patient population.


**REFERENCES:**


1. Basu R, Brar JS, Chengappa KNR et al.The prevalence of the metabolic syndrome in patients with schizoaffective disorder-bipolar subtype. J Clin Psychiatry 2007;68:917-922
2. Suvisaari JM, Samuli IS, Perala J et al. Metabolic syndrome among persons with schizophrenia and other psychotic disorders in a general population survey. J Clin Psychiatry 2007;68:1045-1055


**NR1-085**

**MISIDENTIFICATION SYNDROMES: A REVIEW OF THE MOST COMMON FORMS AND THEIR OCCURRENCE IN A SINGLE PATIENT**


*Judie M Kwolek, M.D. Bergen Regional Medical Center230 East Ridgewood Avenue, Paramus, NJ 07652,*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to identify the features of the four main variants of the delusional misidentification syndrome, to understand some of the proposed etiologies of the syndrome from both a psychodynamic and biological perspective, and to appreciate profound impact these delusions can have with regard to treatment and management of patients experiencing these phenomena.

**SUMMARY:**


In 1923, the first of several variants of the delusional misidentification syndrome was described and named for its founder, Jean Marie Joseph Capgras. Over the next 55 years, successors of Capgras came to identify additional delusional disorders, all of which held the common theme of distorted identities. The following case report describes a 26-year-old-male with a history of Schizophrenia Paranoid Type since childhood. Throughout his years of battling a severe mental illness, he has presented with features of three of the four variants of this unusual syndrome. It serves as a unique teaching case as it provides an opportunity to review each of the delusions of the misidentification syndrome from a descriptive and historical perspective, and provides a glimpse of how each of these might present in a single patient. Consideration is given to both the psychodynamic and biological factors which may contribute to this phenomenon.


**REFERENCES:**


1. Atwal, S, KHAN, MH: Coexistence of Capgras and its re lated syndromes in a single patient. Australian and New Zea land Journal of Psychiatry 1986; 20:496-498.
2. Margarit, MM, Kontaxakis, VP: Approaching delusional mis identification syndromes as a disorder of the sense of unique ness. Psychopathology 2006; 39(6):261-268.


**NR1-086**

**SKELETAL STATUS IN PSYCHOTIC DISORDERS: A POPULATION STUDY**


*Krista Partti, M.S. National Public Health Institute, Department of Mental Health and Alcohol Research, Mannerheimintie 166,*

*Helsinki, Finland 00300, Markku Heliövaara, M.D., Ph.D., Jonna Perälä, M.D., Samuli Saarni, M.D., Jouko Lönnqvist, M.D., Ph.D., Jaana Suvisaari, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the end of this presentation, the participant should be able to recognize the association between schizophrenia and poor skeletal status in women, and to understand that affective psychoses may be associated with an increased risk of osteoporosis in men.

**SUMMARY:**

Introduction: Schizophrenia may be associated with decreased bone mineral density (1,2) through a still unclear mechanism. Previous studies, however, have been few in number, and limited by small and heterogeneous samples. Our study is the first general population survey of skeletal status in persons with psychotic disorder and in users of antipsychotic medication.
Methods: In a nationally representative sample of 8028 persons aged 30 or over, quantitative bone ultrasound values of the heel were measured from subjects with schizophrenia (n=48), other non-affective psychosis (n=56), affective psychosis (n=37), and from 6100 controls. In addition, the skeletal status of subjects with antipsychotic medication was assessed. The bone ultrasound results were expressed as age- and sex-adjusted Z-scores in units of standard deviation. Linear regression was employed to investigate whether psychotic disorders are associated with lower bone ultrasound values after controlling for the most common risk factors for osteoporosis, and for antipsychotic medication.
Results: The Z-scores, based on broadband ultrasound attenuation values, differed significantly from the female general population values in females with schizophrenia and low-potency antipsychotic medication (Z=-0.54, p=0.0014 and Z=-0.37, p=0.0075, respectively). Likewise, Z-scores were significantly lower in males with affective psychosis (Z=-0.37, p=0.0424), low-potency antipsychotic medication (Z=-0.41, p=0.0408) and mood-stabilizing medication (Z=-0.56, p=0.0279). Schizophrenia diagnosis remained an independent predictor of low Z-scores in women after adjusting for factors related to osteoporosis risk and for antipsychotic medication (Z=-0.45, p=0.0206).
Conclusions: According to our results, schizophrenia is an independent risk factor for poor skeletal status and fragility fractures in women. Our finding should be brought to the attention of clinicians, especially since osteoporosis is largely preventable.

**REFERENCES:**

1. Hummer M, Malik P, Gasser RW, Hofer A, Kemmler G, Naveda RCM, Rettenbacher MA, Fleischhacker WW: Osteo porosis in patients with schizophrenia. Am J Psychiatry 2005; 162:162-167.
2. Bilici M, Cakirbay H, Guler M, Tosun M, Ulgen M, Tan U: Classical and atypical neuroleptics, and bone mineral density, in patients with schizophrenia. Int J Neurosci 2002; 112:817-828.

**NR1-087**

## ADHERENCE TO ANTIPSYCHOTIC MEDICATIONS IN "FIRST-EPISODE" SCHIZOPHRENIA: PATIENTS ATTITUDES AND INFLUENCES

*Mamta Sapra, M.D. 6126 Sandhurst Drive, Roanoke, VA 24018, Peter J.Weiden, MD., Sunakawa A, MA., Schooler NR, Ph.D., Goldfinger S.M., M.D.*

**EDUCATIONAL OBJECTIVE:**

At the end of the presentation, the participants will be able to recognize that alliance with the clinician is a major factor influencing the adherence to antipsychotic medications in patients recovering from a first acute episode of schizophrenia. This presentation will present new data on attitudes and subjective reasons of adherence as reported by stabilized first episode patients.

**SUMMARY:**

Background: "First-episode" schizophrenia patients usually respond very well to their acute antipsychotic treatment, but often discontinue their medications shortly thereafter. A starting point in addressing this problem is to understand the determinants of adherence soon after the initial medication response.
Methods: The data was obtained from patients entering a prospective maintenance study comparing the effectiveness of long-acting vs. oral atypical antipsychotic for "first-episode" schizophrenia patients (Prevent First-Episode Relapse, or PREFER study). Patients entered into a research evaluation and diagnostic assessment phase lasting up to 12 weeks (Phase I). Those who met further treatment inclusion criteria were randomized to the recommendation of long acting risperidone microspheres vs. oral antipsychotic (Phase II). Out of 38 consented phase II patients, 34 were assessed at the 12 week post-randomization for their attitudes and influences for medication adherence. The attitudinal assessment of adherence was done using "Rating of Medication Influences" scale (ROMI). The ROMI has 2 subscales, one for adherence 'ROMI-A' and one for nonadherence 'ROMI-NA'.
Results: In ROMI-A, clinician alliance was rated as strong influence by 74% of the patients with highest median score of 3. Relapse prevention was rated strong by 44% of the patients and 41% rated perceived daily benefit as a strong influence. Ninety percent of the patients reported no influence of pressure/force. In ROMI-NA, the major influences were side effects (33% rated it as strong), no benefit (27% rated as strong) and 27% patients rated denial of illness as strong. No daily benefit and distress by side effects had the highest median score of 2.
Conclusions: Therapeutic alliance has the greatest influence on medication adherence during the post-discharge phase of stabilized "first-episode" patients from patients' perspective.
PREFER study was supported by Janssen

**REFERENCES:**

1.Weiden PJ,Rapkin B,Mott T, Zygmunt A, Goldman D, Frances A. Rating of medication influences (ROMI) scale in schizo phrenia. Schizophrenia Bulletin 1994; 20:297-310.
2. Robinson D,Woerner MG,Alvir J,Bilder R,Hinrichsen GA,Lieberman JA. Predictors of medication discontinuation by patients with first episode schizophrenia and schizoaffec tive disorder.Schizophrenia Research 2002;57:209-219.

**NR1-088**

## COMORBIDITY OF SCHIZOPHRENIA AND DEPRESSION

*Monica Negueruela, Fundación Jiménez Díaz, Avenida Reyes*

*Católicos, 2, Madrid, Spain 28040, Maria M. Perez-Rodriguez, M.D. Francisco Javier Quintero Gutiérrez del Álamo, M.D. Carlos Mur de Viu, M.D. María Martínez Vigo, M.D. Rocío Navarro Jiménez, M.D. Diana Zambrano-Enríquez Gandolfo, M.D. Enrique Baca García, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand prevalence between schizophrenia and depression.

**SUMMARY:**

Introduction: 39-60% of patients with schizophrenia meet criteria for more than one axis I disorder [1]; 7-20% report depressive symptoms in cross-sectional studies; and 25-75% report depressive symptoms in lifetime prevalence/follow-up studies [2]. Regarding the course of the depressive symptoms during inpatient treatment, it has been reported that they may decrease (in about 22% of the patients), persist (24%) or disappear (26%). § Material and methods: The sample included 27,077 patients (selected from a sample of 143,906 psychiatric patients) with a mean follow-up of 5.4 years and a mean of 28.9 evaluations by a psychiatrist (total number of evaluations=784,474). § Results: We found that 10.9% of patients had been diagnosed with schizophrenia (17.2% of males and 7.3% of females) and 40,7% with depression ( 27.2% of males and 48.5% of females); 6.5% had been diagnosed with schizophrenia and depression (6.3% of males and 6.9% of females). Among those patients with comorbid schizophrenia and depression, 28.4% received the diagnosis of schizophrenia in the first place, while 40.0% received the diagnosis of depression in the first place. § Conclusions: The majority of patients with comorbid schizophrenia and depression were diagnosed with depression in the first place. This may cause a delay in the diagnosis of schizophrenia. Moreover, depressi

**REFERENCES:**

1. Farrelly S, Harris MG, Henry LP, Purcell R, Prosser A, Schwartz O, Jackson H, McGorry PD. Prevalence and corre lates of comorbidity 8 years after a first psychotic episode. Acta Psychiatr Scand. 2007 Jul;116(1):62-70.
2. Siris SG. Depression in Schizophrenia. Am J Psychiatry 2000; 157: 1379-1389

**NR1-089**

## EARLY COGNITIVE RESPONSE TO TREATMENT IN FIRST EPISODE PSYCHOSIS

*Renata R Schoeman, M.Med. PO Box 19010 Tygerberg, Cape Town South Africa 7505, Chiliza B, M.B.Ch.B, FC Psych, Emsley R, M.B.ChB, M.Med(Pscyh), F.C .Psych, M.D*

**EDUCATIONAL OBJECTIVE:.**

At the conclusion of this session, the participant should be able to recognise that low doses of a long-acting conventional antipsychotic are effective in improving some aspects of cognitive function after a first episode of schizophrenia. The response is rapid, and coincided with improvement in positive symptoms. The failure of previous studies to demonstrate cognitive benefits of conventional antipsychotics may have been related to excessive doses being prescribed.

**SUMMARY:**

Background and aims Cognitive impairment is well documented in schizophrenia, and improves to some extent with treatment. Early cognitive changes in response to antipsychotic treatment are not well documented. We assessed early (12wk) cognitive changes and their relationships to psychopathology in 20 patients in an interim analysis of an ongoing study.
Methods Patients with a first episode of schizophrenia underwent MATRICS Consensus Cognitive Battery assessment at baseline, 4 and 12wks. PANSS ratings were completed. Treatment with low doses of oral and depot flupenthixol was commenced.
Results The sample consisted of 4 females and 16 males, with an average age of 21,22 years. The mean modal dose of flupenthixol was 10mg 2 weekly IMI .Two patients were withdrawn due to side-effects. The average premorbid IQ of the sample was on the 91st percentile as estimated by the Vocabulary subtest of the WAISS. Early changes in attention and concentration from baseline were present. Other cognitive domains (speed of processing, working memory, and visual learning) also improved and was correlated with changes in PANSS scores. Conclusion Low doses of a long-acting conventional antipsychotic are effective in improving some aspects of cognitive function after a first episode of schizophrenia. The response was rapid, and coincided with improvement in positive symptoms. The failure of previous studies to demonstrate cognitive benefits of conventional antipsychotics may have been related to excessive doses being prescribed.

**REFERENCES:**

1. Koren,D., Seidman,L.J., Goldsmith,M. and Harvey,P.D., 2006. Real-World Cognitive and Metacognitive Dysfunction in Schizophrenia: A New Approach for Measuring (and Reme diating) More “Right Stuff”. Schizophr Bull 32(2):310-26
2. Sharma, T. & Harvey, P. (2001). Cognition in schizophre nia: impairments, importance and treatment strategies. Oxford University Press.

**NR1-090**

## SUBLIMINAL PRIMING OF THREATENING EMOTION IN SCHIZOPHRENIA: GENUINENESS APPRAISAL

*Su Young Lee, M.D. Department of Psychiatry, Severeance Hospital, Yonsei University College of Medicine, 134 Shinchon-dong, Seodaemoon-gu, Seoul Korea 120-752, Jee In Kang, M.D., Kee Namkoong, M.D, Ph.D., Eun Lee M.D., Ph.D., Suk Kyoon An M.D, Ph.D*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to get an idea of processing of subliminal threatening emotion in patients with schizophrenia, especially in respects to appraisal conditions.

**SUMMARY:**

Objectives: The aim of this study is to examine the priming effect of the subliminal threatening emotion in patients with schizophrenia, and whether it varies when a paranoid tendency is evoked. Methods: Thirty-two patients with schizophrenia and twenty-six healthy controls performed two separated sessions, an affect appraisal session and a genuineness appraisal session which we developed to evoke paranoid tendency. The target stimulus was a 50% happy face, and the priming stimuli consisted of 50% happy, neutral and 100% fear faces. Subjects

were instructed to appraise the affect of the target faces and the genuineness of it in each session. The detection sensitivity(d') and the response bias(c) from the signal detection theory was used to examine the priming effect and the response tendency. Results: Patients with schizophrenia showed lower detection sensitivity of the fear primes compared to controls in the affect appraisal session(t=4.15, df=47.60, p<0.001), but not in the genuineness appraisal session. In the schizophrenia group, the response bias of the genuineness appraisal session was more negative than that of the affect appraisal session(t=2.08, df=31, p=0.046), and such negative bias correlated with subscale scores of delusion(r=-0.414, p=0.049) and hallucination(r=-0.440, p=0.037). Conclusion: Patients with schizophrenia showed a lower priming effect of the subliminal threatening emotion, but this result could vary in respects to appraisal conditions, such as a genuineness appraisal which seemed to correlate with paranoid symptoms.

**REFERENCES:**


1. Höschel K, Irle E: Emotional priming of facial affect identifi cation in schizophrenia. Schizophr Bull 2001;27(2):317-327
2. Murphy ST, Zajonc RB: Affect, cognition, and awareness: affective priming with optimal and suboptimal stimulus expo sures. J Pers Soc Psychol 1993;64(5):723-739


**NR1-091**

## VISUAL 3 STIMULUS EVENT-RELATED POTENTIAL P3A AND P3B IN PASSIVE PARADIGM IN ADMITTED PATIENTS WITH SCHIZOPHRENIA


*Su-Jin Kim, M.D. Department of Psychiatry Our Lady of Mercy Hospital, The Catholic University of Korea, Incheon Korea 403-720, Yang-Whan Jeon, M.D., Ph.D., E-Jin Park, M.D., Sang-Ick Han, M.D., Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to distinguish paradigm effects of conventional active paradigm from those of passive paradigm concerning event-related potential P300, of which might be more appropriate for exploring relatively uncooperative patients with schizophrenia.

**SUMMARY:**


INTRODUCTION: Even though it is well known that the event-related potential P300 is useful for exploring schizophrenia, it is not enough to be studied on the paradigm effects. This study was designed to examine that visual passive paradigm is appropriate for relatively uncooperative and admitted patients with schizophrenia. METHODS: Visual 3 stimulus oddball paradigm was employed for admitted patients with schizophrenia (N=33) and controls (N=35). The paradigm was composed of standard (small circle, 80%), distractors (large rectangle, 10%), and targets (large circle, 10%) in a random manner once every 2 s. The passive task was presented first, and the subjects were instructed to look at the monitor in relaxed manner. The active task was presented second, and subjects were asked to press a mouse button to the targets. P3a to the distractors is elicited in passive and active tasks. P3b to the targets is elicited in active task. RESULTS: In active paradigm, the P3a and P3b were successfully acquired in all 35 control subjects (100%), but in only 25 patients (76%). In passive paradigm, the P3a was elicited for 32 patients (97%) as well as for 35 control subjects (100%). Passive P3a (F=3.1, p=0.08 in amplitude, F=30, p<0.0001 in latency), active P3a (F=11.6, p=0.001 in amplitude, F=20 p<0.0001 in latency), and active P3b (F=2.9, p=0.09 in amplitude, F=12.4, p<0.001)) were smaller and delayed in patients with schizophrenia. With using mixed between (groups) and within (anterior-posterior and laterality) repeated measurement ANOVA, the three P300s showed topographic differences between two groups (F=2.4, p=0.03 in passive P3a, F=3.7, p=0.001 in active P3a, and F=3.4, p=0.01 in active P3b). CONCLUSION: The passive 3 stimulus visual P300 paradigm could be used for further exploring the patients with schizophrenia without or minimizing losing the information from some patients who are uncooperative with using only the conventional active P300 paradigms.


**REFERENCES:**


1. Polich J: P300 from a passive auditory paradigm. Electroen cephalogr Clin Neurophysiol 1989; 74:312–320
2. Jeon YW, Polich J: P3a from a passive visual stimulus task. Clin Neurophysiol 2001; 112:2202-2208


**NR1-092**

## COMPARISON OF CLOZAPINE AND TYPICAL NEUROLEPTICS ON PSYCHOPATHOLOGY, TOLERABILITY & FUNCTIONING IN EARLY NEUROLEPTIC-RESPONSIVE SCHIZOPHRENIA


*William V Bobo, M.D. 1601 23rd Avenue SouthSuite 3035Nashville, TN 37212, Nashville, TN 37212, Myung A. Lee, M.D., Phil Cola, M.S., Karuna Jayathilke, M.S., Herbert Y. Meltzer, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize thatclozapine may not provide comparatively greater effectiveness than typical antipsychotics among patients with early schizophrenia and a history of positive response to neuroleptic treatment, but may be more effective in preventing relapse during long term treatment.

**SUMMARY:**


Background: Due to the risk of agranulocytosis, utilization of clozapine has been restricted to neuroleptic-resistant schizophrenia. Considering other therapeutic advantages of clozapine, such as decreased suicidality and improvement in cognitive function, it is of considerable clinical interest to assess clozapine's risks and benefits in neuroleptic-responsive patients. Objective: To compare the effects of clozapine and typical neuroleptics on key effectiveness measures over long-term treatment in early stage, treatment responsive patients with schizophrenia (SCH) or schizoaffective disorder (SAD). Methods: This was a randomized, masked trial of two years duration involving 85 patients (clozapine, n = 40; typical neuroleptics, n = 45) who met DSM-IV criteria for SCH or SAD. Assessments of psychopathology (BPRS total and subscales, SAPS and SANS), quality of life (QLS), tolerability (BARS, AIMS), work functioning and cost or treatment were obtained at baseline, 6 weeks, and 6, 12, and 24 months. Results: Both treatments produced non-significantly different improvement in psychopathology. However, more relapse/rehospitalization and drop-outs occurred in the typical neuroleptic-treated compared to the clozapine-treated patients. Two patients treated with typical neuroleptics, but none treated with clozapine, became non-responsive to their treatment. The only difference in tolerability of the two treatments was

significantly greater weight gain in the clozapine-treated group compared to the typical neuroleptic group. Conclusions: Results of this study suggest that clozapine may not provide comparatively greater improvements in psychopathology effectiveness than typical antipsychotics among patients with early schizophrenia and a history of positive response to neuroleptic treatment, but may be more effective in preventing relapse during long term treatment. Further prospective study of clozapine's effects in this population is warranted.

**REFERENCES:**


1. Agid O, Remington G, Kapur S, Arenovich T, Zipursky RB (2007): Early use of clozapine for poorly responding first-epi ode psychosis. J Clin Psychopharmacol 27: 369-373.
2. Lee MA, Jayathilake K, Meltzer HY (1999): A comparison of the effect of clozapine with typical neuroleptics on cognitive function in neuroleptic-responsive schizophrenia. Schizophr Res 37: 1-11.


**NR1-093**

## GENDER IDENTITY DISORDER IN PARENT-CHILD RELATIONSHIPS


*Heather A Church, M.D. 92 Forbes Quay, Dublin, Ireland, Republic of 2, Donal O'Shea, M.D., James V. Lucey, M.D., Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should have a greater understanding of transgendered parents' relationships with their children. The participants will learn about how being a transgendered parent affects various aspects of their role as a parent. The participants will also gain knowledge of how being a parent affects both the time taken to transition and level of transition from one gender to another.

**SUMMARY:**


Introduction: About a third of people with Gender Identity Disorder (GID) are parents. They are a unique cohort in the population of people with GID as they have their child(ren) to consider. Objective: To describe the relationship between parents with GID and their child(ren) and to understand how being a parent affects transitioning from one gender to the other. Methods: Fourteen parents with GID completed the Index of Parental Attitudes (IPA). An IPA score of greater than 30 indicates parent-child relationship difficulties (range 0 to 100). The authors also conducted the SCID-I to establish other Axis I disorders. Results: We assessed 12 male to female (MtF) and 2 female to male (FtM) parents with GID residing in Ireland. In total, 14 GID parents had 28 children. Three children had no relationship with their GID parent. The other 25 children, as reported by the parent, had good relationships with their children. And, these 25 children's average score IPA score was 6.4 (range 0-25). Twelve GID parents (86%) believed that being a parent had no effect on their desired level of transitioning, while 2 were influenced not to transition. Eleven GID parents (79%) reported that being a parent had increased the time taken to commence transitioning, 2 have stopped transitioning altogether, while 1 cited no effect on time. Additional contributing factors affecting gender transition included their relationship with their partners, working environment, other family members, societal pressures, physical ailments preventing having hormones/surgery, religious beliefs and other Axis-I diagnosis that cause discomfort. Conclusion: Parents with GID reported either a positive relationship (n=11) or no relationship (n=3) with their children. Being a parent prolonged overall transitioning time in people with GID and affected achieved level in transitioning.


**REFERENCES:**


1. Di Ceglie D, Freedman: A Sranger in my Own Body: Atypi cal Gender Identity Development and Mental Health. London, UK, Karnac Books, 1998
2. Tully B: Accounting for Transsexualism and Transhomosexu ality. London, Whiting &Birch 1992


**NR1-094**

## A LITERATURE REVIEW OF THE TREATMENT OF NIGHTMARES


*Donald S Christman, M.D. 8738 Veranda Ct., San Antonio TX 78250-2624,*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to identify the various treatments of nightmares, both pharmacologic and psychologic as well as the degree of support for each in the current psychiatric literature.

**SUMMARY:**


Introduction/Hypothesis: Nightmares are often a significant component of posttraumatic stress disorder (PTSD) and evidence-based treatment should dictate a clinician's response to nightmares. No FDA-approved medication exists for the amelioration of nightmares. Furthermore, no APA guidelines exist for the management of nightmares. Methods: Literature review using OVID PsychINFO from 1806 to October 2007, limited to English language articles. Results: Eleven different medications and nine therapies have been reported to have some efficacy. Randomized, double-blind, placebo-controlled trials of the treatment of nightmares are rare. Only two such trials have been published, and both evaluated prazosin, an alpha-2 adrenergic antagonist. Conclusion/Discussion: Prazosin currently has the most empirical support for the treatment of nightmares. Of the psychological approaches, imagery rehearsal therapy (IRT) has the most convincing data. Although more research is needed to elucidate the best treatment for nightmares, some promising interventions exist.There are no relevant financial disclosures.


**REFERENCES:**


1. Raskind MA, Peskind ER, Hoff DJ, Hart KL, Holmes HA, Warren D, Shofer J, O'Connell J, Taylor F, Gross C, Rohde K, McFall ME: A Parallel Group Placebo Controlled Study of Prazosin for Trauma Nightmares and Sleep Disturbance in Combat Veterans with Post-Traumatic Stress Disorder. Bio Psych 2007; 61, 928-934.
2. Davis JL, Wright DC: Randomized clinical trial for treatment of chronic nightmares in trauma-exposed adults. J Traum Stress 2007; 20, 123-133.


**NR1-095**

## COGNITIVE BEHAVIORAL THERAPY FOR CHRONIC INSOMNIA


*Doo Soo Lee, M.D. Department of PsychiatrySt. Vincent's Hospital, The Catholic University of Korea, Suwon, Korea 442-723, Yoon-Kyung Shin, M.D., Seung-Chul Hong, M.D., Jong-Hyun*

*Jeong, M.D., Sung-Pil Lee, M.D., Jin-Hee Han, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize that cognitive and behavioral factors play an important role in insomnia, and cognitive behavioral therapy not only improves sleep disturbance in chronic insomnia but also decreases cognitive and physical hyperarousal and dysfunctional beliefs and thoughts associated with sleep.

**SUMMARY:**

INTRODUCTION: Recognition that cognitive and behavioral factors play an important role in insomnia has led to increased interest in therapies targeting these factors. Nowadays Cognitive Behavioral Therapy(CBT), in some cases coupled with drug therapy, is considered as the most effective treatment of chronic insomnia. We plan to investigate the efficacy of cognitive behavioral therapy for chronic insomnia. METHODS: We examined all of 22 chronic insomnia patients from May of 2007 to August. They voluntarily participated in CBT because they couldn't be satisfied with their sleep. Four sessions of CBT for insomnia included sleep hygiene education, stimulus control instruction, sleep restriction therapy, relaxation training, and cognitive therapy. All the patients completed the questionnaires including sleep diaries, visual analogue scale of subjective satisfactions with one's own sleep, the Pre-Sleep Arousal Scale, and the Dysfunctional Beliefs and Attitudes about Sleep Scale at the beginning and ending of CBT. RESULTS: Sleep logs showed that CBT-treated patients achieved a 40.5% reduction in their sleep latency and 19.6% increase in their total sleep time by study completion. Their nocturnal wake time after sleep-onset and number of awakenings were decreased 41.1% and 21.2% respectively and their sleep efficiency was increased 13.3%. The degree of cognitive arousal and physical arousal decreased 53.9% and 23.2% respectively. In addition, the degree of dysfunctional belief and thought associated with sleep diminished 29.2% after completion of CBT (Table 1). CONCLUSION: CBT not only improves sleep disturbance in chronic insomnia but also decreases cognitive and physical hyperarousal and dysfunctional beliefs and thoughts associated with sleep. Cognitive-behavioral therapy is a very effective intervention for chronic insomnia.

**REFERENCES:**

1. Mendelson WB: Combining pharmacologic and nonpharma cologic therapies for insomnia. J Clin Psychiatry 2007; 68 Suppl 5:19-23
2. Edinger JD, Wohlgemuth WK, Radtke RA, Coffman CJ, Car ney CE: Dose-response effects of cognitive-behavioral insom nia therapy: a randomized clinical trial. Sleep 2007; 30(2):203-212

**NR1-096**

## PREVALENCE OF SLEEP DISORDERS IN PATIENTS WITH SUBSTANCE DEPENDENCE.

*Youssef Mahfoud, M.D. Cleveland Clinic*
*9500 Euclid Avenue, Cleveland OH 44195, Farid Talih, M.D., David Streem, M.D., Kumar Budur, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) recognize various sleep disorders that are particularly common in patients with substance dependence; 2) understand the prevalence of various sleep disorders in patients with substance dependence; and 3) recognize the importance of screening for sleep disorders to enhance remission and prevent relapse of substance abuse/dependence.

**SUMMARY:**

Introduction: Substance abuse is a major public health problem with high morbidity and mortality. Comorbid disorders are suspected to cause a high relapse rate. Subjects with sleep disorders tend to self medicate with alcohol and tranquilizers to promote sleep or to abuse stimulants to stay awake during the day. Substance abuse can in turn cause sleep disturbances which can result in relapse. No studies have systematically studied the prevalence of various sleep disorders in these subjects. Methods: This is a cross-sectional study conducted at Cleveland Clinic Drug and Alcohol Rehabilitation Center. Subjects with active substance abuse and able to consent were requested to complete a comprehensive sleep disorder questionnaire including a general medical, psychiatric, and substance abuse history as well as validated scales including Insomnia Severity Index, Pittsburgh Sleep Quality Index (PSQI), Berlin Questionnaire for sleep apnea and Restless Legs Syndrome Questionnaire. Results: 25 patients completed the survey so far. The most commonly abused substance was alcohol (80%) followed by narcotics (44%) and more than 90% were polysubstance abusers. 56% of the patients reported using substance to self medicate sleep problems. The prevalence of various sleep disorders in this population along with the prevalence in general population in parenthesis are as follows: Sleep impairment (PSQI>5) was noted in 96% (15%) of the subjects and 56% (10-15%) had insomnia of moderate to severe degree. Symptoms suggestive of sleep apnea were reported in 60% (4-6%) of the subjects and Restless leg syndrome symptoms in 32% (10%). Conclusion: Substance abuse is on the rise and affects every aspect of society. Our study has for the first time systematically evaluated various sleep disorders in these subjects who seem 5 to 10 times more likely to have sleep disorders. Diagnosing and treating sleep disorders will have a huge impact in inducing remission.

**REFERENCES:**

1. Johnson EO, Roehrs T, Roth T et al. Epidemiology of alcohol and medication as aids to sleep in early adulthood.Sleep.1998; 21: 178-186.
2. Maher K-H .Treating insomnia in patients with substance use/abuse disorders. Psychiatric Times 2004; 21(2):1-7.

**NR1-097**

## LONGITUDINAL DIAGNOSTIC STABILITY OF FUNCTIONAL PSYCHOSIS IN PATIENTS WITH MULTIPLE ADMISSIONS

*Javad Moamai, M.D. Pierre Janet Hospital20 Pharand St., Gatineau, QuebecCanada J9A1K7,*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) Appraise the stability of functional psychosis diagnosis over time 2) Discuss the lack of long-term stability of different psychotic disorders in clinical practice.

**SUMMARY:**

BACKGROUND: The DSM-V Prelude Project recommends the creation of a new general psychosis syndrome that "would

cover a broad range of disorders ranging from schizophrenia, schizoaffective, delusional, and brief psychotic disorders, to bipolar disorder and psychotic depression". This new syndrome is relatively similar to the ICD-9 classification's concept of Functional Psychosis (FP), which was a controversial issue in its own time. Longitudinal Diagnostic Stability (LDS) is known to be a crucial link between clinical observations and diagnostic validity.AIM: To assess the LDS of first diagnosis in a group of patients with multiple admissions for FP, with attention to patterns of change across time.
METHOD: Data (ICD-9 format) was collected for all 2,383 subjects (age 13 years and older) who were admitted twice or more to a regional psychiatric hospital in Quebec from 1980 through 2007. Kappa statistics were used for each diagnosis.
RESULTS: Over the 26 year study period, overall kappa values decreased from 0.63 to 0.35 for FP, from 0.58 to 0.35 for affective psychoses and from 0.65 to 0.45 for schizophrenic psychoses. The positive predictive values (PPV) for affective psychoses decreased (74% to 61%) and for schizophrenic psychoses increased (72% to 81%) constantly over time. Nevertheless, the PPV for FP varied intermittently around 89% causing diagnostic instability, with time between first and last admissions having a significant influence.
CONCLUSIONS: Our study highlights that the diagnosis of FP would not improve LDS of different psychotic disorders in clinical practice. In fact, schizophrenic spectrum disorders might be more stable across time than the diagnosis of FP.

**REFERENCES:**


1. First MB: DSM-V Prelude project, deconstructing psychosis. http://www.dsm5.org/confererence5.cfm
2. Retterstol N: Classification of functional psychoses with special reference to follow-up studies. Psychopathology 1986; 19:5-15


**NEW RESEARCH YOUNG INVESTIGATORS' POSTER SESSION 2**

**MONDAY, MAY 5, 2008 12:30 P.M. – 2:00 P.M. WEST LOBBY, LEVEL ONE, WASHINGTON CONVENTION CENTER**

**NR2-001**

## MOTIVATIONAL INTERVIEWING INCREASES PHYSICAL ACTIVITY IN DEPRESSED INPATIENTS


*David D Benbassat, M.D. 135 rue Washington, Brussels, Belgium 1050, Paolo Dos Reis, Psy., Yun Van Driette, MD. Nelly De Nutte, MD., Philippe Corten, MD., Paul Verbanck, MD., Ph.D., Charles Kornreich, MD., Ph.D.*


**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to improve the treatment of depressed inpatient using motivational interviewing to increase the physical activity .

**SUMMARY:**

INTRODUCTION: Physical activity (PA) is recognized to be an efficient therapy for depression but few patients are practicing it. In the study, we aimed to show the interest of motivational interviewing in making depressed inpatients participate to PA.
METHODS: 70 depressed patients, hospitalized in a psychiatric unit were followed regarding their participation to indoor bike training sessions. The first 39 ones (controls = C) were informed that this training possibility was at their disposal without further comment. The 31 next ones (the participants = P) received one session per week of motivational interviewing. Frequency, time, and intensity of the indoor bike training were compared between groups. Demographical variables, BDI and STAI were recorded. There were no significant differences between groups regarding these variables. Participation frequency was recorded as the total number of sessions of physical training by each patient divided by the number of his hospitalization days. All the patients were treated pharmacologically.
RESULTS: The frequency of participation to PA for the P group is 0.45 participations per day [SD=0.14] versus 0.16 for the C group [SD=0.14]($p<0.0001$). This is an increase of PA practice from once a week to 3 times a week, which is the international recommendation. The mean energy spent at each participation is equivalent in both groups, 41.9 Kcal [SD=21.8] for the P group versus 44.2 Kcal [SD=32.7] for the C group.
CONCLUSIONS and DISCUSSION: This study shows for the first time that a cognitive-behavioral care, with motivational interviewing can raise significantly the frequency of participation to PA of depressed inpatients. Aboulia is not a fate to depressed inpatients. They can increase their PA to get the numerous benefits of physical exercise. This study needs to be replicated. It opens an important perspective in the treatment with PA as an add-on therapy for depression in psychiatric hospitalization.


**REFERENCES:**


1. Dunn AL, Trivedi MH, Kampert JB, Clark CG, Chambliss HO: Exercise treatment for depression: efficacy and dose response. Am J Prev Med 2005; 28(1):1-8
2. Rubak S, Sandbaek A, Lauritzen T, Christensen B: Motiva tional interviewing: a systematic review and meta-analysis. Br J Gen Pract 2005; 55(513):305-12


**NR2-002**

## ASSESSING ANXIETY IN AUTISM SPECTRUM DISORDER


*Angelo Porto, 4 West Mill Drive Apartment 1B Great Neck, New York 11021, Carla DeVincent, Ph.D., Kenneth D. Gadow, Ph.D.*


**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, participants should better understand how to assess DSM-IV-defined symptoms of Anxiety Disorders in children with Autism Spectrum Disorder.

**SUMMARY:**

Introduction: Historically, one of the more contentious issues in the clinical management of children with autism spectrum disorder (ASD) is whether their emotional and behavioral problems are co-morbid psychiatric syndromes or epiphenomena of ASD. The goal of this study was to validate a behavior rating scale for assessing anxiety in children with ASD. Method: Boys (N=200) between 6 and 12 years old (M=8.9) with diagnosed ASD and with IQs > 70 were evaluated with the RUPP Anxiety Scoring Algorithm (ASA-4) for the Child and Adolescent Symptom Inventory-4. Both parents and teachers completed ratings. Additional variables included IQ, ADOS, ADI-R, and adaptive functioning scores. Results: The

20-item ASA-4 evidenced satisfactory internal consistency (alpha). Item-total correlations were in the moderate range. Over forty percent of the study sample received a Screening Cutoff score for at least one anxiety disorder. ASA-4 scores were minimally correlated with IQ, but moderately correlated with ADHD, ODD, MDD, and psychotic symptom scores as well as the core features of ASD (Language Deficits, Social Deficits, Perseverative Behaviors). For the most part, the pattern of associations was similar for both parent and teacher ratings. When children were separated into low versus high anxiety groups, the latter exhibited significantly greater severity of other psychiatric symptoms and impairments in adaptive functioning. Conclusion: The ASA-4 shows promise as a useful clinical measure of anxiety in children with ASD and clearly warrants further study.

**REFERENCES:**


1. Gadow, K.D., DeVincent, C.J., Pomeroy, J., & Azizian, A. (2005). Comparison of DSM-IV symptoms in elementary school-aged children with PDD versus clinic and community samples. Autism, 9, 392-415.
2. Sukhodolsky, D. G., Scahill, L., Gadow, K. D., Arnold, L. E., Aman, M. G., McDougle, C. J., MacCracken, J. T, Tierney, E., Williams White, S., Lecavalier, L., & Vitiello, B. (2007).
3. Parent-rated anxiety symptoms in children with pervasive developmental disorders: Frequency and association with core autism symptoms and cognitive functioning, Journal of Abnormal Child Psychology.


**NR2-003**

## ELECTROCONVULSIVE THERAPY AS AN ALTERNATIVE TO DEEP BRAIN STIMULATION FOR MEDICATION-REFRACTORY TOURETTE SYNDROME.


*Carl Erik Fisher, B.A. 1051 Riverside Dr, Unit 21New York State Psychiatric Institute, New York NY 10032, Alexandra L Sporn, M.D., Antonio Mantovani, M.D., Ph.D. James F Leckman, M.D, Sarah H Lisanby, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the salient symptoms of Tourette Syndrome (TS), describe current understanding of its pathophysiology, articulate the different treatment options and their risks and benefits for treatment-refractory TS, and understand the potential role of electroconvulsive therapy in the treatment of TS.

**SUMMARY:**


INTRODUCTION: Multiple therapeutic brain stimulation modalities have been attempted in the treatment of Tourette Syndrome (TS), with varying evidence in support of their efficacy. A recent open trial of transcranial magnetic stimulation (TMS) has shown efficacy in treating the symptoms of TS and obsessive-compulsive disorder. Electroconvulsive therapy (ECT) for TS has shown conflicting results in prior case series. Deep Brain Stimulation (DBS) has received significant attention recently. METHOD: We review the literature on the pathophysiology of TS and the use of brain stimulation therapies for its treatment, and present a case of a 23-year-old man with intractable, medication-refractory TS with multiple comorbidities, requiring multiple hospitalizations for extreme agitation and self-injurious behaviors, and refractory to numerous medications, behavioral interventions, and botulism toxin injections. He was treated with TMS, then ECT as less-invasive alternatives to DBS. RESULTS: The patient, who was house-bound by his disease prior to stimulation treatments, initially responded to TMS but eventually relapsed. After a course of bilateral ECT, the patient achieved a marked decrease in tic burden, a complete remission of his major depressive episode, and a significant reduction in obsessive-compulsive symptoms. This remission has continued for over six months on maintenance ECT, as measured by the Yale Global Tic Severity Scale, the Yale Brown Obsessive Compulsive Scale, and the Hamilton Rating Scale for Depression. DISCUSSION: New possibilities for the mechanism of action of ECT in TS are proposed, namely the recently described effects of ECT on TMS measures of motor cortex excitability and possible GABAergic effects on striatal oscillatory tone. The role of ECT in the treatment of TS is discussed. This case study of ECT for TS, while open-label and consisting of one patient, may represent a promising and overlooked option in the treatment of TS.


**REFERENCES:**


1. Leckman JF, Bloch MH, Scahill L, King RA. Tourette syndrome: the self under siege. J Child Neurol 2006 Aug;21(8):642-649.
2. Singer HS. Tourette's syndrome: from behaviour to biology. Lancet Neurol 2005 Mar;4(3):149-159.


**NR2-004**

## EFFICACY OF EARLY INTERVENTION FOR CHILDREN AND ADOLESCENTS WITH ANXIETY DISORDERS


*Ethan S Rothstein, B.A. 1493 Cambridge Street Cambridge, MA 02139, Ethan S. Rothstein, B.A., Ana Carla Oltramari, M.S., Gustavo D. Kinrys, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to identify the appropriate intervention for children and adolescents with various anxiety disorders. This will include pharmacological treatments as well as cognitive-behavioral therapies. Participants will be able to recognize the types of interventions that have literary support for the treatment of children and adolescents with generalized anxiety, social anxiety, posttraumatic stress, and obsessive-compulsive disorders.

**SUMMARY:**


OBJECTIVES: The safety, efficacy and type of intervention for children and adolescents with anxiety disorders are complex. Many anxiety disorders first present in childhood and persist throughout the life span. Anxiety symptoms can be debilitating and are associated with high rates of comorbid disorders later in life. We examined the available literature with the goal of attempting to answer the following question: What are the short and long-term benefits of treatment early in the life cycle? METHOD: The researchers examined the literature for evidence-based reports on children (age 7-12) and adolescents (age 13-17) who were diagnosed with generalized anxiety (GAD), social anxiety (SAD), posttraumatic stress, (PTSD) obsessive-compulsive (OCD) and separation anxiety disorders. Interventions included cognitive-behavioral therapy (CBT) (or a modified version), pharmacological treatment or a combination of the two. RESULTS: We were able to identify 56 studies

for this review. There is evidence for the short-term benefits of the use of antidepressants for SAD and GAD. In addition, data in the literature support the efficacy of CBT in reducing symptoms of SAD, PTSD and OCD. The available literature suggests longer lasting effects of family-based CBT when compared to individual CBT in children. CONCLUSIONS: Our review suggests short-term benefits for the treatment of youths. Although data regarding the long-term outcomes of interventions appear to suggest long-term benefits as well, more studies are needed to confirm these findings.

**REFERENCES:**


1. de Groot J, Cobham V, Leong J, McDermott B. Individual versus group family-focused cognitive-behaviour therapy for childhood anxiety: pilot randomized controlled trial. Aust N Z J Psychiatry. 2007 Dec;41(12):990-7.
2. Beidel DC, Ferrell C, Alfano CA, Yeganeh R. The treatment of childhood social anxiety disorder. Psychiatr Clin North Am. 2001 Dec;24(4):831-46.


**NR2-005**

## SDQ-CAS INTERNAL CONSISTENCY IN COLOMBIAN CHILDREN: A PILOT-STUDY


*Heidi C Oviedo, M.D. Carrera 5 45-30 Bloque 3 Apto 301, Edificio Kramer Bogotá, David A. Rincón, M.D., Esperanza Acevedo, Psy.D., Adalberto Campo-Arias, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to know the big importance of screeening scales in children and adolescent psychiatry.

**SUMMARY:**


Objective/Hypothesis: Around 20% of children and adolescents have any disabling mental disease and 3-4% need specialtreatments. The aim of this study is to calculate the internal consistency of the Strength and DifficultiesQuestionnaire-Spanish version (SDQ-cas) in a sample of basic education students of Bucaramanga, Colombia. Method/Proposed Methods: This is an instrument validation study with-out a gold standard. This research was approved by the institution authorities. Participants signed an informed consent. We asked to168 parents to complete the SDQ-cas. This 25-item scale is compounded of five sub-scales, five items each one (emotional symptoms, conduct problem symptoms, interpersonal symptoms, hyperactivity, and pro-social behavior). Items have three options of answer. A group of 127 parents accepted to participate and completed the scale about their children conduct during the last six months. Finally, 107 parents completed fully the questionnaire. The mean age was 11.0 years (SD=0.89) and 52.3% were male. 57.0% were in sixth grade, and 43.0%, in fifth grade; and 82.2% were living in medium socio-economical level (3 y 4). Cronbach alpha coefficient was computed for each sub-scale. Results:The Cronbach alpha for emotional symptom sub-scale was 0.671; for conduct problem symptom sub-scale, 0.428; for interpersonal symptom sub-scale, 0.598; for hyperactivity sub-scale, 0.715; and pro-social behavior sub-scale, 0.464. The alpha coefficient for the entire scale without the five items of pro social behavior sub-scale was 0.781. Discussion/Significance: Conduct problem symptoms and pro-social behavior sub-scales had a poor performance in our sample and emotional symptoms sub-scales showed a modest coefficient. Only, the hyperactivity sub-scale presented an acceptable internal consistency. However, if a shorter and better scale is wanted, the five items of pro-social behavior could be deleted and the alpha improves significantly.


**REFERENCES:**


1. Goodman R. The strenghs and difficulties questionnaire: a research note. J Child Psych Psych 1997;38; 581-6.
2. Pineda DA, Puerta IC. Prevalence of dissocial conduct disor der in adolescents using an epidemiological diagnostic ques tionnaire. REV NEUROL 2001; 32: 612-8.


**NR2-006**

## TOTAL COMPETENCE, INTERNALIZING, AND EXTERNALIZING SYMPTOMS AS PREDICTORS OF SUBSEQUENT METABOLIC SONTROL IN DIABETIC YOUTH


*Ivana Balic, M.D. UTHSCSA Department of Psychiatry7703 Floyd Curl Drive, San Antonio TX 78229, Burleson W. Daviss, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to identify total social competence together with age and single parent marital status as strong predictors of the poor metabolic control in diabetic youth. Lesser predictors of poor metabolic control include dietary non-compliance, externalizing psychopathology, and family conflict.

**SUMMARY:**


Objective: To determine how well internalizing and externalizing symptoms and social competence predict subsequent metabolic control in diabetic youth relative to family and compliance factors. Introduction: Previous studies have suggested that poor metabolic control in diabetic youth may be the result of both internalizing and externalizing psychopathology and family problems (Naar-King et al. 2006; Lawrence et al. 2006). Methods: In 78 youths with type 1 diabetes recruited from a clinic or diabetic camp, internalizing and externalizing symptoms and total social competence on the Child Behavior Checklist, along with demographic and family factors and dietary compliance were examined as predictors of subsequent poor metabolic control (HbA1C >= 10 mg/dl) 3 months later. A backward stepwise logistic regression was done to examine the relative strength of these variables in predicting poor metabolic control. Results: 44 of 78 subjects had poor subsequent metabolic control. Age and living with single parent were significant predictors ($p<.05$) of poor metabolic control, as were lower total social competence, family conflict, dietary non-compliance, and externalizing but not internalizing symptoms. With all significant predictors from univariate analysis entered into a backward stepwise logistic regression, the final predictive model included age ($p=.02$), living with single parent ($p=.02$), lower total social competence ($p=.03$), dietary non-compliance ($p=.08$), and family conflict ($p=.09$) and correctly classified 73.7% of subjects with poor metabolic control. Conclusions: Lower total psychosocial competence is a strong independent predictor of poor metabolic control in diabetic youth, along with age and single parent marital status, while lesser predictors include dietary non-compliance, family conflict, and externalizing psychopathology. In contrast to prior studies, internalizing psychopathology was not a significant predictor in

the current sample.

**REFERENCES:**


1. Naar-King S, Podolski C-L, et al. Social ecological model of illness management in high-risk youths with type 1 diabetes. Journal of Consulting and Clinical Psychology 2006; 74(4): 785-9.
2. Lawrence JM, Standiford DA, et al. Prevalence and correlates of depressed mood among youth with diabetes: the SEARCH for Diabetes in Youth study. Pediatrics 2006; 117(4): 1348-58.


**NR2-007**

## CORRELATES OF MAJOR DEPRESSION TREATMENT CONTINUATION IN CHILDREN AND ADOLESCENTS IN THE UNITED STATES


*Jamie Johnson, B.A. 200 East 24th Street Apt. 1205, New York, NY 10010, Eda Inan, B.A., Sophia Haeri, B.A., Ramin Mojtabai, M.D., Ph.D., M.P.H.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to identify the extent and correlates of treatment discontinuation in children and adolescents with depression, understand the importance of perceived helpfulness in their decision to continue treatment, and recognize the influence of ethnicity and geographic access on continuation of treatment in this population.

**SUMMARY:**


Background: Treatment discontinuation in management of major depression constitutes a major problem in long term care of these patients. The present study seeks to examine the extent and correlates of treatment discontinuation in adolescents and children with major depression.

Methods: The extent and correlates of general and medication treatment discontinuation were assessed in a large sample of children and adolescents drawn from the National Survey on Drug Use and Health (NSDUH) for 2004-2005 who met diagnostic criteria for 12-month major depression and reported receiving treatment.

Results: A total of 8.6% of children and adolescents out of the total 36,972 met the criteria for major depression. Of these, 35.5% saw a professional for treatment of their depression in the past 12-months, and 17.4% took psychotropic medications. Only 38.1% of those who saw a professional in the past year were continuing treatment at the time of interview. Of those who took any medications, 66.0% were still using them at the time of interview. Adjusting for a variety of sociodemographic and other characteristics, children and adolescents who perceived their treatment as helpful and those who saw a psychiatrist were more likely to continue treatment in general and to continue medication treatment. Children with comorbid substance disorders were also more likely to continue medication treatment. However, children and adolescents from minority ethnic groups were less likely to continue treatment in general and with medications, and children who reside in rural areas were less likely to continue treatment in general.

Conclusion: Treatment discontinuation is common among children and adolescents with major depression and is associated with: lower perceived helpfulness of treatment, seeking treatment from providers other than psychiatrists, ethnicity and geographic access.


**REFERENCES:**


1. Melfi, CA, Chawla, AJ, Croghan, TW, Hanna, MP, Kennedy, S, Sredl, BA. The effects of adherence to antidepressant treat ment guidelines on relapse and recurrence of depression. Arch Gen Psychiatry 1998;55:1128-1132.
2. Olfson, M, Marcus, SC, Tedeschi, M, Wan, GJ. Continuity of antidepressant treatment for adults with depression in the United States. Am J Psychiatry 2006:163:101-108.


**NR2-008**

## INFLAMMATION, PSYCHOSIS AND EPILEPSY IN CHILDREN


*Tatiana Falcone, M.D. Cleveland Clinic, 9500 Euclid Avenue P57, Cleveland, OH 44195, Erin Carlton BS, Ingrid Tuxhorn M.D., Damir Janigro Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to; 1) recognize some of the psychiatric comorbidities in patients with epilepsy; and 2) the link between inflammation and psychosis.

**SUMMARY:**


Introduction; The relationship between epilepsy and psychosis is well established. Psychosis occurs at increased frequency of 4 -20% in patients with epilepsy. A correlation between epilepsy and psychiatric co morbidities and lack of response to antiepileptic drug therapy has been established. We and others have recently demonstrated a link between epilepsy and systemic inflammation which involves the blood-brain barrier in both human and animal studies. We wanted to test the hypothesis that a common thread links BBB dysfunction, inflammation, psychosis and epilepsy. Since immune cell activation was reported in both populations, we wished to compare monocyte levels in patients with psychosis and epilepsy versus non psychotic patients with epilepsy.

Methods; retrospective review was performed of 1800 patient charts for those admitted to a Child and Adolescent in-patient Psychiatry Unit between 2003-2007. 92 patients were identified as first-episode psychotic and of these, 12 had epilepsy. Control subjects were recruited from patients admitted to the psychiatry unit for reasons other than psychosis and were matched by age and gender. Information pertinent to epilepsy, including seizure type, seizure burden, MRI and EEG results, were examined. Psychiatric co morbidities and white blood cell values were also examined. Statistical analysis was performed using the JMP 7.0 software of the SAS package.

Results;The incidence of psychosis and epilepsy in our pediatric population was 12%. Psychotic episodes were interictal, lasting one month on average, and were temporarily not seizure-related, in contrast to the reported findings in adults. Most psychotic patients showed drastic improvement in psychiatric symptoms within one month with neuroleptics. These medications did not change baseline seizure frequency. Monocytosis was prevalent in acutely psychotic patients. This suggests acute BBB disruption may be a mechanism of acute psychosis and is unlikely in the chronic ep


**REFERENCES:**


1. Plioplys S, Dunn D and Caplan R. 10- year Research update review: Psychiatric Problems in children with epilepsy. J Am Acad. CHil Adolesc. Psychiatry, 46:11, November 2007;

1389-1402
2. Bortolato M, Solbrig M. The price of Seizure control: Dynophins in interictal and postictal psychosis. Science Di rect Psychiatry Research 151 (2007) pp 139-143.

**NR2-009**

**IN MONOCYTOSIS IN A GROUP OF CHILDREN WITH FIRST EPISODE PSYCHOSIS**

*Tatiana Falcone, M.D. Cleveland Clinic, 9500 Euclid Avenue P57, Cleveland, OH 44195, Erin Carlton, B.S., Ayush Batra, B.S., Katlheen Franco, M.D., Barry Simon, D.O., Damir Janigro, Ph.D.*

**EDUCATION OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize white blood cells abnormalities in a group of children with first episode psychosis

**SUMMARY:**

Introduction; Previous studies have suggested an underlying inflammatory mechanism for a variety of neurological disorders, including schizophrenia. While its understanding remains limited in adults, no prior studies have evaluated a possible link between inflammation and psychotic events in children or adolescents.

Methods:

We conducted a retrospective review of patients admitted to the Cleveland Clinic child and adolescent inpatient psychiatric unit from 2003-2006. Patients (n=80) had new-onset psychosis diagnosed by two child psychiatrists using DSM-IV TR criteria for Psychosis NOS, schizophreniform disorder or schizoaffective disorder. Patients were matched for age, race and gender with non-psychotic inpatients within the same unit. One-way ANOVA was performed among the two patient groups and data was analyzed with the Student's t-test. A value of $p<0.05$ was considered statistically significant in all cases.

Results:

White blood cell values revealed a significant increase in absolute monocytes of psychotic patients ($p<0.01$) compared to non-psychotic controls. All other hematologic values were similar between the groups and no significant correlation between differential values (excluding monocytes) and psychosis was found. A slight age dependency was present for absolute monocytes but this did not reach the statistical significance. Similarly female to male differences were not significant nor did diverse ethnicity influence counts. Together these results suggest that monocyte counts are altered in psychotic patients for reasons unrelated to patient selection, etc.

Conclusion:

Elevated monocytes, an indication of peripheral inflammation, was higher than reference values, supporting an association between the inflammatory response and first episode psychosis in children and adolescents.

**REFERENCES:**

1. B Fellerhoff, B Laumbacher, N Mueller, S GU and R Wank. Associations between Chlamydophila infections, schizophre nia and the risk of HLA-A10. Molecular Psychiatry (2007) 12, 264-272
2. A MacIntyre et al. Chlamydia pneumoniae Infection promotes transmigration of monocytes through human brain endotelial cells. Journal of Neuroscience research. 71:740-750 2003

**NR2-010**

**AN UNUSAL PRESENTATION OF MOYAMOYA DISEASE IN A 10 YEAR-OLD GIRL**

*Dil Tahera, M.D. Dept of Psychiatry, New England Medical Center, 750 Washington Street, Boston MA 02111, Charles Moore, M.D.*

**EDUCATIONAL OBJECTIVE:**

Moyamoya Disease should be considered in the differential diagnosis of psychiatric illnesses in children.

**SUMMARY:**

Introduction: Moyamoya Disease (MD), familial diease of unknown etiology,is characterized by abnormal vasculature, predominantly in the Circle of Willis, forming a complex meshwork appearing as a "smoky area"; hence the name. In Japanese "Moyamoya" means "puff of smoke". First diagnosed in Japan in 1960's. Children are commonly affected, presenting as strokes, transient ischemic attacks, headaches, cognitive impairments, mood instability, learning disorders, mental retardation and seizures. Adults suffer from hemorrhagic stroke. Cerebral angiogram and surgical correction are standard investigation and treatment respectively. This report describes a recent case of MD presenting with psychiatric symptoms at the Child Psychiatric Unit of the New Engaland Medical Center/ Tufts University.

Case Presentation: A ten years old Caucasian female was admitted due to increasing violence, aggressive, and self injurious behavior. She had several in/out patient psychiatric treatments since she was two carrying various diagnoses including bipolar, ADHD, mental retardation, learning disability. Had bilateral pial synangiosis of her cerebral vessels in 2004 and had a mild stroke in 2006. An MRI revealed narrow caliber of cerebral vessels. An angiogram confirmed severe bilateral internal carotid stenosis. During her current hospitalization she was treated with Adderall and Aspirin. After two weeks of hospitalization she was discharged, with the advice for follow up with psychiatry and neurology outpatient services.

Conclusion: Cerebral ischemia in MD may present with various psychiatric symptoms. Dalayed/miss diagnosis can lead to dangerous irreversible consequences. Without surgical correction patients will progressively develop cognitive decline and CVA. No medical management has been found to be effective. Early diagnosis and correction of vascular abnormality can decrease permanent damage.

**REFERENCES:**

1. Masuda, J, Ogata, J, Yamaguchi, T. Moyamoya disease. In: Stroke: Path physiology, diagnosis and management, 4th ed, Mohr, JP, Choi, DW, Grotta, JC, et (Eds), Churchill-Living stone, Philadelphia 2004. p 613
2. Uchino, K, Johnston, SC, Becker, KJ, Tirscwell, DL. Moy amoya disease in Washington State and California. Neurology 2005; 65:956

**NR2-011**

**PSYCHIATRIC ILLNESS CONTRAST: EMERGENCY PSYCHIATRIC UNIT VERSUS GENERAL HOSPITAL**

*Dil Tahera, M.D. Dept of Psychiatry, New England Medical Center, 750 Washington Street, BostonMA 02111,*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to learn about patient demographics, diagnosis and referral system from a consult service. Identify ways to improve the consultation/liaison service.

**SUMMARY:**
Introduction:Article focuses on the patient population at an emergency psychiatric setting and a consultation/liaison service. Medical conditions, particularly chronic illnesses, significantly increase the likelihood of developing a mood disorder, anxiety disorder, psychosis, or a substance use problem. Life time prevalence of a mental illness in chronic physically ill patients is over 40%. As many as 30-60% of the general hospital inpatients have diagnosable psychiatric disorders. In this study, the patient demography and psychiatric illnesses were compaired. Methods: The study conducted at two centers; University Medical Center (UMC) and Psychiatric Observation Unit (POU) at Southern Nevada Mental Health System (SNAMHS), Las Vegas, Nevada from July to September/2006. The patients were evaluated by the investigator on both the sites, 292 patients at UMC and 191 were at POU. At UMC 54% were male, 29% older than 50 years, highest number were caucasian Vs. 61% male, only 16.7% older than 50, highest number were caucasian at POU. At UMC 13% schizophrenia, 10% MDD, 10% bipolar, 32% subatance abuser Vs. 18% schizophrenia, 12% MDD, 17% bipolar, 29% substance abuser at POU. Discussion: Consulted patients had previous psychiatric illness before exhibiting somatic symptoms. A large percentage of patients had their first psychiatric contact at the C/L service. Bipolar illness was more common among POU patients. Substance abuse patients were referred for detoxification and not routinely sent to POU. Findings showed similar percentage of psychiatric illness in both institutions, except bipolar. Large proportion of UMC patients were seen on medical-surgical unit of the ED. The ED patients often referred to SNAMHS for continued care. Conclusion: More studies needed on psychotropic medication induced medical problem in general hospitals. Improve communication between psychiatrist and other specialties to provide bio-psychosocial treatment.

**REFERENCES:**
1. American Psychiatric Association. Diagnostic & Smanual of Mental Disorder. 4th edition. Text Rev. Washington, DC: APA;2000.
2. Curtis JR, Geller G, Stokes EG, et al: characteristics, diagnos tic & treat of alcoholism in elderly patients. J Am Geriatric Soc 37:310-316, 1989

**NR2-012**

## DELIRIUM WITH CATATONIC FEATURES: A NEW SUB-TYPE?

*Antonio R Lopez-Canino, M.D. 2414 Preston Road, Denison, TX 75020, Brenda Garro, M.D., Maria German, M.D., Steven A. Cole, M.D., Christopher A. Burke, M.D., Andrew Francis, Ph.D., M.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to identify common catatonic signs that have been seen in delirious patients and discuss possible precipitants and management options.

**SUMMARY:**
Background: The authors have observed delirious patients who appear to have catatonic features and sought evidence to support the validity of a new sub-type: delirium with catatonic features. Methods: We used four approaches: review of the delirium literature; re-analysis of case reports of delirium using the Bush-Francis Catatonia Rating Scale (BFCRS); re-assessment of 20 clinical reports of drug-induced catatonia for signs of concurrent delirium [Lopez-Canino and Francis, 2004]; and evaluation of 3 of our own recent cases of delirium with the BFCRS. Results: An 18-year English language PubMed search using the terms 'hypoactive delirium' and review of all reference lists, yielded 47 articles, only 1 of which noted the presence of catatonic features in delirium. However, 6 case reports of delirium were found with sufficient detail to determine the presence of multiple catatonic signs on the BFCRS (mean 4.7, range 2-7). In all 6 cases, the catatonia was attributed to recent benzodiazepine cessation. Twenty published cases of drug-induced catatonia were carefully analyzed for signs of delirium, yielding 7 cases [meeting Bush-Francis catatonia criteria] where delirium and catatonia co-occurred. Of these, 6 were induced by disulfiram and 1 by steroids. Finally, 3 patients seen on the psychiatry consultation service with *DSM-IV* delirium were identified. They had 5, 7, and 11 BFCRS catatonic signs respectively, meeting both Bush-Francis and *DSM-IV* criteria for catatonia. Conclusion: To date, 16 cases have been identified with concurrent delirium and catatonia (13 from the literature and 3 new cases) supporting the existence of a catatonic sub-type of delirium. Further study of this sub-type is warranted as to its prevalence, validity, and careful testing whether established treatments of catatonia (e.g., benzodiazepines) are useful in management.

**REFERENCES:**
1. Lopez-Canino, A., Francis, A. "Drug-Induced Catatonia." in Caroff, S., Mann, S., Francis, A., Fricchione, G. Co-editors. Catatonia American Psychiatric Press Inc., Washington, DC, 2004, 129-140.
2. Hauser P, Devinsky O, DeBellis M, et al. Benzodiazepine withdrawal delirium with cattaonic features Arch Neruol 1989; 46: 696-699

**NR2-013**

## COMPARING CHANGES OF PSYCHIATRIC CONSULTATIONS IN THE FIRST AND FIFTH YEARS: RESULTS FROM A NEWLY OPENED HOSPITAL

*Jian-An Su, M.D. No 6, Sec West, Chia-Pu Rd, Pu-Tz City, Chiayi, Taiwan 61344, Hin-Yeung Tsang, M.D., Ph.D, Shih-Yong Chou, M.D., Chee-Jen Chang, Ph.D*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to understand the low accuracy of detection rates for depression in primary care providers still persietent over years.

**SUMMARY:**
The study was conducted in a regional general hospital with approximately 700 beds and newly-opened on December 16, 2001. Using chart reviews, we retrospectively examined all the psychiatric consultation requests in 2002 and 2006.
The consultation rate was 1.06% (total 19,975 inpatients) in 2002 and 1.31% (total 25,469 inpatients) in 2006. Internal

medicine accounted for the majority of consultations in both years. The consultations from the surgery department significantly increased in 2006 (34.8%) from 2002 (24.5%). The most common reasons for referral in 2002 were confusion, depression, and suicide risk. In 2006, the most common referral reasons were still depression, followed by sleep problems and confusion. The most common psychiatric diagnosis in 2002 was depressive disorder, followed by delirium, substance use disorder and organic mental disorder. In 2006, the two most common diagnoses were depressive disorder and delirium, the same as in 2002, followed by adjustment disorder, substance use disorder and dementia. Although the diagnosis of depression increased significantly in 2006, referrals for depression didn't increase consistently . The accurate detection of depression by the primary care doctors had still not improved even after four years. Prescriptions for psychotropic medication were the most frequent recommendation. Newer antidepressants and atypical antipsychotics were more popular in 2006 than in 2002.

Our study demonstrates significant changes in psychiatric consultation over four years in a newly opened hospital. Surgeons might have under recognized the psychiatric morbidity in the first year. The cases of depression increased significantly, but the low accuracy of detection rates for depression in primary care providers still seems to have persisted over the four years since the hospital opened. Further education of primary care doctors in improving detection of psychiatric morbidity accaccurately, especially depression.

**REFERENCES:**


1. Hansen MS, et al., Mental disorders among internal medical inpatients: prevalence, detection, and treatment status. Journal of Psychosomatic Research, 2001. 50(4): p. 199-204.
2. Grant JE, Meller W, and Urevig B, Changes in psychiatric consultations over ten years. General Hospital Psychiatry, 2001. 23(5): p. 261-5.


**NR2-014**

## IMPULSIVITY IN A PATIENT WITH PERSONALITY CHANGE DUE TO HISTIOCYTOSIS X: A CASE REPORT


*Judie M Kwolek, M.D. Bergen Regional Medical Center230 East Ridgewood Avenue, Paramus, NJ 07652,*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the potential neuropsychiatric implications of advanced disease in patients suffering from Histiocytosis X, better understand the role of thalamic involvement in personality change and impulsive behavior, and finally examine some of the challenges faced in the treatment of behavioral symptoms caused by a general medical condition.

**SUMMARY:**


The long-term sequalae of Histiocytosis X, though rarely seen, usually are limited to a discussion of the severely debilitating physical manifestations of the disease. Seldom, if ever, are the behavioral aspects of this condition addressed. The disease, itself, is quite uncommon, and even fewer are the cases where it regresses to progressive multi-organ involvement that would predispose to such behavioral disturbances. The following case report describes a 32-year-old female patient with a 12-year history of Histiocytosis X, and seeks to explain how this chronically progressive illness and its treatment may lead to various neuropsychiatric symptoms, ranging from depression to severe rage and impulsivity. Further, it serves as a unique teaching case, as it examines the psychological factors contributing to this patient's mood symptoms, the role of thalamic involvement in personality change and impulsive behavior, and finally addresses some of the challenges faced in the treatment of behavioral symptoms caused by a general medical condition.


**REFERENCES:**


1. Alpers, BJ: Personality and Emotional Disorders Associated with Hypothalamic Lesions. Psychosomatic Medicine July 1940 Vol. II, No. 3: 286-303
2. Joseph R: The Limbic System. In Neuropsychiatry, Neuro psychology, and Clinical Neuroscience, 2nd edition, Williams and Wilkins, 1996, pp 161-205


**NR2-015**

## A CASE REPORT OF VALACYCLOVIR-INDUCED PSYCHOSIS IN A 17-YEAR-OLD FEMALE WITH GENITAL HERPES


*Sunny P Aslam, M.D. Division of Consultation Liaison Psychiatry SUNY Upstate University1702 University Hospital, SyracuseNY 13210, Sunny P. Aslam, M.D, Bushra Naz, M.D, Kathleen Carroll, Adekola O. Alao, M.D, M.R.C.Psych*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize that Valacyclovir may cause psychosis in patient's with genital herpes who are otherwise medically healthy.

**SUMMARY:**


We report the first case of likely Valacyclovir-induced psychosis in a 17-year-old female with newly acquired genital herpes and no previous psychiatric or medical history. The patient presented with acute psychosis after being started on Valacyclovir and the symptoms continued after stopping the Valacyclovir, but improved after administration of Risperidone. Genital herpes is a common illness and antiviral medications, such as Valacyclovir, Acyclovir and Famciclovir are used to reduce the duration and severity of the painful lesions. There are reports of psychosis with Valacyclovir's structural analogs in older and sicker patients. This case is unusual in that it was in a younger and healthier patient. The event scored as possible using the Naranjo Adverse Drug Reaction scale. Clinicians should be aware that Valacyclovir could induce psychosis in younger and healthier patients with no previous psychiatric history.


**REFERENCES:**


1. Hansen BA, Greenberg KS, Richter JA. Ganciclovir-induced psychosis. N Engl J Med. 1996 Oct 31;335(18):1397.
2. Ernst ME, Franey RJ. Acyclovir- and ganciclovir-induced neurotoxicity. Ann Pharmacother. 1998 Jan;32(1):111-3.


**NR2-016**

## CASE REPORT: PSYCHOSIS IN AN ADOLESCENT WITH GENITAL HERPES TREATED WITH VALACYCLOVIR


*Sunny P Aslam, M.D. Division of Consultation Liaison Psychiatry SUNY Upstate University 1702 University Hospital, SyracuseNY 13210, Sunny P. Aslam, M.D., Kathleen Carroll, MS-3, Bushra*

*Naz, MD, Adekola O. Alao, MD, MRCPsych.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize that Valacyclovir may cause psychosis in patient's with genital herpes who are otherwise medically healthy.

**SUMMARY:**

We report the first case of likely Valacyclovir-induced psychosis in a 17-year-old female with newly acquired genital herpes and no previous psychiatric or medical history. The patient presented with acute psychosis after a 5-day course of Valacyclovir. The delusions and hallucinations continued after stopping the Valacyclovir, but improved after administration of Risperidone. Genital herpes is a common illness and antiviral medications, such as Valacyclovir, Acyclovir and Famciclovir are used to reduce the duration and severity of the painful lesions. There are reports of psychosis with Valacyclovir's structural analogs in older and sicker patients. This case is unusual in that it was in a younger and healthier patient. The event scored as possible using the Naranjo Adverse Drug Reaction scale. Clinicians should be aware that Valacyclovir could induce psychosis in younger and healthier patients with no previous psychiatric history.

**REFERENCES:**

1. Hansen BA, Greenberg KS, Richter JA. Ganciclovir-induced psychosis. N Engl J Med. 1996 Oct 31;335(18):1397.
2. Ernst ME, Franey RJ. Acyclovir- and ganciclovir-induced neurotoxicity. Ann Pharmacother. 1998 Jan;32(1):111-3.

**NR2-017**

## DOES PSYCHIATRIC HISTORY PREDICT EMERGENCE OF PSYCHOSIS IN DELIRIUM?

*William C Jangro, D.O. Department of PsychiatrySUNY Stony Brook, Stony Brook, NY 11794, Stephen A. Cole, M.D., Christopher A. Burke, M.D., Andrew Francis, Ph.D., M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to identify of types and prevalence of psychotic symptoms seen in delirium and some predictors of their occurrence.

**SUMMARY:**

Background: Prior research indicates variation in the rate at which patients with delirium manifest psychosis. We hypothesized personal or family psychiatric history may be a diathesis which increases incidence of psychosis during a delirium. Method: We reviewed consecutive psychiatric consultation reports over a period of 3.5 years for clinical diagnoses of delirium, presence of psychosis (i.e., hallucinations or delusions), and personal or family history of psychiatric illness (categorized as psychotic, substance abuse, or non-psychotic). Results: 15% (N=480) of 3250 reports had a diagnosis of delirium, of which 30% showed psychosis. 93% of the records were informative for presence/absence of personal psychiatric history, and 81% for family history. 27% of patients with a personal psychiatric history had psychosis compared to 35% without a personal psychiatric history (p=0.09). Similarly, 28% of patients with a positive family psychiatric history and 31% of those without had psychosis (p>0.2). These findings did not vary across the three categories of disorders. In all cases, any history was associated with nonsignificant trends towards lower rates of psychosis in delirium. This trend reached statistical significance in a subsample with both personal and family histories (N=25) where the rate of psychosis was 16%, compared to 31% in subjects (N=158) with neither personal nor family histories (p=.04, one-tailed). Conclusion: The data did not support the hypothesis that psychiatric history predisposes to psychosis during delirium. The data suggested the opposite view, that psychiatric history may reduce rates of psychosis in delirium, reaching statistical significance only in a subsample having both personal and family histories. We hypothesize that the patients with psychiatric histories may take antipsychotic or other medications which could protect against the emergence of psychosis during delirium. More research is indicated to identify risk factors.

**REFERENCES:**

1. Webster R, Holroyd S: Prevalence of psychotic symptoms in delirium. Psychosomatics 2000; 41:519-522
2. Kalisvaart KJ, de Jonghe JF, Bogaards MJ, et al.:Haloperidol prophylaxis for elderly hip-surgery patients at risk for delirium: a randomized placebo-controlled study. J Am Geri atr Soc. 2005; 53(10):1658-1666

**NR2-018**

## THE RELATIONSHIP BETWEEN PSYCHOLOGICAL PROFILE AND SLEEP DISTURBANCE IN MAINTENANCE HEMODIALYSIS PATIENTS

*Yi-Fang Chuang, M.D. 12F,No.60,Lane 220, Jhung-Jin Rd., Banciao,Taipei Hsien, Taiwan, R.O.C, Taipei, Taiwan 22042, Yen-Ling Chium, M.D., Kai-Chi Fang, M.D., Yu-Sen Peng, M.D., Shi-Kai Liu, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the sleep problems of hemodialysis patients not only have biological etiology but were affected by psychological factors especially anxiety, somatic symptoms and obsession. In treating this kind of sleep problems, we should combine different medication in addition to hypnotics and other feasibole modalities.

**SUMMARY:**

Background: Previous studies had shown that hemodialysis patients are suffering from severe sleep disturbances. Depression was associated with sleep quality in this population. However, other psychological factors had not been studied. Method: Patients who had received regular hemodialysis for more than 3 months within our center participated in this study. Patients with dementia and recent hospitalization were excluded. Psychological well-being was measured by the Brief Symptom Rating Scale, which is composed of 9 domains including somatic symptoms, obsession, interpersonal sensitivity, depressive symptoms, anxiety, hostility, phobia, paranoid and additional symptoms. Sleep quality was measured by the Pittsburgh Sleep Quality Index. Both questionnaires' Chinese version had been validated and patients completed them under the assistance of study nurses. Results: A total of 156 patients completed this study. 105 patients (67%) had PSQI score more than 5 were classified as "bad sleepers" while another 51 were good sleepers. Compared with good sleepers, bad sleepers had higher scores on all 9 domains of BSRS and total BSRS score (P<0.05). By linear regression model performed within the bad sleeper group, PSQI scores were significantly correlated with

somatic symptoms, obsession, depressive symptoms, anxiety, additional symptoms and total BSRS scores. Conclusion: Psychological factors, especially minor neurotic symptoms focused in this study are closely related to sleep disturbance in hemodialysis patients.

**REFERENCES:**


1. Noda A, Nakai S, Soga T, et al: Factors contributing to sleep disturbance and hypnotic drug use in hemodialysis patients. Internal medicine (Tokyo, Japan) 2006;45:1273-1278.
2. Merlino G, Piani A, Dolso P, et al: Sleep disorders in patients with end-stage renal disease undergoing dialysis therapy. Nephrol Dial Transplant 2006;21:184-190.


**NR2-019**

## HEALING DEPRESSION SYMPTOMS WITH ART THERAPY IN INPATIENT SETTINGS WITH LANGUAGE AND CULTURE BARRIERS


*Lorerky M Ramirez Moya, M.D., 12769 Dunks Ferry RD., Philadelphia, PA 19154*


**EDUCATIONAL OBJECTIVES;**

At the conclusion of this presentation the participant should be able to recognize the importance of art therapy as a tool for increasing awareness of self and others, better cope with distressing symptoms, stress, and traumatic experiences and enhance cognitive abilities and enjoy the life-enhancing process of making art

**SUMMARY:**


When a language barrier is present in therapy, it can become very difficult for a clinician, but little do we know there could be a way to help our patients to express their feelings in other ways besides words. The following case report describes a 58 years old male patient with a history of alcohol dependence and depressive disorder and seeks to explain how our patients through art therapy can express themselves. This case can be a good teaching example where we can see how much a patient can improve in symptoms reflected in the changes in the colors, shapes, and presence of objects in their artwork. In a case of someone with a long chronic history of alcohol dependency, lack of family support, living in a foreign culture and a language barrier, this was a very unique way to help him by allowing him to express his feelings and thoughts through art.


**REFERENCES:**


1. American Art Therapy Association http://www.arttherapy.org/staep.html
2 Kaplan, H.I. & Saddock, Synopsis of Psychiatry, 10th edition. Lippincott, Wilkins, 2007


**NR2-020**

## SOMATIC AND COGNITIVE DOMAINS OF SELF-REPORTED DEPRESSION IN RURAL ECUADOR: CULTURAL & EDUCATION EFFECTS


*Anna Yusim, M.D. 207 E. 88th Street #3D, New York, NY 10128, Raymond Goetz Ph.D., Janet Abou B.A.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) Identify obstacles to obtaining mental health care in rural regions of Latin America; 2) Describe differences in depressive symptoms between Americans & rural Ecuadorians; 3) Recognize the relationship between education level and depression in rural Ecuador; 4) Describe gender-specific manifestations of depression among rural Ecuadorians; and 5) Discuss strengths & limitations of the Beck Depression Inventory in research.

**SUMMARY:**


INTRODUCTION: Because of its Ibero-American cultural identity, depression is usually expressed in Latin American countries through somatic symptoms such as headaches, gastrointestinal disturbances, or “nerves,” rather than subjective feelings of sadness or guilt. This study seeks to better understand somatic and cognitive domains of self-reported depression in an underserved and unstudied region of Latin America, the Andean highlands of Ecuador. METHODS: The Spanish Beck Depression Inventory-II (BDI) was administered to 163 patients, recruited from mobile medical clinics, in 7 parishes along the southern Andes of Ecuador. BDI scores were stratified by age, gender, marital status, ethnicity, occupation & education level. Cognitive and somatic subscale analyses were performed to better understand culturally-relevant manifestations of distress in this population. RESULTS: BDI scores ranged from 0 to 57 with a mean BDI score of 23 +/- 12, which correlates with moderate depression. 25% of subjects had no or minimal depression (BDI<14); 15% had mild depression (BDI 14-19); 28% had moderate depression (BDI 20-28); 32% had severe depression (BDI>28). A significant difference in BDI scores was seen with education level: more educated subjects had lower rates of self-reported depressive symptoms ($p<.005$). Somatic complaints were reported more frequently than cognitive complaints ($p<.02$). DISCUSSION: In accordance with past reports, somatic manifestations of depression predominate over cognitive manifestations, and symptom severity appears to decrease with education, an effect that was independent of occupation and therefore socioeconomic status. In resource poor settings with minimal mental health care access, an appreciation of culturally-specific manifestations of depression and the social factors that influence them must be further studied in order to improve advocacy, formulate innovative interventions, and apportion resources commeasurate with needs.


**REFERENCES:**


1. Berganza CE, Mezzich JE, Otero-Ojeda AA, Jorge MR, Villaseñor-Bayardo SJ, Rojas-Malpica C. The Latin American guide for psychiatric diagnosis. A cultural overview. Psychiatr Clin North Am. 2001 Sep;24(3):433-46.
2. Üstün TB, Sartorius N, editors. Mental illness in general health care: an international study. Chichester (England): John Wiley; 1995.


**NR2-021**

## WAIST CIRCUMFERENCE DOES NOT PREDICT ATYPICAL ANTIPSYCHOTIC-INDUCED INSULIN RESISTANCE IN BLACK/AFRICAN AMERICAN PATIENTS WITH SCHIZOPHRENIA


*Bernice B Rumala, M.A. 332 Avalon Place, Toledo, OH, 43611, Xiaoduo Fan, M.D., M.S.;Bikash Sharma, M.B.B.S; Dana D. Nguyen, Ph.D.; Christina P.C. Borba, M.P.H; Leah B. Namey Briggs, B.S.; Sharon Forstbauer; Kate Miley; David C. Henderson, M.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to understand the role of race in the relationship between waist circumference and insulin resistance in schizophrenia patients on atypical antipsychotic medication.

**SUMMARY:**
Objective: To determine whether race plays a role in the relationship between anthropometric predictors, such as waist circumference and insulin resistance, in Black/African American and White/Caucasian patients with schizophrenia who are taking atypical antipsychotic medication. Method: A cross-sectional comparison was conducted to determine the relationship between waist circumference and insulin resistance in 55 patients treated with antipsychotic medication. Each subject underwent an anthropometric assessment of waist and hip circumference, height, weight and body mass index (BMI). Laboratory assays were performed. Results: Mean waist circumference was higher in White/Caucasians(98 cm +/- 11 cm) compared with Blacks/African Americans (94 cm +/- 11 cm) but not statistically significant (P = 0.181). There was no relationship between waist circumference and insulin resistance calculated by HOMA-IR in the Black/African American patient sample (r = 0.05, P = 0.853). There was a statistically significant positive relationship between waist circumference and insulin resistance in the White/Caucasian population (r = 0.66, P < 0.001). After applying demographic controls, Whites/Caucasians had a statistically significant positive correlation between waist circumference and insulin resistance (r = 0.623, P = 0.00 ) compared with no statistically significant relationship in Blacks/African Americans (r = 0.022, P = 0.944). Conclusions: While waist circumference remains an excellent predictor of insulin resistance for White/Caucasian schizophrenia patients, it has no relationship as a predictor of insulin resistance in the Black/African American schizophrenia population. These findings suggest that predictors in the general population may not be applicable to specific racial groups in a population of schizophrenia patients on atypical antipsychotic medication.

**REFERENCES:**
1. McEvoy JP, Meyer JM, Goff DC et al. Prevalence of the met abolic syndrome in patients with schizophrenia: baseline results from the Clinical Antipsychotic Trials of Interven tion Effectiveness (CATIE) schizophrenia trial and compari son with national estimates from NHANES III. Schizophr Res. 2005;80:19-32
2. Bresnahan M, Begg MD, Brown A et al. Race and risk of schizophrenia in a US birth cohort: another example of health disparity? Int J Epidemiol. 2007

**NR2-022**

## HEALTH PROMOTION RESEARCH PROGRAM: HEALTH PROMOTING STRATEGY AND PROJECT DEVELOPMENT MERGING EVERY FIELD OF LIFE, ESPECIALLY IN COMMUNITY AND SCHOOL

*Ji-Yung Jung, M.D. Hanyang Univ. Hospital, Haengdang 1-dong Seongdong-gu, Seoul, Korea, 133792, Jnug-Hyun Nam, M.D., Ph.D., Hee-Sang Lee, M.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to know the scientific and reasonable base for further health promotion project and the strategy for systematized management of the program.

**SUMMARY:**
< Objectives >
We have investigated health promoting school model of World Health Organization(WHO) and evaluating the suitability of that model in our environment. We wanted to suggest feasible school health project and health education guide.
< Methods > First, we reviewed the reference relating health risk behavior, and investigated the actual conditions of the rural and urban school. Second, we built the school health management system and decided the hierarchy of the health risk behavior. Finally, we developed the health promotion program, practiced and assessed it. < Results >We planned the 'making healthy school' project. Our project was inclusive. Students, teachers, parents and communities participated in it. We focused the physical and social environment surrounding out schools. The several tasks, changing desks and chairs, afforesting around school, preventing of epidemics, investigating air pollution near school, and examining water were achieved. And, as a social environment, the health promotion of teachers and parents had importance. We checked the health of teachers and parents, and found out the relational problem and communication problem between students and them.< conclusion >It was difficult to investigate the actual conditions of school health service for reasons of school administration system and educational schedule. Even so we prepared the scientific and reasonable base for further health promotion project.

**REFERENCES:**
1. Leaf P.J, Schultz D, Kiser L.J, Pruitt D.B : School Mental Health in Systems of Care, in Handbood of School Mental Health: Advancing Practice and Research, Eds. Kluwer Academic/Plenum Publishers 2003;
2. Rahman A, Mubbashar M, Harrington R, Gater R : Develop ing child mental health services in developing countries. J Child Psychol Psychiatr 2000; 41(5):539-546

**NR2-023**

## THE IMPLEMENTATION OF ELECTRONIC HEALTH RECORDS: A COMPARISON BETWEEN SERVER-BASED AND WEB-BASED EHRS

*Lindsey Moorhead, B.A. 710 Asp Ste 700 Norman, OK 73069, Agi Lurtz, Louise Beckett-Thurman, M.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of the presentation, participants will recognize the importance of electronic health records in modern health care. Participants will also have the ability to recognize the positive and negative attributes of the two different forms of electronic health records with an emphasis on web-based EHRs as the most effective option for smaller practices.

**SUMMARY:**
Introduction: The impact of electronic health records on the health industry is vast. Staggering statistics display the viability and effectiveness EHRs have on a practice.
•At 90% adoption of EHR systems, the estimated savings for both inpatient and outpatient care could average more than $77 billion per year. The largest savings come from reducing the hospital length of stay, nurses' administrative time, drug usage

in hospitals, and drug and radiology usage in the outpatient setting.
•Approximately eight million outpatient (adverse drug events) occur each year, of which one-third to one-half are preventable. About two-thirds of these would be prevented by use of an EHR and computer physician order entries. Each avoided event saves $1,000 to $2,000 based on avoided office visits, hospitalization and other care. On a scaled down national level this would account for $3.5 billion in savings with 37% potential savings coming from solo practioners.
Methods: Two studies were compared, one utilizing a server-based EHR and the second using a web-based EHR. A server-based EHR exists on a local computer where as a web-based EHR is hosted on a secure web server. The research was conducted employing small group or individual practice settings due to the fact that these practices compose 2/3rds of the US market.
Results:Web-based EHRs significantly reduced operating costs in solo or small group practices. Server-based EHRs were not as cost effective and often not as functional as web-based EHRs.
Conclusion: For small group or individual practices a web-based EHR is most appropriate and necessary. The ease of use, affordability, and effectiveness of a web-based EHR compared to a server-based EHR was highly evident based on the studies performed and the comparisons executed. Disclosure: Preparation and research was funded by OnlineMedsource.

**REFERENCES:**


1. Hillestad R, Bigelow J, Bower A, Girosi F, Meill, Scoville R, Taylor R: Can Electronic Medical Record Systems Transform Health Care? Potential Health Benefits, Savings, and Costs. Health Affairs 2005; Volume 24 #5:1103-1117.
2. Kibbe D, Waldren S: Partners for Patients Electronic Health Record Market Survey. American Academy of Family Physi cians and the Center for Health information Technology 2005.


**NR2-024**

## BEARING GRUDGES AND PHYSICAL ILLNESSES: RELATIONSHIP TO ASTHMA AND ULCERS


*Anil Saini, D.O. Medical College of Georgia Department of Psychiatry 997 Saint Sebastian Way, Augusta, GA 30912, Philip Sinato, M.D., Dr. Stephen Welch, M.D., Erick L. Messias, M.D., Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand the use of epidemiology as a hypothesis testing tool, and consider the importance and need for psychosomatic research.

**SUMMARY:**


OBJECTIVES: Personality traits are reported to be associated with a variety of medical comorbidities. Given our interest in the biological underpinnings of such traits it is also possible that common biological determinants could result in co-occurrence of personality traits and medical conditions. Large, population-based samples are ideal to test hypotheses, as they avoid sources of biases, including that of treated samples. There have been reports of an association between 'bearing grudges' and medical conditions in adults and in teenagers. Given these reports we hypothesize that persons reporting "bearing grudges for years" would be more likely to have medical comorbidities. METHOD: The National Comorbidity Survey Replication (NCS-R) is a probability sample of the US population designed to constitute a nationally representative sample (N = 9,882). To study the association between tendency to bear grudges and physical comorbidities we linked two areas of the data: one item from the Personality section and items from the Chronic Conditions section. Associations were measured in odds ratios (95% C.I.) and adjusted using logistic regression. We tested this hypothesis on the following medical conditions: asthma, diabetes, cancer, epilepsy, and ulcers. RESULTS: Positive and statistically significant associations were found between bearing grudges and history of asthma (1.3, 1.1-1.5) and ulcers (1.4, 1.2-1.6). The association persisted after adjusting for age, gender, race, and history of depression. No association was found with history of diabetes, epilepsy, and cancer. CONCLUSIONS: In a population-based survey, bearing grudges is associated with a history of asthma and ulcers. No association was found with other medical comorbidities tested. Further research is needed to clarify these associations and investigate their biological underpinnings. These results point to the importance of psychosomatic research in medical settings.


**REFERENCES:**


1. Rozanski A, Kubzansky LD. Psychologic functioning and physical health: a paradigm of flexibility. Psychosomatic Medicine. 2005;67 Suppl 1:S47-53.
2. Stang PE, Brandenburg NA, Lane MC, Merikangas KR, Von Korff MR, Kessler RC. Mental and physical comorbid condi tions and days in role among persons with arthritis. Psychoso matic Medicine. 2006;68(1):152-158.


**NR2-025**

## PREVALENCE OF MENTAL DISORDERS IN WORKERS OF MANUFACTURING INDUSTRIES IN VENEZUELA


*Gustavo D Resler, M.D. Av. Río Caura, Residencias Parque Prado Torre 2B. Apartamento 111. Urbanización Parque Humboldt, Caracas, Venezuela 1080, Gustavo D. Resler, M.D., Joel R. Vivas, M.D., Guslin G. Ruiz, M.D., Victor J. Saravia, M.D., Leon Serfaty, M.D., Julio Campos, Ph.D.,M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to discover which are the most frequent psychiatric diagnostics in venezuelan worker population. In the same way the participants will learn about the use of PRIME-MD as a usefull tool to improve diagnosis in the workplace.

**SUMMARY:**


OBJECTIVE: To determine the psychiatric disorders prevalence by an a semi-structured interview instrument in a worker population of manufacturing industries.
METHOD: With randomized selection and by the use of inclusion and exclusion criteria, we selected a sample of workers from six manufacturing industries of the industrial polygon of "La Victoria", Aragua state, Venezuela. Primary Care Evaluation of Mental Disorders (PRIME-MD) (Trade Mark of Pfizer Inc.) was employed as interview instrument, evaluating the people in their work place. We used the "Patient Questionare" as orientation to the specific modules to screening the psychiatric disorders.
RESULTS: The selected sample was constitued by 239

people, 221 man and 18 woman. The media age was 33.2±18.3 years. The 46% (110 people) of the sample has suspected some mental disorder (p<0.001), being the most prevalent the abuse/dependence of alcohol (51%), followed by disorders of anxiety (30%), mood disorders (17.2%) and feeding disorders (5.45%). Aditionaly when we correlate the presence or absence of psychiatric disorders versus the autoevaluation of their own health it was realy significant (p<0.002).
CONCLUSION: We demostrate that the instrument PRIME-MD is usefull, easy and sensible to detect and diagnose the presence of frecuent psychiatric disorders in the workers population in their own workplace, appreciating the high prevalence of psychiatric disorders, specially the abuse/dependence in the studied population.

**REFERENCES:**


1. Smith MV,Rosenheck RA,Cavaleri MA,Howell HB,Poschman K,Yonkers KA. Screening for and Detection of Depression, Panic Disorder, and PTSD in Public-Sector Ob stetric Clinics. Psychiatr Serv 2004;55:407-14.
2. Stewart WF,Ricci JA,Chee E,Hahn SR,Morganstein D. Cost of Lost Productive Work Time Among US Workers With Depression. JAMA 2003;289:3135-44.


**NR2-026**

## THE PSYCHOSOCIAL STRESS AND CHANGES OF MENTAL HEALTH STATUS CAUSED BY FLOOD IN A MOUNTAIN VILLAGE; THE PROSPECTIVE STUDY


*Jihoon Heo, M.D. Dept. of Psychiatry, Wonju Christian Hospital Yonsei Univ. College of Medicine, Ilsan-dong, Wonju-si, Gangwon-do, Korea, Wonju, South Korea 220-701, Seongho Min, M.D.,Ph.D, Sang Baek Koh, M.D,PhD, Kichang Park, M.D.,PhD, Jongho Shin, M.D.,Ph.D, Min-Hyuk Kim, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize that the degree of psychosocial stress and the incidence of psychiatric disorders (e.g. depression, PTSD) has been raised by the floods.

**SUMMARY:**


Natural disasters are known to cause many psychiatric disorders; e.g. depression and post traumatic stress disorder(PTSD). On July 15, 2006, Garisan-ri, Inje-gun, Gangwon-do, South Korea was flooded with localized torrential downpour. Many casualties and material damages were caused only within a few hours of time and has not been restored yet. The changes of mental health status before and after this disaster were examined. Garisan-ri, Inje-gun, Gangwon-do, South Korea was selected beforehand as a part of prospective cohort for safety supervision of agricultural work, and the physical and mental health status of Garisan-ri's residents between April and August, 2006 has been evaluated, which was just before the disaster. In 38 men (mean age; 55.4±14.4) and 45 women (mean age ; 56.2±13.6), Psychosocial Well-being Index (PWI) and Mental Health and Vitality among the General Health Status (short form-36; SF-36) were reexamined after the disaster. Beck Depression Index was done in 43 subjects, and MMPI-PTSD in 39 subjects. PWI was significantly higher after the disaster (mean; 31.09) than before the disaster (mean; 20.54) (t=8.439, df=40, p<0.001), and SF-36 was also significantly higher after the disaster (mean; 25.02) than before the disaster (mean; 17.59) (t=4.331, df=41, p<0.001). 46.2% of all respondents scored higher than 17 points in MMPI-PTSD, which designates the diagnosis of PTSD. In BDI, 56.8% of all respondents had mild depression (higher than 10 points), 30.2% had moderate depression (higher than 16 points), and 20.9% had severe depression (higher than 24 points). We concluded that the degree of psychosocial stress and the incidence of psychiatric disorders (e.g. depression, PTSD) has been raised by the floods. Prospective studies about the changes in the length of time and the effects of new natural disasters (e.g. new floods) should be done.


**REFERENCES:**


1. Parslow RA, Jorm AF, Christensen H. (2005) Associations of pre-trauma attributes and trauma exposure with screening positive for PTSD: analysis of a community-based study of 2,085 young adults. Psychol Med 36, 387-395
2. Ursano, R. J., Fullerton, C. S. and Norwood, A. E. (1995) Psychiatric dimensions of disaster: Patient care, community consultation, and preventive medicine. Harvard Review of Psychiatry 3, 196-209.


**NR2-027**

## BIPOLAR DISORDER AMONG ADOLESCENTS AND YOUNG ADULTS: RESULTS FROM AN EPIDEMIOLOGICAL SAMPLE


*Nicole R Kozloff, B.A. c/o Undergraduate School of Medicine, Queen's University 68 Barrie Street Kingston, ON K7L 3N6 CANADA, Amy Cheung, M.D., Ayal Schaffer, M.D., John Cairney, Ph.D., Carolyn Dewa, Ph.D., Scott Veldhuizen, B.A., Paul Kurdyak, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to:1) Identify sociodemographic and clinical factors associated with bipolar disorder in adolescents and young adults; 2) Identify sociodemographic and clinical factors associated with variations in service use in adolescents and young adults with bipolar disorder; and 3) Understand the implications of these associations on improving the identification and treatment of bipolar disorder in adolescents and young adults

**SUMMARY:**


Introduction: Over the past decade, the clinical recognition and treatment of bipolar disorder in youth has increased significantly. However, little is known about this illness on a population level for youth aged 15-24.Objectives: To identify the lifetime prevalence of bipolar disorder (BD), and to describe the sociodemographics, clinical characteristics, and use of mental health services among 15-24-year-olds with BD. Method: Data were extracted from the Canadian Community Health Survey: Mental Health and Well-being (CCHS 1.2), a population-based survey conducted by Statistics Canada. We calculated lifetime prevalence rates of BD among subjects age 15-18 and 19-24 and report the clinical characteristics and rates of service use among these younger subjects with BD.Results: The weighted lifetime prevalence rate of BD was 2.06% (95% confidence interval [CI], 1.37% to 2.74%) among 15-18-year-olds, and 3.79% (95% CI, 2.98% to 4.60%) among 19-24-year-olds. Lifetime prevalence was significantly higher in females (2.66%; 95% CI, 1.53% to 3.78%) than males 15-18 years old (1.49 %; 95% CI, 0.71% to 2.28%, P < 0.05). Among those age

19-24 years, the rate of BD diagnosis was significantly higher in those with low income. Among 15-18 year olds with BD, 45.8% (95% CI, 29.3 to 62.2) accessed services in the previous 12 months, while among 19-24 year olds with BD, 60.2% (95% CI, 48.7 to 72.0) accessed services in the previous 12 months. Conclusions:These findings suggest that BD is particularly common among young people and there are specific factors associated with BD in youth. Among adolescents, BD is more common in females than males. Nearly half of all Canadian adolescents and young adults with BD have never used any mental health services, suggesting that efforts should go towards raising general awareness among young people of BD and the health services that are available to them.

**REFERENCES:**


1. Schaffer A, Cairney J, Cheung A, et al: Community survey of bipolar disorder in Canada: lifetime prevalence and illness characteristics. Can J Psychiatry 2006; 51:9-16
2. Lewinsohn PM, Klein DN, Seeley JR. Bipolar disorder dur ing adolescence and young adulthood in a community sample. Bipolar Disord 2000; 2:281-293


**NR2-028**

## CORRELATES OF 12-MONTH OUTPATIENT PSYCHOTHERAPY USE AMONG ADULT COMMUNITY RESIDENT IN BRAZIL


*Paula Silva, M.D. Rua Baltazar da Veiga, 335 - 91Vila Nova Conceição, São Paulo, Brazil 04510001, Erica T. P. Peluso, Ph.D., Sergio L. Blay M.D., Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to know the prevalence and correlates of 12-month outpatient psychotherapy use in Brazil.

**SUMMARY:**


Objective: The main purpose of this study is to investigate the 12-month prevalence of outpatient psychotherapy use in São Paulo, Brazil, and its association with sociodemographic characteristics, and mental health status in community residents aged 18 to 65 years old. Method: Cross sectional population–based random sample of 2000 household residents aged 18-65 years old, examined in a face-to-face interview. 12-month outpatient psychotherapy use, sociodemographic variables, family connections (married, previously married, never married), type of employment, mental health status (assessed through the General Health Questionnaire), were assessed through a structured interview in a face to face procedure. The main outcome measure of the investigation is the 12- month use of outpatient psychotherapy service. Logistic regression analysis was used to control for demographic, family, social connections and mental health status.

Results: In 2000, the overall prevalence of 12-month prevalence of outpatient psychotherapy use was 4.6% (males 3.4%, females 5.6%). In controlled analyses, gender (females), age (30-39 and 40-49 years old), education ( =9 years), marital status (never married), type of employment (student), and psychiatric condition (positive GHQ), were significantly associated with 12-month outpatient psychotherapy use. Income and place of birth were not associated with treatment use. Conclusion: The overall prevalence of 12-month psychotherapy use was 5.6%, similar to other investigations of this kind. In controlled analyses, females, persons aged 30 to 49 years, never married, with more than 9 years of education, students, and mentally distressed had a greater likelihood of using 12-month outpatient psychotherapy.


**REFERENCES:**


1. Olfson M, Pincus HA: Outpatient psychotherapy in the United States, I: volume, costs, and user characteristics. Am J Psychiatry 1994, 151: 1281-1288.
2. Olfson M, Marcus SC, Druss B, Pincus HA: National trends in the use of outpatient psychotherapy. Am J Psychiatry 2002, 159: 1914-1920.


**NR2-029**

## BEARING GRUDGES AND PHYSICAL ILLNESSES: HYPERTENSION AND OTHER CARDIOVASCULAR COMORBIDITIES


*Philip Sinato, M.D. Medical College of Georgia Department of Psychiatry 997 Saint Sebastian Way, Augusta, GA 30912, Anil Saini, D.O., Erick L. Messias, M.D., Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the use of epidemiologic methods in psychiatry and discuss the association between bearing grudges and cardiovascular health.

**SUMMARY:**


OBJECTIVE: Personality traits are likely to contribute to disease risk and outcome through different mechanisms. Given the likely biological underpinnings of such traits, it is also possible that common biological determinants could result in co-occurrence of specific personality traits and medical conditions. An example of this relationship is the potential linkage between hostility and cardiovascular complications. Previous studies have shown an association between harboring grudges and aggressive impulses and higher diastolic blood pressure. Therefore, we hypothesized that people reporting "bearing grudges for years" would be more likely to have been diagnosed with hypertension and other cardiovascular comorbidities. METHOD: Data on individuals aged 18 and older who completed Part I and II of the National Comorbidity Survey Replication (NCS-R) was used in this study. The NCS-R is a nationally representative sample (N = 9,882) of English-speaking individuals aged 18 and older living in US households between February 2001 and December 2004. Four cardiovascular outcomes were included in the analysis: stroke, heart attack (both self report), hypertension, and heart problems (both told by health professional). RESULTS: The following odds ratios (95% C.I.) with bearing grudges were found: stroke .8 (.6-1.2); heart attack 1.1 (.8-1.5); heart problems 1 (.8-1.2); high blood pressure 1 (.9-1.1). These results show no association between bearing grudges and the four cardiovascular outcomes. CONCLUSIONS: A population-based assessment of the relationship between bearing grudges and cardiovascular outcomes failed to replicate previous reports of this association. Further research is needed to clarify the links between personality traits and cardiovascular health.


**REFERENCES:**


1. Cottington EM, Brock BM, House JS, Hawthorne VM: Psy chosocial factors and blood pressure in the Michigan State wide Blood Pressure Survey.Am J Epidemiol.

1985;121(4):515-29.
2. Johnson EH, Spielberger CD, Worden TJ, Jacobs GA: Emotional and familial determinants of elevated blood pres sure in black and white adolescent males. J Psychosom Res. 1987;31(3):287-300.

**NR2-030**

## ALLERGIES AND SUICIDALITY: RESULTS FROM THE NATIONAL COMORBIDITY SURVEY REPLICATION (NCS-R)

*Stephen J Welch, M.D. Medical College of GeorgiaDepartment of Psychiatry 997 Saint Sebastian Way, Augusta, GA 30912, Erick Messias, M.D., Ph.D., Diana E. Clarke, Ph.D., Renee D. Goodwin, Ph.D., M.P.H.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the use of epidemiology in psychiatric research and contemplate the putative associations between physical health and suicidality.

**SUMMARY:**

OBJECTIVE: Previous studies have shown an association between asthma and suicidality, and there have been reports of an association between atopic dermatitis and suicide ideation. Given the known relationship between allergies, asthma, and atopic dermatitis, we hypothesize an association between history of allergies and suicidality (ideation and history of attempts). METHOD: Data on individuals aged 18 and older who completed Part I and II of the National Comorbidity Survey Replication (NCS-R) was used in this study. The NCS-R is a nationally representative sample (N = 9,882) of English-speaking individuals aged 18 and older living in US households between February 2001 and December 2004. Part I of the NCS-R survey, which comprised of core diagnostic assessment, was administered to all respondents, Part II was administered to only those individuals who met lifetime criteria for a Part I disorder and a probability sample of other respondents. Logistic regression models were used to calculate adjusted odds ratios (with 95% CI) controlled for the following confounding variables: age, sex, race, and a history of depression. RESULTS: A positive and statistically significant association was found between history of allergies and (1) suicidal ideation (adjusted OR = 1.37 (1.13-1.65) and 1.27 (1.04-1.54) when controlling for depression) and (2) history of suicide attempts (adjusted OR = 1.4 (1.07-1.84) and 1.32 (1.003-1.74) when controlling for depression). CONCLUSIONS: Findings from a population-based sample seem to support the hypothesized relationship between allergies and suicidality. Further research is needed to better understand the association and its biological underpinnings.

**REFERENCES:**

1. Goodwin RD, Eaton WW. Asthma, suicidal ideation, and suicide attempts: findings from the Baltimore epidemiologic catchment area follow-up. Am J Public Health. 2005 ;95(4):717-22.
2. Kimata H.Prevalence of suicidal ideation in patients with atopic dermatitis. Suicide Life Threat Behav. 2006 Feb;36(1):120-4.

**NR2-031**

## IMPACTS OF NATIONWIDE NEGATIVE EVENTS ON MENTAL HEALTH VISITS TO ER

*Xiangyang Zhao, M.D. 11732 Lake Ave #105, Lakewood, OH 44107, Toni Love Johnson, M.D., Robert Taylor Segraves, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) be aware of possible connections between nationwide negative events and pediatric, mental health visit to ED; and 2) discuss preventive and or responsive mechanisms for the events in the future.

**SUMMARY:**

Abstract: It is unclear how negative events, which are often broadcasted nationwide by media, affect mental health visits to ER. We postulated that campus and non-campus related nationwide negative events might impact the mental health visits to ER differently. In this study, we chose two events: 1) Virginia Tech Massacre (VTM), which we define as a campus related negative event, 2) Minnesota Bridge Collapse (MBC), as a non-campus related negative event. Both events were broadcasted by a variety of media nationwide. To examine the hypothesis, we counted the daily patient visits to ER of a 300-bed, tertiary community hospital. Based on the patient's complaint and age, patients were counted as "Total Patients with Psychiatric chief complain (TP/P)" and "Pediatric Patients with Psychiatric chief complain (Ped/P)". The average daily visit during acute phase of events (from day of the event to the 7th day post-event) was compared with the daily average of the rest of the month (baseline). Results: In VTM, there was no significant difference between TP/P during acute phase and that of the baseline (9.1±1.1 vs. 8.8±0.8 visits /day, p=0.8226); conversely, there was a significant increase in Ped/P in acute phase compared with that of the baseline (1.7±0.4 vs. 0.6±0.2 visits/day, p=0.0047). In MBC, there was no significant difference between TP/P during acute phase and that of the baseline (6.7±0.6 vs. 9.1±0.6 visits/day patients/day, p=0.0518); no significant difference between Ped/P in acute phase and that of the baseline (0.4±0.3 vs. 0.7±0.2 visits/day, p=0.5025, Details seen table 1,2). Statistical analysis: Data expressed as means ± SEM. Means between two groups were compared using t-test. $p < 0.05$ = significant Conclusion: 1) There seems a significant increase of pediatric, mental-health visits to ER under the impact of VTM. 2) Total mental health visits (sum of pediatric and adult patients) seem not affected by either VTM or MBC.

**REFERENCES:**

1. Larkin, G.L., et al., Trends in U.S. emergency department visits for mental health conditions, 1992 to 2001. Psychiatr Serv, 2005. 56(6): p. 671-7
2. Hazlett, S.B., et al., Epidemiology of adult psychiatric visits to US emergency departments. Acad Emerg Med, 2004. 11(2): p. 193-5.

**NR2-032**

## MENTAL CAPACITY IN PSYCHIATRIC AND MEDICAL IN-PATIENTS: A SYSTEMATIC REVIEW

*Edwin Herazo, M.D. Tv 93 # 53-48 Int. 68, Bogota, Colombia 11001, Adalberto Campo-Arias, M.D.*

At the conclusion of this session, the participant should be able to know factors involved in mental capacity assessment in

psychiatric and medical in-patients.

**SUMMARY:**

Objective: To actualize the existing knowledge about mental capacity in psychiatric and medical in-patients, and to compare mental capacity in both groups in developed and developing countries. Method: A systematic review was done seeking for original researches on mental capacity assessment in developed and developing countries using data bases using data bases Embase, Imbiomed, Lilacs, Medcarib, Medline, Psycoinfo and Redylac from January, 2002 to November, 2007. This research was done in English, Spanish and Portuguese, and it used as key words "mental capacity", "decision-making", "competence", "medical in-patients" and "psychiatric in-patients". Results: Two articles were included, all of them from developed countries. The two studies involved 271 patients assessed with the Mac Arthur competence Assessment tool for Treatment (MacCAT-T) or Thinking Rationally about Treatment (TRAT). One article reported competence among patients of a general hospital and the other one in a psychiatric hospital. The global prevalence of mental incapacity was 36.5%. Patients in psychiatric hospital presented more mental incapacity than general hospital ones (OR=1.70, 95%CI 1.02-2.80). Mental incapacity was as similar as among women and men (OR=1.11, 95%CI 0.68-1.83). Conclusions: Mental capacity is more impaired in psychiatric in-patients than in medical in-patients. Few articles exist in medical literature. There is no any original research about mental capacity published in developing countries. This finding possibly means that in developing countries ethics concepts in patients and physicians at the time of deciding treatment acceptance is even poor. Acknowledgments: This research was supported by the Human Behavioral Research Institute, Bogotá, Colombia.

**REFERENCES:**

1. Cairns R, Maddock C, Buchanan A, David A, Hayward P, Richardson G, et al. Prevalence and predictors of mental incapacity in psychiatric in-patients. Br J Psychiatry 2005; 187: 379-85.
2. Raymont V, Bingley W, David A, Hayward P, Wessely S, Ho topf M. Prevalence of mental incapacity in medical in-pa tients and associated risk factors: cross-sectional study. Lan cet 2004; 364: 1421-7.

**NR2-033**

## INVOLUNTARY ADMISSION IN PSYCHIATRIC ACUTE INPATIENT UNIT

*Alejandra Garcia Rosales, M.D. Hospital Universitario La Paz.Servicio de psiquiatria.Pso Castellana 261, Madrid Spain 28045, Eduvigis Contreras Martinón, Ph. D., Juan J. De Frutos Guijarro M.D. (presenting), David López Gómez M.D., María Benítez Alonso M.D., Belén Bardón Rivera M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to know about the involuntary admissions on La Paz University Hospital in Madrid, Spain.

**SUMMARY:**

Introduction

The objective of this study is to describe the differential characteristics and treatments of voluntary and involuntary admissions, in the psychiatric acute inpatient unit of La Paz University Hospital (Madrid, Spain). The number of readmissions was considered.

MethodsThe authors reviewed the discharge summaries of all the patients admitted to the ward, from December 2002 to November 2007. They collected the following data: socio-demographic characteristics, type of admission (voluntary or involuntary), number of previous admissions and DSM-IV diagnosis.

Results

52.8% of patients were admitted on an involuntary basis. The sample was composed of 52.8% of women and 47.2% of women. The mean age was 38.8 years. The mean duration of inpatient stay was 14.9 days (SD = 8.356). Within the sectioned population, 50.8% suffered from schizophrenia or other psychotic disorders.

Conclusions

Sectioning patients appears to be quite consistent with the severity of the psychiatric disorder, be it schizophrenia or other psychotic disorders and affective disorders. Nonetheless, nearly 25% of patients diagnosed with schizophrenia and more than half of the patients diagnosed with affective disorders are admitted on a voluntary basis. We believe that these patients have developed some significant insight into their disorder and therefore seek help spontaneously. Unfortunately, in our setting, social resources are scarce. More often than not, the inpatient unit becomes a transient alternative source of accomodation, when the family has ceased to offer support.

Sectioned patients seem to receive higher dosages of medication, are more likely to receive intramuscular depot formulations and have a higher chance of being re-admitted than voluntary patients.

**REFERENCES:**

1. Katsakou C, Priebe S.Outcomes of involuntary hospital ad mission--a review. Acta Psychiatr Scand. 2006 Oct;114(4):232-4
2. Okai D, Owen G, McGuire H, Singh S, Churchill R, Hotopf M.Mental capacity in psychiatric patients: Systematic review Br J Psychiatry. 2007 Oct;191:291-7.

**NR2-034**

## ASSOCIATION BETWEEN TRAUMATIC EXPERIENCE DURING CHILDHOOD AND THE OCCURRENCE OF FIXED DELUSIONS IN SCHIZOPHRENIA: A CASE REPORT

*Anoosh Salman, M.B.B.S 230 East Ridgewood Ave, Paramus, NJ 07652, Irmute Usiene, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand the importance of early recognition of traumatic events that may predispose an individual to the manifestation of psychotic illness, to examine some of the treatment internevtions that can prevent such development, and to appreciate the impact that such delusions can have with regard to a patient's interaction with the legal system.

**SUMMARY:**

Can traumatic experience during childhood lead to the later development of psychotic illnesses? There is increased interest in the correlation between early traumatic events and risk

of psychosis in adulthood. There are a number of studies in which the majority of patients suffering from psychotic illness had some traumatic event during childhood, which suggests the prevalence of childhood trauma in this population is high. In spite of strong evidence of high rates of childhood and adult trauma in schizophrenia, the area remains insufficiently researched. The following case report describes a 34 year old male patient with an 8 year history of schizophrenia paranoid type with fixed delusions of persecution related to his traumatic experience during his early childhood.

**REFERENCES:**


1. Morgan, c, Fisher, H: Environment and Schizophrenia: anvi ronmental factors in schizophrenai: childhood trauma - a criti cal review. Schizophrenia Bulletin 2007; 33(1):3-10.
2. Spence, W, Mulholland, C, Lynch, G, McHugh, S, Dempster,M, Shannon, C: Rates of childhood trauma in a sample of patients with schizophrenia as compared with a sample of patients non-psychotic psychiatric diagnoses. J Trauma Dissociation 2006; 7(3):7-22.


**NR2-035**

## SILDENAFIL CITRATE PRODUCES PENILE BLOOD VOLUME CHANGES IN LOW-RESPONDING MIDDLE-AGED MALES UNDERGOING PHALLOMETRIC TESTING


*Nathan J Kolla, M.D. Centre for Addiction and Mental Health University of Toronto, 250 College Street, Toronto, ON Canada, M5S 3L4, Ray Blanchard, Ph.D., Philip E. Klassen, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to 1) understand the utility of phallometric testing for assisting in the diagnosis of pedophilia; and 2)describe the physiological mechanisms of sexual arousal and the role of phosphodiesterase 5 selective inhibitors on this process.

**SUMMARY:**


The phallometric test of erotic interests measures penile volume changes in male subjects who are presented with erotic stimuli in a laboratory setting. Although there is little debate as to the superiority of phallometry over patient histories or self-reports in diagnosing erotic age p**references**, including pedophilia, a significant proportion of subjects undergoing phallometric testing demonstrate little or no response. As sildenafil citrate has been clinically proven to increase penile blood flow in adult males, we hypothesized that drug administration would increase blood flow across all categories in a way that should convert non-responders to responders. Twelve subjects participated in our two-way cross-over study of sildenafil citrate. Participants were required to undergo phallometric testing on two separate occasions separated by at least 48 hours. Subjects were given 50 mg PO of sildenafil citrate prior to one of the tests. The order in which subjects received the drug was pre-determined to ensure equality between the two conditions. The subjects' penile blood volume was monitored while they were presented with a standardized set of laboratory stimuli depicting a variety of potentially erotic activities and objects. Subjects' responses to each category of stimuli (e.g. female child) were measured relative to their responses to the other stimulus categories. Neither the drug condition nor the order in which the drug was taken had a significant effect on penile blood volume. However, a trend towards a significant increase in penile blood volume ($p = 0.52$) was observed among men taking sildenafil citrate who had the lowest baseline volumes. These preliminary results suggest that the magnitude of penile blood volume in low or non-responders to phallometric testing could potentially be increased to clinically useful levels by pre-treatment with sildenafil citrate. Further studies with larger sample sizes are warranted.


**REFERENCES:**


1. Blanchard R, Kolla NJ, Cantor JM, Klassen PE, Dickey R, Kuban ME, Blak T: IQ, handedness, and pedophilia in adult male patients stratified by referral source. Sex Abuse 2007; 19:285-309
2. Blanchard R, Klassen PE, Dickey R, Kuban ME, Blak T: Sensitivity and specificity of the phallometric test for pe dophilia in nonadmitting sex offenders. Psychol Assess 2001; 13:118-126


**NR2-036**

## ASSESSING ORTHOPAEDIC-PSYCHIATRIC CO-MORBIDITY IN THE CONTEXT OF WORKER'S COMPENSATION: ADDRESSING THE SOCIAL BURDEN ON THE INSURANCE SYSTEM


*Parameshwaran Ramakrishnan, M.B.B.S 105 N, 31st Ave, Suite 102, Omaha, NE 68131, Saurabh Jauhari, M.B.B.S., Monica Sarawagi, M.B.B.S., Anil Agarwal M.B.B.S., M.S., F.A.C.S., C.I.M.E.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognise: 1) the high social cost in managing orthopedic patients with workers compensation claims; 2) psychiatric comorbidity leads to exageration and chronicity of pain symptoms and poor recovery; and 3) comprehensive independent medical examinations by a multidisciplinary team consisting of an orthopedic surgeon and a psychiatrist can weed out inappropriate cases and help reduce the social cost.

**SUMMARY:**


Background: Work related orthopedic injuries constitute a major burden on the health insurance system, costing up to billions of dollars each year. The United States Centre for Disease Control and Prevention estimates a high psychological correlation with orthopedic pain conditions and suggests a multidimensional approach to address this issue. However, only a fraction of these claimants undergo psychiatric assessment and treatment. Method: Medical records of one hundred randomized workers' compensation claimants were reviewed for appropriateness of medical care. Fifty clients were referred for Independent Medical Examination (IME group) and were evaluated by a team of orthopedic surgeon and a psychiatrist. The other half (Peer review group) did not have an IME, instead, the appropriateness of their claims/requests for therapeutic interventions were assessed by reviewing their medical records. We compared the two groups for their socio-demographic, clinical variables, psychiatric comorbidity and care options. Results: Claimants of IME group had a significantly ($p<0.01$) high prevalence of psychiatric comorbid diagnosis (44%) as compared to the peer review group (8%). While 46% of the claimants of the IME group were approved for their treatment

and received favorable impairment ratings, only 16% of the treatment options of the peer review group were approved. Statistical tests, biases and limitations of the study are discussed. Conclusion: A multidisciplinary team is needed for a comprehensive assessment of pain symptoms associated with orthopaedic conditions. While tenderness is considered not to be an objective sign as per the guidelines, inconsistencies in other 'signs' become more obvious in the context of a psychiatric diagnosis. Addressing psychological distress of patients with chronic pain helps in improving their quality of life as well as reduce burden of workman's compensation.

**REFERENCES:**


1. Bursztajn HJ, Paul RK, Reiss DM, Hamm RM. Forensic psy chiatric evaluation of workers' compensation claims in a man aged-care context. Journal of American Academy of Psychia try and Law. 2003; 31(1):117-9.
2. Strine TW, Hootman JM. US national prevalence and corre lates of low back and neck pain among adults. Arthritis Rheum. 2007 May 15;57(4):656-65.


**NR2-037**

## THE REPORTING OF POTENTIALLY CRIMINAL INCIDENTS WITHIN PSYCHIATRIC INPATIENT SETTINGS: A SURVEY OF CURRENT CLINICAL PRACTICE


*Pavan Srireddy, M.B.B.S ESTEEM (South), F20, Festival Business park, 150 Brand Street, Glasgow, United Kingdom G51 1DH, Jennifer Murphy, M.B.Ch.B., M.R.C.Psych. Julie Richardson, M.B.B.S., Adam Daly, M.B.B.S., M.R.C.Psych, Prathima Apurva, M.B.B.S., Thomas McPhee, M.B.B.S.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should have knowledge of current clinical practise with regard to the reporting of incidents to police, in particular the infrequency of reporting. We would invoke discussion on the subject and encourage participants to consider the potential benefits and risks associated with reporting incidents when they occur.

**SUMMARY:**


Objective: The reporting of incidents on inpatient units to the police is an option which, although controversial, may be appropriate in some circumstances. We hypothesised that the reporting of potentially criminal acts was infrequent and that prosecution even less common. While there has been discussion in published literature regarding the benefits, risks and ethics of this approach, there is limited research examining current practise, something we aimed to address. Method: The prospective survey was carried out across 5 acute psychiatric admission units covering a primarily urban population in Glasgow, Scotland. Data regarding incidences of violence, theft, drug possession and criminal damage was recorded by staff using an incident recording system. Specific details of incidents recorded between July and December 2006 was collected, in addition to demographics and clinical details of the patient involved. Results: 727 incidents were recorded of which 31 (4.26%) were reported to the police. Of these 31 incidents, 4 were charged and taken into police custody, 10 were charged, and 17 were not charged. The incidents reported involved verbal abuse (14), physical assault (9), criminal damage (7), drug possession (6), threatening behaviour (4) and possession of an offensive weapon (1). In 65% of cases the decision to report to the police was made by nursing staff alone. Only in 2 cases was there a management plan in place recommending police involvement should an incident occur. Conclusion: Reporting of incidents on inpatient units is extremely rare and the decision to charge even rarer. The significant number of incidences of violence, theft and drug possession on inpatient units highlights the need for preventative work. The low rate of reported incidents suggests possible under-reporting and clearer guidance for staff is necessary, in order that criminal proceedings are actioned in appropriate cases.



We have no financial sponsorship to declare


**REFERENCES:**


1. Appelbaum KL, Appelbaum PS: A model hospital policy on prosecuting patients for presumptively criminal acts. Hospital and Community Psychiatry 1991; 42(12): 1233-7.
2. Kumar S, Fischer J, Bradley N, Clarke S, Robinson E: Prosecuting psychiatric patients who assault staff. Austral asian Psychiatry 2006; 14(3): 251-255


**NR2-038**

## CHARACTERISTICS AND OUTCOME OF THE PSYCHIATRIC POPULATION IN A HOSPITAL-BASED POLICE DIVERSION UNIT


*Shubi R Mukatira, M.D. UT College of Medicine Department of Psychiatry135 North Pauline, Memphis, TN 38105, Robert C. Kores, Ph.D., S. Taylor Williams, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to demonstrate an understanding of the characteristics of patients who required psychiatric consultations in a hospital-based police diversion unit. Participants should be familiar with the legal status (arrested versus incarcerated), reason for referral, demographic breakdown, psychiatric diagnoses, and discharge disposition of this unique and controversial psychiatric population.

**SUMMARY:**


Introduction: The criminalization of the mentally ill is a central issue facing society today. A recent study showed that although many individuals are treated for mental illness in the jail setting, a significant number eventually require acute psychiatric hospitalization (Lamb et al, 2007). Furthermore, it has been demonstrated that patients who need mental health treatment are aided in gaining access to psychiatric services by residing in a community with a crisis intervention team (Teller et al, 2005). Setting: The Regional Medical Center at Memphis, Tennessee is an urban, community-based, and university-affiliated hospital in which there is a police diversion unit. Patients are either brought to this unit upon arrest by police officers trained in crisis intervention, or sent from a criminal justice facility for medical evaluation. When indicated, patients are assessed by a psychiatric consultation-liaison team. Method: This study is a retrospective chart review of those patients (n=194) who received a psychiatric evaluation in this unit from January 2005 to November 2007. Data collected included demographics, reason for psychiatric consult, psychiatric diagnosis, concurrent medical conditions, and discharge disposition.Results: Notably, 45% (n=52) of individuals brought in immediately after arrest were referred for inpatient psychiatric hospitalization.

Additionally, 59.5% (n=47) of incarcerated individuals received inpatient psychiatric treatment. Upon analysis, significant differences were noted in gender distribution based on status (arrested versus incarcerated) as well as discharge disposition (inpatient psychiatric unit versus criminal justice facility) based on diagnosis. Conclusion: The police diversion unit has a distinct and often controversial psychiatric population. Having access to psychiatric consultations facilitates the identification of patients in need of acute inpatient admission, who would otherwise have been incarcerated.

**REFERENCES:**


1. Lamb HR, Wineberger LE, Marsh JS, Gross BH: Treatment prospects for persons with severe mental illness in an urban county jail. Psychiatr Serv 2007; 58:782-786
2. Teller JL, Munetz MR, Gil KM, Ritter C: Crisis intervention team training for police officers responding to mental distur bance calls. Psychiatr Serv 2006; 57:232-237


**NR2-039**

**BROKEN HEART SYNDROME SECONDARY TO ELECTROCONVULSIVE THERAPY**


*Christina L Wichman, D.O. 200 First Street SW, Rochester, MN 55905, Kemuel L. Philbrick, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to discuss the risk of stress-induced cardiomyopathy secondary to electroconvulsive therapy (ECT).

**SUMMARY:**


Introduction Electroconvulsive therapy (ECT) is a first-line treatment for depressed patients who are suicidal, severely agitated, catatonic or psychotic and may be used when antidepressant medications are poorly tolerated or ineffective. (1) ECT is a safe procedure, however, major cardiac events, although uncommon, can occur after ECT, including stress-induced cardiomyopathy.

Methods Mrs. H, a 77-year-old female, presented with severe depression including dysphoria, anhedonia, decreased appetite, and weight loss. After informed consent, bitemporal ECT was initiated. Mrs. H tolerated ECT #1 without incident. However, after ECT #2, the patient became unresponsive. Laboratory studies demonstrated hypoxia with elevated d-dimer and troponin. ECG revealed T-wave inversion in leads V2-6 and a prolonged QTc. An emergent echocardiogram demonstrated extensive hypokinesis of the anteroseptum, anterior wall and apex with ejection fraction estimated at 40%. Cardiac catheterization did not reveal any acute occlusion, although there was moderate coronary artery disease with a high-grade stenosis in the first diagonal artery. Cardiology concluded that Mrs. H had developed a stress-induced cardiomyopathy likely due to ECT and recommended no further ECT. Unfortunately, the patient later developed acute respiratory failure due to aspiration and expired.

Discussion Stress-induced cardiomyopathy is a syndrome characterized by transient dysfunction of the apical portion of the left ventricle with compensatory hyperkinesis of the basal wall, producing ballooning of the apex in the absence of significant CAD. Previous studies have described ECT-associated left ventricular systolic dysfunction as a common, but transient phenomenon without untoward lasting effects. (4) However, this case report demonstrates the possibility of stress-induced cardiomyopathy after ECT and illustrates the value of vigilance for factors which might predict higher risk for this complication.


**REFERENCES:**


1. American Psychiatric Association. Practice Guidelines for major depressive disorder in adults. Am J Psychiatry 1993; 150 (suppl 4): 1-26.
2. McCully RB, Karon BL, Rummans TA et al. Frequency of Left Ventricular Dysfunction After Electroconvulsive Therapy. Am J Card 2003; 91:1147-1150.


**NR2-040**

**ANXIOUS AND DEPRESSED ELDERLY, A PARALLEL OR SERIAL RELATIONSHIP?**


*Kah Hong Goh, M.D. 930 62nd Street, Brooklyn, NY 11219, COHEN, Carl M.D.,MITTAL Sukriti M.D.,GUSTAVE Mario M.D.,YAFFEE Robert Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to appreciate the causal relationship among depression, anxiety and associated factors in a clinical sample of depressed elders.

**SUMMARY:**


Objective: Depression and anxiety frequently coexist in older adults. The aim of this study is to examine the causal relationship among depression, anxiety and associated factors in a clinical sample of depressed elders.

Method: The original sample consisted of 239 cognitively intact persons aged 55+ in a multiracial group drawn from three psychiatry outpatient clinics and a geriatric day program in NYC. 149 persons were re-interviewed at a mean of 30 months (mean age 68 years, 86% female, 43% white). Depression was defined as a CES-D score of >8. An adaptation of Linda George's Social Antecedent Model was used to study 15 predictor variables of depression (Time 2) in a logistic regression analysis

Results: 46% of the sample was non-depressed at both Time 1 and Time 2, 24% was depressed at both Time 1 and Time 2, 17% was not depressed at Time 1 (T1) but depressed at Time 2 (T2), and 13% was depressed at T1 but not at T2.Logistic regression indicated that 7 variables attained significance as predictors of T2 depression: T1 depressive symptoms, presence of paranoid or psychotic symptoms at T1, longer time between T1 and T2 interviews, smaller proportion of reliable network members at T1, more psychotherapy visits, the presence of subsyndromal or syndromal anxiety at T1, and an increase in anxiety symptoms between T1 and T2.

Discussion: Several clinical factors--depression T1, psychoses/paranoid ideation, and anxiety—were predictors of T2 depression. Baseline and change in anxiety were strong predictors of depression. Treatment success may depend on more completely addressing other co-morbid clinical symptoms such as anxiety and psychoses/paranoid ideation.


**REFERENCES:**


1. Vink D, Aartsen MJ, Schoevers RA. Risk factors for anxiety and depression in the elderly: A review. J Affect Disord. 2007 Aug 16, PMID: 17707515
2. Schoevers RA, Deeg DJ, van Tilburg W, Beekman AT. Depression and generalized anxiety disorder: co-occurrence

and longitudinal patterns in elderly patients. Am J Geriatr Psychiatry. 2005 Jan;13(1):31-9. PMID: 15653938

**NR2-041**

## DEPRESSION IN THE ELDERLY: WHAT PREDICTS THE OUTCOME?

*Kah Hong Goh, M.D. 930 62nd Street, Brooklyn NY 11219, COHEN Carl,M.D.,MITTAL Sukriti M.D., PREHOGAN Alla M.D.,YAFFEE CASIMIR, Georges MS*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to better appreciate the relevant factors affecting depression outcome in the elderly.

**SUMMARY:**

Objectives: There has been a paucity of longitudinal data to examine predictors of depression outcome among currently depressed older community adults. We address this issue by examining predictors of depression in a multiracial sample of older persons in NYC. Methods: Using census data for Brooklyn, N.Y., we attempted to interview all cognitively intact persons age 55+ in randomly selected block groups. The initial sample consisted of 206 Caucasians and 818 Blacks (282 U.S. born, 288 from English speaking islands, 248 from French speaking islands). Of these, we identified 249 persons who met criteria of depression based on a CESD score of >8. On follow-up (mean: 3 years; range 1 to 4.5 years), we located 159 of these depressed persons of whom 110 could be re-interviewed. We used George's Social Antecedent Model to examine 11 predictor variables of depression at Time 2. The sample was weighted by race and gender. To control for design effects, we used SUDAAN for the data analysis. Results: On follow-up, 27% of the respondents remained depressed at Time 2 (T2). In logistic regression analysis, we found 6 variables were significant predictors of T2 depression: higher Time 1 (T1) CESD, higher T1 Anxiety Symptom Inventory (ASI) scores, presence of T1 psychoses/paranoid ideation, larger T1 social network size, lower T1 income, and greater change in ASI between T1 and T2. Age, gender, race, IADL change, and mental health treatment were not significant. During the follow-up period, only 22% sought mental health treatment from any source. Discussion: A substantial proportion of depressed persons in the general aging community remain depressed after 3 years. Only about one-fifth of depressed persons sought any mental health assistance, although the clinical predictors of T2 depression were potentially treatable. PCPs must not only more aggressively recognize and treat depression, but also co-occurring

**REFERENCES:**

1. Schoevers RA, Beekman AT, Deeg DJ, Hooijer C, Jonker C, van Tilburg W. The natural history of late-life depression results from the Amsterdam Study of the Elderly (AMSTEL). J Affect Disord. 2003 Sep;76(1-3):5-14. PMID: 12943928
2. Schoevers RA, Beekman AT, Deeg DJ, Geerlings MI, Jonker C, Van Tilburg W. Risk factors for depression in later life; results of a prospective community based study (AMSTEL) J Affect Disord. 2000 Aug;59(2):127-37. PMID: 10837881

**NR2-042**

## CEREBELLAR VERMIS VOLUME AS A PREDICTOR OF DEMENTIA IN PATIENTS WITH MILD COGNITIVE IMPAIRMENT

*Leonardo Baldaçara, M.D. Rua Major Maragliano 241 Vila Mariana Cep 04017030S, ão Paulo, Brazil, João F. Borgio, M.D., Walter Moraes, M.D. Ph.D., Acioly L.T. Lacerda, M.D. Ph.D., Rodrigo A. Bressan, M.D. Ph.D., Maria Beatriz M. Montaño, M.D., Sérgio Tufik, Luiz Roberto Ramos, M.D. Ph.D., Andrea P. Jackowski, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize cerebellum as an important structure related to cognition, and thecerebellar vermis as a new element predicting conversion to dementia in mild cognitive impairment.

SUMMARY:

Background: In the past, the role of cerebellum was thought to be limited to motor functions, including gait, posture, and balance. However, several studies have pointed to the involvement of cerebellum in cognition and emotional processing. In this case, the cerebellum would exert a regulatory function enhancing and supplementing other brain functions through direct and indirect circuits. Recent studies indicate that there are structural and functional cerebellar abnormalities in patients with dementia, but to the best of our knowledge, there are no structural imaging studies examining cerebellum subjects with mild cognitive impairment (MCI). Methods: Twenty-eight individuals above 60 years old (nine healthy controls and 19 patients with MCI), matched by gender, age and years of education, were submitted to clinical and neuropsychological evaluation. All the subjects underwent magnetic resonance imaging scan. After two years, they were re-evaluated to detect dementia. Controls and patients were compared by gender, age, years of study, Clinical Dementia Rating Box Score (CDR-BS), neuropsychological tests, cerebral and cerebellum volumes (including vermis volume and sub-regions). Results: Memory, language, and calculation impairment at baseline were related to dementia development after two years (p=0,001). No volumetric differences regarding the cerebral lobes, thalami and cerebellar hemispheres were observed. Cerebellar vermis volume was negatively correlated with CDR-BS and was smaller in subjects who developed dementia (p=0,001). Cerebellar vermis atrophy was related to language and calculation impairment (p=0,0001).However, cerebellar vermis atrophy was not related to Mini-mental exam but to a lower CDR-BS. Conclusions: Smaller cerebellar vermis volume appears to be a risk factor for developing dementia in patients with mild cognitive impairment. Future follow-up studies examining larger samples are warranted to validate these preliminary findings.

**REFERENCES:**

1. Wegiel J, Wisniewski HM, Dziewiatkowski J, Badmajew E, Tarnawski M, Reisberg B, et al. Cerebellar atrophy in Alzheimer's disease-clinicopathological correlations. Brain Res. 1999 Feb 6;818(1):41-50.
2. Baloyannis S. Pathological alterations of the climbing fibres of the cerebellum in vascular dementia: a Golgi and electron microscope study. J Neurol Sci. 2007;257(1-2):56-61.

**NR2-043**

## NEUROSYPHILIS AS A RARE CAUSE OF DEMENTIA AND PSYCHOSIS: A CASE REPORT

*Marina M Haghour-Vwich, M.D. 230 .E .Ridgewood Ave, Paramus, NJ 07652, M. Imran Anjum, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand the importance of considering a diagnosis of neurosyphillis in patients who present with symptoms of cognitive and memory decline, to examine the different presentations of this illness, and to appreciate the benefit of early intervention and treatment.

**SUMMARY:**

Neurosyphilis can cause rapid progressive irreversible dementia and personality changes. The following case report describes a 70- year old male patient with history of altered mental status and it seeks to explain why patients who present with forgetfulness and decline in memory and cognitive functions should be screened for syphilis. It is recommended that psychiatrists have a high index of suspicion for neurosyphilis, which may have an exclusively psychiatric presentation. Neurosyphilis may present as virtually any psychiatric disorder, including personality disorder, psychosis, delirium, and dementia. The clinical onset in this paitent was characterized by altered mental status, psychosis, grandiose and persecutory delusions and hostlility. Serum nontreponemal tests (VDRL and RPR) and serum treponemal tests (FTA-ABS and TPPA) were reactive. The patient was treated with IV penicllin without significant improvement. Neurosyphilis in its manifestations can cause long term sequelae of decline in memory and cognitive functions, neglect of self hygiene, assaultive behavior and inability to take care of self. Lack of adequate oral intake could lead to dehydration, elevation in CPK and rhabdomyolysis. The nature of behavioral symptoms in neurosyphilis raises a major issue of long term placement of such patients, poor adherence to medications which poses a challenge to caregivers and families.

**REFERENCES:**

1. Moore, JE, Hopkins, H: Asymptomatic neurosyphilis vs. The prognosis of early and late asymptomatic neurosyphilis. JAMA 1930; 95:1637.
2. Vargas AP, Carod-Artal FJ, Del Negro MC: Serviçio de Neu rologia, Hospital de Aparelho Locomotor - SARAH, Brasília, DF, 70334-900, Brasil

**NR2-044**

## FUNCTIONAL DEFICITS AND COGNITIVE IMPAIRMENTS BETWEEN LATE-LIFE DEPRESSED AND REMITTED PATIENTS

*Ming-Ching Wen, M.S. Department of Psychiatry Chang Gung Memorial Hospital5 Fu-Shin Street, Kwei-Shan, Taoyuan 333 TAIWAN, Shwu-Hua Lee, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the features of functional deficits and cognitive impairments between late-life depressed and remitted patients.

**SUMMARY:**

Objective: Functional deficits and cognitive impairments are common features of dementia, but few studies have explored the relationship in late-life depression. The purpose of this study is to explore the characters of functional deficits and cognitive impairments on late-life depression.

Methods: 69 depressed and 28 remitted patients aged 55-83 years without dementia who met *DSM-IV* criteria for major depression and remission were administrated a comprehensive neuropsychological assessment, including Orientation (time, personal information, and place), episodic memory (Verbal List Recall, Delay Recall, and Benton Visual Retention Test), Semantic Verbal Fluency, Object Naming Test, Digit Span Test & Digit Symbol Substitution Test from WAIS-III, Trail Making A & B, 3D Block Construction Test, and Hamilton Depression Rating Scale. Besides, the three categories (Community Affairs, Home and Hobbies, and Personal Care) from the Clinical Dementia Rating Scale (CDR) were extracted as the evaluation of functional status to yield the measures of extended activities of daily living (ADL) scores.

Result: The results revealed that depressed patients differed from remitted patients on several cognitive functions, including verbal delay recall, attention, executive function, and visuospatial praxis, and functional status. Depressed patients showed more deficits not only in several cognitive domains, but also in functional status. Moreover, poor ADL was associated with cognitive deficits.

Conclusions: Late-life depressed patients had severer cognitive impairments and poorer functional status compared with remitted older patients. We suggest that interventions in functional deficits among late-life depression patients should be needed.

**REFERENCES:**

1. Rapp MA, Beeri MS, Scbmeidler J, Sano M, Silverman JM, Haroutunian V: Relationship of neuropsychological per formance to functional status in nursing home residents and community-dwelling older adults. American Journal of Geri atric Psychiatry 2005; 13:450-459
2. Butter MA, Becker JT, Nebes RD, Zmuda MD, Mulsant BH, Pollock B, Reynolds CF: Changes in cognitive functioning following treatment of late-life depression. American Journal of Psychiatry 2000; 157:1949-1954

**NR2-045**

## COMPARISON OF CLINICAL PRESENTATION BETWEEN YOUNG AND ELDERLY PATIENTS WITH GENERALIZED ANXIETY DISORDER

*Nahyun Kim, M.D. Department of Psychiatry, Kangbuk Samsung Hospital, 108, Pyung-dong, Chongno-gu, Seoul, South Korea 110-746, Eun-Ji Kim, M.D., Hong-Min Choi, M.D., Han-Yong Chung, M.D., Se-Won Lim, M.D., Kang-Seob Oh, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize that there are different presentation of symptoms between young and elderly patients with generalized disorder. It might be useful to assess anxiety and related depressive and somatic symptoms using both self-report measures and clinician ratings of symptom severity in elderly patients with generalized anxiety disorder.

**SUMMARY:**

IntroductionThe authors compared young and elderly patients with generalized anxiety disorder to investigate differences in phenomenology.

Methods

Study group included 244 outpatients who met diagnostic criteria for generalized anxiety disorder at the department of

psychiatry of Kangbuk Samsung hospital from March 2003 to August in 2007. Patients in the elderly group (age 60 and above) were 119 and the ones in the young group (age 59 and below) were 125. Diagnoses were based on Korean version of MINI International Neuropsychiatric Interview plus by experienced psychiatry residents. All subjects were investigated using Hamilton Anxiety Scale (HAM-A), Hamilton Depression Scale (HAM-D), and Global Assessment of Functioning score (GAF). Study subjects filled out 4 questionnaires, which were Beck Anxiety Inventory (BAI), Beck Depression Inventory (BDI), Anxiety Sensitivity Index (ASI), State-Trait Anxiety Inventory (STAI).

ResultsBetween the two groups, there were no differences in sex, duration of illness, the number of comorbidity and GAF scores. And total scores of HAM-A, HAM-D, BAI, BDI, ASI, and STAI of the two groups were not different significantly. But, The elderly group reported higher scores of BDI item 16 ($t = 2.105$, $df = 242$, $p = 0.014$), BDI item 21 ($t = 3.422$, $df = 242$, $p = 0.001$), HAM-A item 6 ($t = 3.272$, $df = 242$, $p = 0.002$), and HAM-D item 1 ($t = 2.016$, $df = 242$, $p = 0.021$) than the young group.

ConclusionElderly patients with generalized anxiety disorder tended to report more severe complaints of sleep disturbance and decreased interests about sex than young patients even though these findings were not supported through the objective clinician rating scales. And depressive symptoms might be underreported by the subjective scales in elderly with generalized anxiety disorders.

**REFERENCES:**


1. Carmin CN, Wiegartz PS, Scher C: Anxiety disorders on the elderly. Curr Psychiatry Rep 2000; 2:13-19
2. Hopko DR, Bourland SL, Stanley MA, Beck JG, Novy DM, Averill PM, Swann AC: Generalized anxiety disorder in older adults: examining the relation between clinician severity ratings and patient self-report measures. Depress Anxiety 2000; 12:217-225


**NR2-046**

## HOSPITAL BEHAVIORAL HEALTH PREPAREDNESS FOR INFECTIOUS DISEASE OUTBREAKS


*Artin Terhakopian, M.D. Psychiatry Department, 4301 Jones Bridge Road,, Bethesda, MD 20814, Thomas R. Magra, M.D., David M. Benedek, M.D., Charles C. Engel, M.D., M.P.H., Robert J. Ursano, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) recognize behavioral health problems related to an infectious disease outbreak and interventions aimed to remedy them; 2) identify the strengths and weaknesses of preparedness at D.C. hospitals; and 3) list the most important barriers to improving hospital preparedness.

**SUMMARY:**


Infectious disease outbreaks result in both medical and psychiatric morbidity and mortality. Such outbreaks place a large demand on hospital behavioral health services. Consequently, hospital behavioral health preparedness is an important component of an effective emergency response. We developed a questionnaire based on the most recent advances in disaster response science to assess hospital preparedness for behavioral health interventions in an infectious disease outbreak and to gauge perceived barriers to improvement. Responses of D.C. hospital personnel to this questionnaire are summarized. Preliminary results from 6 respondents indicate a mixed picture regarding awareness of behavioral health problems generated by infectious disease outbreaks and hospital behavioral health interventions for them. Food and shelter provisions for hospital employees and patients, employee vaccination and prophylactic treatment programs, and patient decontamination, quarantine, isolation and evacuation guidelines are often in place. Within-hospital and within-community coordination, financing, and training are the most cited barriers to improving preparedness. 5/6 respondents report having received federal, state or local funds in the past and 6/6 intend to seek additional funds to improve hospital preparedness. Given the current heightened risk for bioterrorism and pandemic flu, hospital preparedness for behavioral health interventions in an infectious disease outbreak are inadequate. Improved coordination within hospitals and communities, increased funding and further training may help overcome the barriers that have limited hospital preparedness for infectious disease outbreaks.


**REFERENCES:**


1. Kaji AH, Koenig KL, Lewis RJ: Current hospital disaster preparedness. JAMA 2007; 298:2188-2190
2. Terhakopian A, Benedek DM: Hospital disaster prepared ness: mental and behavioral health interventions for infectious disease outbreaks and bioterrorism incidents. American Jour nal of Disaster Medicine 2007; 2:43-50


**NR2-047**

## USING COMMUNITY ARTS EVENTS TO ENHANCE COLLECTIVE EFFICACY AND COMMUNITY ENGAGEMENT TO ADDRESS DEPRESSION IN AN AFRICAN AMERICAN COMMUNITY


*Bowen Chung, M.D. 10920 Wilshire Blvd Suite 300, Los Angeles, CA 90024, Loretta Jones, M.A., Theodore Booker, Edward Corbett, Kenneth B. Wells, M.D., Barry E. Collins, Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand community partnered participatory research; recognize the importance of community partnerships for working on approaches for engaging underserved, African American communities around research; to identify that Collective Efficacy and Community Engagement to address depression is a relevant construct in an underserved African American community

**SUMMARY:**


Introduction. Depression can be viewed as a collective concern in underserved communities, but little is known about either the precursors or effects of planned intervention on perceived community engagement or collective efficacy to improve depression care. We used a community-partnered participatory research approach (CPPR) to design, implement, and evaluate the impact of community-generated arts events concerning depression on community engagement to improve depression care in an African American community.

Methods. Survey data were collected from participants at

community arts events (Photography exhibit, N=747 and Spoken Word, N=104) sponsored by the Talking Wellness work group. Post hoc (photo exhibit) and confirmatory (spoken word) structural equation models (SEM) identified the influence of knowledge and attitudes concerning depression, sociodemographics, and exposure to either Spoken Word or prior CPPR initiatives on community engagement.
Results. The final SEM suggests that collective efficacy to improve depression care is an independent predictor of community engagement to address depression (path coefficients: 0.64-0.97, each $p<0.001$). Social stigma was not associated with Collective Efficacy or Community Engagement. In confirmatory analyses, exposure to Spoken Word and prior CPPR initiatives increased perceived Collective Efficacy to improve depression care (path coefficients 0.19-0.24, each $p<0.05$).
Conclusions. Collective Efficacy to improve depression care and Community Engagement to address depression is a relevant construct in this underserved, African American community. CPPR initiatives and specific sponsored events may stimulate Community Engagement through increasing Collective Efficacy. CPPR is a viable framework to design and evaluate community engagement health initiatives.

**REFERENCES:**


1. Wells KB, Miranda J, Bruce ML, Alegria M, Wallerstein N: Bridging community intervention and mental health services research. Am J of Psychiatry 2004;161(6):955-963
2. Jones L, Wells K. Strategies for academic and clinician engagement in community-participatory partnered research. JAMA 2007;297(4):407-410


**NR2-048**

## PERCEIVED NEEDS AND BARRIERS TO ACCESS OF MENTAL HEALTH INFORMATION: PATIENT, FAMILY MEMBER, AND PROVIDER VIEWS


*Charissa F Andreotti, B.S. 1 Bowdoin Square, Boston, MA 02114, Karen Blumenfeld, M.S.W., M.B.A., Anthony P. Weiss, M.D., M.Sc., Mark A. Blais, Psy.D., Jeff Huffman, M.D., Robert J. Birnbaum, M.D., Ph.D., Timothy J. Petersen, Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the sources of mental health information that are most commonly accessed by patients and families as well as information recommended by mental health practitioners. 2. At the conclusion of this presentation, the participant should be able to demonstrate an understanding of the access and utilization barriers most commonly endorsed by patients, family members, and providers.

**SUMMARY:**


Background: In recent years, there has been a proliferation of publicly available information regarding mental health disorders. However, no systematic investigation of usage patterns or barriers to access has been conducted. This investigation sought to evaluate, in a large sample of patients, family members, and providers, sources of information most frequently accessed and recommended, as well as perceived barriers to access and utilization. Methods: 1,591 providers and 259 patients or their family members responded to surveys as part of the 2006-2007 Psychiatry Academy and Mood and Anxiety Disorders Institute at the Massachusetts General Hospital. Providers responding to the survey had participated in one of ten CME events held throughout the U.S., while patients and family members had attended one of two workshops focused on either mood disorders or substance use disorders. Responses were evaluated using descriptive analyses and results of both surveys were compared using appropriate statistical techniques. Results: Patients and family members endorse medications (58.1%, 51.7%) as the topic for which they are most frequently seeking information. This group also indicates their mental health practitioner (81.4%, 66.7%) as the information source they most often turn to, and feeling overwhelmed (72.9%, 51.7%) as the most significant barrier to access. Providers report that patients most often want to learn about treatments (87.4%), and the source to which they most commonly refer patients is mental health literature (61.3%). In contrast to patients, providers report the greatest barrier to recommending mental health information to be concerns about the quality and reliability of available information (50.4%).
Conclusions: Patients and providers endorse factors that would impact access to, and recommendations of, mental health information. Future studies are needed to identify methods for reducing barriers to access for both providers and patients.


**REFERENCES:**


1. Jorm AF et al. Helpfulness of interventions for mental disor ders: beliefs of health professionals compared with the gen eral public. Br J Psychiatry, 1997; 171: 233-7.
2. Riedel-Heller SG, Matschinger H & Angermeyer MC. Mental disorders--who and what might help? Help-seeking and treat ment p**references** of the lay public. Soc Psychiatry Psychiatr Epidemiol, 2005; 40, 167-74.


**NR2-049**

## METABOLIC SYNDROME AMONG PSYCHIATRIC INPATIENTS


*David Lopez, M.D. Servicio De Psiquiatría Hospital Universitario La PazPaseo De La Castellana Nº 261, Madrid, Spain 28001, Ainoa Muñoz San José, M.D. (is the lead author), Santiago Kassem Vargas, M.D., David López Gómez, M.D. (presenting), Belén Bardón Rivera, M.D., Jesús J. Marín Lozano, M.D., María Fe Bravo Ortiz, M.D. Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize when their patients are at the risk of developing a metabolic syndrome, due to its elevated prevalence among psychiatric patients. The diagnosis, prevention and treatment of this disease are essential for an optimum clinical practice in order to avoid an important cause of morbimortality.

**SUMMARY:**


Introduction: Metabolic syndrome has been increasing its clinical relevance for the last years, especially, since the introduction of atypical antipsychotics. Mood-stabilizers are also implicated in it. This clinical problem is an important cause of morbimortality. The aim of our study is to determine the frequency of metabolic syndrome among inpatients in a short-stay psychiatric unit. Clinical characteristics and other features included in such syndrome are evaluated according to international criteria. Methods: The sample comprises all inpatients of a 21-bed short-stay psychiatric unit of a general

hospital in Madrid (Spain) during four consecutive months. We gathered social, demographical, clinical and anthropometrical data. Analytical determinations of the parameters involved in the metabolic syndrome were also handled. A descriptive research has been done, analyzing data with SPSS PC. We use the diagnostic criteria of the National Cholesterol Education Program (NCEP) of 2001.
Discussion: Psychiatric patients, both due to the treatment they receive and to other variables which could be related to their mental illness, are at a special risk of developing a metabolic syndrome. These facts may increase their physical risks and their treatment compliance. It is of crucial importance that all psychiatrists become aware of this problem. We all should diagnose, treat and prevent the short, medium and long-term consequences.

**REFERENCES:**


1. Meyer JM, Nasrallah HA, McEvoy JP, Goff DC, Davis SM, Chakos M, Patel JK, Keefe RS, Stroup TS, Lieberman JA: The Clinical Antipsychotic Trials Of Intervention Effective ness (CATIE) Schizophrenia Trial: clinical comparison of subgroups with and without the metabolic syndrome. Schizophr Res. 2005 Dec 1; 80(1):9-18.
2. Tirupati S, Chua LE: Obesity and metabolic syndrome in a psychiatric rehabilitation service. Aust N Z J Psychiatry. 2007 Jul; 41(7):606-10.


**NR2-050**

## CLINICAL AND DEMOGRAPHICAL CHARACTERISTICS RELATED TO LENGTH OF HOSPITAL STAY AMONG ADULT INPATIENTS AT AN ACUTE PSYCHIATRIC UNIT


*David Lopez, M.D. Servicio De Psiquiatría Hospital Universitario La Paz Paseo De La Castellana Nº 261, Madrid, Spain 28001, Jesús J. Marín Lozano, M.D., Ainoa Muñoz San José, M.D., Juan José de Frutos Guijarro, M.D., Santiago Kassem Vargas, M.D, María Benítez Alonso, M.D., Eduvigis Contreras Martinón, B.S., Belén Bardón Rivera, M.D., María Fe Bravo Ortiz, M.D. Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the variables that predict a more extended hospital stay and, on the other hand, to dismiss the variables that do not affect the stay. The participants should also be aware that the mean stay of patients depends on the diagnostic category.

**SUMMARY:**


Introduction: Hospital stay in acute psychiatric patients may vary depending on clinical and demographical parameters and admission type (voluntary/involuntary). The aim of our study is to demonstrate the relative importance of each of them. This will help us to predict the mean stay of patients according to the various variables. Methods: The sample comprises 2,124 inpatients at our acute psychiatric unit of a general hospital in Madrid, Spain, between Jan 2003 and Sep 2007. A retrospective case-series study has been done, analyzing data with SPSS PC. The dependent variable used was length of stay; whereas the independent variables were sex, age, admission type, and diagnostic category, according to the APA Diagnostic Classification (*DSM-IV TR*).
Results: The average stay of all inpatients was 14.93 days. Among the obtained results, it is worth pointing out how the mean stay in voluntary admissions is 11.95 days, whereas in involuntary admissions it rises up to 16.85 days. According to diagnostic category, the longest mean stays are represented by: Schizophrenia and Other Psychotic Disorders (17.27), Eating Disorders (17.03), and Delirium, Dementia, and Amnestic and Other Cognitive Disorders (17.09); the shortest ones are represented by: Somatoform Disorders (4.75), Adjustment Disorders (8.58), Anxiety Disorders (9.64), and Substance-Related Disorders (10.09). Regarding sex, no particular differences have been found: men (15.22) and women (14.67).
Conclusions: We have observed that the mean stay is not affected by sex. On the other hand, it is influenced by the type of admission (voluntary vs. involuntary) and by the diagnostic category. The hospital stay is prolonged when the admission is involuntary, and the diagnosis is included in the categories of Psychotic, Eating and Cognitive Disorders. Discussion: The obtained results show which variables are predictors of the stay in our psychiatric unit. This could be useful for the management of a psyc


**REFERENCES:**


1. Journal article:Blais MA, Matthews J, Lipkis-Orlando R, Lechner E, Jacobo M, Lincoln R, Gulliver C, Herman JB, Goodman AF. Predicting length of stay on an acute care medical psychiatric inpatient service. Adm Policy Ment Health. 2003 Sep;31(1):15-29.
2, Journal article:Darren Malone, Naomi A Fineberg, Tim M Gale. What is the usual length of stay in a psychiatric ward? Int J Psych Clin Pract. 2004. 8:53-56.


**NR2-051**

## DEVELOPING A NATIONAL MENTAL HEALTH CARE PROGRAM IN CAMBODIA


*Geoffrey J Oravec, M.D. 11020 Huebner Oaks Apt 2025, San Antonio, TX 78230,*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to demonstrate an understanding of the state of mental health care in Cambodia and how it relates to other developing populations; recognize the obstacles to implementing mental health programs in areas with limited resources and lack of public awareness; and describe methods that have proven effective in these endeavors and may prove efficacious in other parts of the world.

**SUMMARY:**


Objective: To examine the development of psychiatric services in Cambodia and the evolution of the National Program for Mental Health (NPMH); with a focus on the state of psychiatric services in the country today. Methods: The investigator traveled to Cambodia during the spring of 2006 to meet with government officials and observe the practice of local psychiatrists. Data was collected on the numbers of providers trained, psychiatric clinics created, and sources of funding through four stages of development, as well as the numbers of patients presenting to psychiatric clinics and the most common diagnoses. Results: Since 1994 the NPMH has trained 26 psychiatrists, 40 psychiatric nurses, 254 general practitioners, and 269 primary nurses. Nearly 300 medical students, 200 nursing students, and 3 psychology students are now receiving mental health training while in school. The program has

created 35 psychiatric outpatient departments representing 17 of Cambodia's 20 provinces. International funding increased from 129,000USD annually in 1994 to 486,000USD in 1998 but decreased to 382,000USD in 2002. Annual outpatient psychiatric visits increased from 9,615 in 1995 to 56,373 in 2005, while the number of new psychiatric cases rose from 212 to 8,795 over the same period; with the most commonly diagnosed illnesses being anxiety (36.4%), depression (24.9%) and schizophrenia (15%). Conclusions: The NPMH has successfully integrated mental health into the Cambodian health care system and has expanded psychiatric services throughout the country. Increasing consultations and new psychiatric cases indicate greater public awareness of mental illness as well as increased utilization of mental health services. While decreasing funds may threaten the program's sustainability, increasing accessibility of resources to the rural population is helping Cambodia recover from its violent history and this model can be applied to other developing or post-conflict societies.

**REFERENCES:**


1. Savin D: Developing Psychiatric Training and Services in Cambodia. Psychiatric Services 2000; 51:935.
2. Eisenbruch M, Van de Put W: The Cambodian Experience, in Trauma, War and Violence: Public Mental Health in Socio-cultural Context. Edited by Jong J, New York, Kluver Aca demic/Plenum Publishers, 2002, pp 93-156.


**NR2-052**

## HIGH RATE OF UNTREATED DYSLIPIDEMIA IN OUTPATIENTS WITH BIPOLAR DISORDER


*Mytilee Vemuri, M.D. 401 Quarry Road, Stanford, CA 94305, Natalie Rasgon, M.D., Ph.D, Uma Saha, M.D., Nancy Nguyen, Holly-Marie Arce M.A., Po Wang, M.D., Terence Ketter, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize dyslipidemia based on laboratory values, and describe the rates of untreated dyslipidemia and insulin-resistance in an outpatient bipolor clinic setting.

**SUMMARY:**


BACKGROUND: Dyslipidemia, (elevated total cholesterol, low density lipoprotein (LDL), and triglyceride (TG) levels, and low high density lipoprotein (HDL) levels), and insulin resistance (IR) are prevalent in the United States. We assessed rates of dyslipidemia/IR in outpatients with bipolar disorder (BD).

METHODS: Records of 491 outpatients (ages 18-75) seen in the Stanford BD clinic between 2000 and 2007 were reviewed. Patients were systematically assessed and followed longitudinally, received naturalistic treatment according to model practice procedures, and had lipid panels ordered at clinicians' discretion, with patients encouraged to fast prior to venipuncture. IR was imputed from a TG/HDL ratio > 3.5. Patients qualified if they were age 18 to 75 years, had four concurrent lipid measures (total cholesterol, LDL, HDL, TG), and a psychiatry clinic visit within 2 months of venipuncture.

RESULTS: A total of 214 bipolar disorder patients (42.6% Type I, 46.1% Type II, 10.8% Not Otherwise Specified) with a mean age of 39.3 ± 13.2 years, 62.1% female, and 84.9% Caucasian qualified. Nine (4.7%) patients were taking medications for dyslipidemia, and were thus excluded from the analysis. Of the remaining 205 patients, 59.1% had at least one abnormal lipid value. 42.4% had elevated total cholesterol (>=200 mg/dL), 35.6% had elevated LDL (>=130 mg/dL), 18.5% had low HDL (<40 mg/dL), and 22% had elevated TG (>= 150 mg/dL). LDL (but not HDL) significantly correlated with total cholesterol ($r=0.899$, $p<0.01$). 20.6% had a TG/HDL ratio > 3.5.

DISCUSSION: Among outpatients with BD not treated for dyslipidemia, more than one-half had dyslipidemia and more than one-fifth had IR. A surprisingly low number of patients received dyslipidemia medication treatment. This study provides evidence of high rates of metabolic abnormalities in patients with BD, suggesting the need for further assessment of psychiatrists' potential roles in the detection and management of such problems.


**REFERENCES:**


1. Fagiolini A, Frank E, Scott JA, Turkin S, Kupfer DJ: Meta bolic syndrome in bipolar disorder: findings from the Bipolar Disorder Center for Pennsylvanians. Bipolar Disorders 2005; 7:424-430
2. McLaughlin T, Reaven G, Abbasi F, Lamendola C, Saad M, Waters D, Simon J, Krauss RM: Is There a Simple Way to Identify Insulin-Resistant Individuals at Increased Risk of Cardiovascular Disease? American Journal of Cardiology 2005; 96:399-404


**NR2-053**

## RECOVERY FROM SEVERE MENTAL ILLNESS: STAFF ATTITUDES AND KNOWLEDGE


*Rashi Aggarwal, M.D. 43 Stratford Circle, Edison, NJ 08820, Luis E. Bedregal, Ph.D., Galina Georgieva, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to undertand the concept of recovery from severe mental illness. Participants will be able to identify current mental health staff attitudes and knowledge towards recovery and thus delineate factors that need more training amongst staff.

**SUMMARY:**


Introduction: Recovery has been defined and used in numerous ways. It has been seen as a complete cure from active symptoms of mental illness to having a complete life in spite of existing symptoms of the illness. Currently there is an increasing emphasis on mental health systems becoming recovery oriented. Before we can work on improving an existing system we have to understand where it currently stands. The aim of this project was to assess mental health staff attitudes and knowledge about recovery. Method: We used the Recovery Knowledge Inventory (RKI) to measure the staff attitudes and knowledge of recovery from severe mental illness. The study sample included 74 staff members working in the Psychiatry Department at a Community Mental Health Center in New York. We calculated mean scores for staff on the four factors of the RKI. Results: We found that staff had the highest knowledge about the role of peers in recovery and the need for patients to develop a positive identity beyond that of a patient (mean (SD) score 3.97(.52)). Staff was also comfortable with understanding their own and their patient's role and responsibility in the recovery process (mean score 3.58, (.62)). Staff was less comfortable in having realistic expectations regarding recovery of patients (mean score 2.92, (.86)). Staff was least knowledgeable about the course of the

recovery process (mean score 2.41, (.56)). Conclusions: The staff was knowledgeable about some aspects of the recovery process but they lacked knowledge about two vital domains of recovery. These aspects involve having hope that recovery is possible for patients with varying levels of symptoms and that recovery process is not a straightforward course without relapses. Lack of knowledge with these aspects might lead to a lack of hope in the treatment atmosphere and hinder the recovery process. These results need to be translated into more training for staff and further work on assessing the recovery oriented services.

**REFERENCES:**


1. Bedregal L. E., O'Connell M., Davidson L.: The Recovery Knowledge Inventory: Assessment of Mental Health Staff Knowledge and Attitudes about Recovery. Psychiatric Reha bilitation J. Fall 2006 Volume 30 #2,96-103
2. Davidson L.,Ph. D.,O'Connel M. Ph. D, Tondora J. Psy. D., Stryron T. Ph. D., Kangas K. Ed. D.: The Top Ten Con cerns About Recovery Encountered in Mental Health System Transformation. Psychiatric Services, May 2006 Vol 57 No 5,640-645.


**NR2-054**

**IS WHITE COAT NEEDED IN PSYCHOTHERAPY?**


*Zhiqiang Sun, M.D. Zhiqiang Sun 135 Pauline Ave, Memphis, TN 38103, Otis Anderson, M.D., I-Hung Chen, M.D., Omar Mohamed, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize that the white coat can have different meanings depending on the psychotherapists and their patients.

**SUMMARY:**


It has been said that the white coat is a guide to how a patient and a doctor relate to one another. The white coat provides the milieu for one to pursue a career in medicine with it being viewed as the cloak of compassion (Huber S. J., 2003). However, some would argue the role of the white coat and criticize its use in the field (Russell P. C., 2002). To address this debate, we conducted a survey to better understand the role the white coat plays in psychotherapy by better understanding some of the perceptions about it. We distributed questionnaires to 25 patients in psychotherapy and a group of caregivers who conducted psychotherapy consisting of 9 residents, 14 psychiatrists and 5 psychologists. We asked patients "Do you prefer your therapist in a white coat in psychotherapy?" Choices were "Yes", "No", or "It does not matter". The patients were then asked to explain their choice. We also asked caregivers "Do you wear your white coat in psychotherapy?" Choices were "Yes", "No", or "It depends". The caregivers were then asked to explain their choice. Of the 25 patients, 9 chose "Yes" (36%), 6 chose "No" (24%), and 10 chose "It does not matter" (40%). Of the 28 caregivers, 5 chose "Yes" (17%), 17 chose "No" (61%), and 6 chose "It depends" (21%). Patients who chose "Yes" felt that caregiver's white coat signals professionalism, knowledge, and skills. Those who choose "No" felt that caregiver's white coat signals authority and entitlement. Caregivers who choose "Yes" felt that the white coat defines professionalism, patient-doctor relationship, knowledge, skills, and experience. Those who choose "No" felt that a white coat makes patients more anxious and less spontaneous during psychotherapy. Our survey data show that majority of caregivers prefer not to wear their white coats. In conclusion it appears that caregivers may have projected their feelings to their patients and that a white coat may play a positive and perhaps therapeutic role in psychotherapy.


**REFERENCES:**


1. Huber S. J. The white coat ceremony: a contemporary medi cal ritual. J Med Ethics 2003;29:364-366
2. Russell P. C. The White Coat Ceremony: turning trust into entitlement. Teach Learn Med 2002;14:56-9


**NR2-055**

**GAMMA VENTRAL CAPSULOTOMY FOR OBSESSIVE COMPULSIVE-DISORDER: FIRST RESULTS OF A DOUBLE-BLIND, RANDOMIZED CONTROLLED TRIAL**


*Antonio C Lopes, M.D. R Dr Ovídio Pires de Campos, 785, 3. and, Ala Norte, Sala 9 (PROTOC), São Paulo, Brazil 01060970, Anita Taub, Carina C. D'Alcante, Maria E de Mathis, Marcelo Hoexter, M.D., Fernando S. Gouvêa, M.D., Miguel M. Canteras, M.D., Fábio Duran, Geraldo Busatto Filho, M.D., Benjamin D. Greenberg, M.D., Georg Norén, M.D., Euripedes C. Miguel, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to recognize that a subgroup of obsessive compulsive patients are treatment refractory; a specific technique of radiosurgery may be considered as a treatment option for these treatment refractory patients.

**SUMMARY:**


Background: Sixty to eighty percent of Obsessive Compulsive Disorder (OCD) patients respond to medications or psychotherapy. On the other hand, some remain treatment refractory. For this subgroup, an improved, stereotactic radiosurgery called Gamma ventral capsulotomy (GVC) has been recently developed and is a treatment option. However, there is a lack of studies reporting results with this new technique.

Methods: Fifteen refractory *DSM-IV* OCD patients were selected. Five were operated as part of a pilot study. Ten patients were randomized to either receive active or "sham" radiosurgery, in a double-blind, randomized controlled trial (RCT). Every patient was assessed in the pre and post-operative follow-up periods, with psychopathological, global status, neuropsychological and personality scales, as well as with magnetic resonance imaging (MRI) scans with voxel-based morphometry (VBM). More than 35 % improvement in Yale-Brown Obsessive Compulsive Scale and "improved" or "much improved" scores in Clinical Global Impression scale were taken as the primary treatment response criteria.

Results: Three of ten (30 %) patients who had received active radiosurgery fulfilled our response criteria up to 12 months after surgery, or six of ten (60%) subjects after one year of surgery. None of the five sham radiosurgery patients were responders until the 12th month of follow-up. One of the sham procedure patients became responder only after an active procedure was conducted. Hypomanic/manic episodes, delirium, episodic

headaches, dizziness, and nausea were observed in few patients. Regarding neuropsychological changes, improved performances on verbal IQ (p=0.04), global IQ (p=0.04), logical memory (p=0.04), and simple visual attention (p=0.04) were noted in the pilot patients.
Conclusions: Preliminary results suggest that GVC for refractory OCD shows some efficacy, with few adverse effects. More results from our ongoing RCT will better investigate efficacy and safety issues.

**REFERENCES:**


1. Greenberg BD, Price LH, Rauch SL, Friehs G, Noren G, Malone D, Carpenter LL, Rezai AR, Rasmussen SA: Neuro surgery for intractable obsessive-compulsive disorder and de pression: critical issues.Neurosurg Clin N Am 2003;14(2):199-212.
2. Lopes AC, Mathis ME, Canteras MM, Salvajoli JV, Del Porto JA, Miguel EC: Update on neurosurgical treatment for obses sive compulsive disorder. Rev Bras Psiquiatr 2004; 26(1):62-66.


**NR2-056**

**THE PSYCHOSOCIAL BURDEN OF CHRONIC PAIN**


*Bryan M Wick, M.D. 11374 Mountain View Ave Dover Building, Ste C, Loma Linda CA 92354, Peter Przekop, D.O., Ph.D., Mark G. Haviland, Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the constellation of symptoms, including psychiatric, that chronic pain patients manifest. Further, the participant should have an appreciation for the enormous burden that chronic pain exerts on patients.

**SUMMARY:**


Intro: Chronic pain is common and under-treated; in fact, despite its prevalence, the effects of chronic pain on patients' lives have yet to be fully elucidated. We hypothesized that chronic pain patients would report their pain imposed a number of serious, negative psychosocial consequences. Method:
A total 552 patients presenting to a pain clinic for an initial consultation were recruited. The most common pain source was lower back pain (46%), and 85% were taking opiate medications at intake. Of the patients, 57% were female, and 43% were male. The average age was 53.6 years (SD = 15.0). All respondents had been in pain for more than one year, and the average level of pain on a 1-10 scale was 7.0 (SD = 2.0). Participants were asked to complete a survey consisting of 17 questions derived from clinical experience and designed to tap patients' perceptions of the effects of chronic pain. Results: The differences between women and men were not substantial; thus, data are presented for all subjects. Chronic pain had a substantial negative effect on all areas of patient perceptions of their lives; for example, 64% of respondents rated their quality of life as either "very bad" or "somewhat bad." Chronic pain negatively affected six function/performance measures: concentration, hope, memory, social life, sleep, and physical ability. A total of 46% rated their mood as "somewhat sad" or "very sad," and 69.4% rated their anxiety levels as "often anxious" or "always anxious." Average scores across all measures were above the various scale's midpoints (in the direction of "worse" or "bad.") Almost 40% had thoughts of dying. Discussion: Chronic pain appears to negatively affect most aspects of patients' lives, despite medical treatment. This research demonstrates the need for psychiatrists to take an active role in developing new treatment strategies, treatments that address both the pain itself and its psychosocial consequences.


**REFERENCES:**


1. Borsook D, Becerra L, Carlezon, Jr. WA, Shaw M, Renshaw P, Elman I, Levine J. Reward-aversion circuitry in analgesia and pain: Implications for psychiatric disorders. European Journal of Pain 2007; 11:7-20.
2. Young-Casey C, Greenberg MA, Niscassio PM, Harpin E, Hubbard D. Transition from acute to chronic pain and disabil ity: a model including cognitive, affective, and trauma fac tors. In press: doi:10.1016/j.pain.2007.03.032.


**NR2-057**

**PSYCHIATRIC RESIDENT AND ATTENDING DIAGNOSTIC AND PRESCRIBING PRACTICES**


*Adam C Tripp, M.D. 2136 Rockledge Street, Pittsburgh, PA 15212, Thomas L. Schwarz, M.D.,*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to; 1)Better understand the diagnostic similarities and difference between patients seen by residents in training and attending psychiatrists; and 2)Better understand the prescribing similarities and difference between patients seen by residents in training and attending psychiatrists

**SUMMARY:**


OBJECTIVE: This study assessed how resident psychiatrists in training diagnose and medically manage mentally ill patients in comparison to their supervising attending psychiatrists.
METHODS: Demographic, pharmacotherapy, and psychiatric diagnostic data were collected for 100 random patient charts of resident psychiatrists and were compared with 100 random patient charts of attending psychiatrists.
RESULTS: Analysis suggests that there were no remarkable differences in the average number of comorbid Axis I diagnoses, percentages of patients with Axis II diagnoses, or major differences in the specific percentages of the 10 most common Axis I diagnoses. Furthermore, there were no statistically significant differences in the average number of medications prescribed for pharmacological management of mental illness. There were minor differences in the ratios of specific drugs utilized however in this sample.
CONCLUSIONS: There seems to be no major difference in patient characteristics between psychiatric residents and their supervising attendings' patients.


**REFERENCES:**


1. Flores-Mateo G. Argimon JM. Evidence based practice in postgraduate healthcare education: a systematic review. BMC Health Services Research. 7:119, 2007.
2. Rutherford BR. Aizaga K. Sneed J. Roose SP. A survey of psychiatry residents' informed consent practices. Journal of Clinical Psychiatry. 68(4):558-65, 2007 Apr.


**NR2-058**

**KEEPING MEDICAL STUDENTS AWAKE: UTILIZING POWERPOINT FOR A JEOPARDY-STYLE RE-**

**VIEW SESSION**

*Brian K Cooke, M.D. 701 W. Pratt Street, Baltimore, MD 21201,*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to recognize the benefit of using PowerPoint for an interactive Jeopardy-style review session; to learn about example Jeopardy questions and categories; to understand how to create a similar PowerPoint lecture.

**SUMMARY:**

Introduction: Medical student education continuously evolves. As research advances our knowledge, curriculums must adapt. Opportunities for teaching must also utilize technological developments. Medical students on their clinical rotations are exposed to an array of teaching methods including didactics, web-based exercises, and patient interviews. A quiz show class following a Jeopardy-style format provides an interactive environment for students to review psychiatric topics. This format has been used in other areas but to my knowledge has not been discussed in the literature. Objectives: The purpose of this report is to illustrate the Jeopardy-style PowerPoint presentation that has been used as a review session for medical students on their Psychiatry clerkship. I will review the structure of the class, provide examples of questions, and describe how to create this type of lecture. Rules: The rules of the review session are similar to those of the game show "Jeopardy!" Two teams of students answer questions in order to gain the most number of points. There is a single round of Jeopardy with one "Daily Double" and a "Final Jeopardy" question at the end. Examples: Questions test student's knowledge of DSM-IV diagnoses, psychotropics, and laboratory findings. Category headings group the questions by topic and may include geriatrics, substance abuse, or neuropsychiatry. Creating a Jeopardy-Style Lecture: PowerPoint templates are readily available online. The templates are a series of slides that have hyperlinks connecting them to subsequent slides. To modify a template, educators should use their own creativity. Pictures and audio clips can easily be inserted into the PowerPoint slides. Discussion: A Jeopardy-style PowerPoint class provides an excellent opportunity for medical students to review psychiatric topics at the conclusion of their clinical rotation. With creativity and enthusiasm, the educator will keep students awake and engaged.

**REFERENCES:**

1. Niamtu J 3rd: The power of PowerPoint. Plast Reconstr Surg 2001; 108: 466-484
2. Kerfoot BP, Masser BA, Hafler JP: Influence of new educa tional technology on problem-based learning at Harvard Medical School. Med Educ 2005; 39: 380-387

**NR2-059**

**ENSURING RESEARCH COMPETENCY IN PSYCHIATRY RESIDENCY TRAINING**

*Eda N Inan, B.A. 1st Avenue and 16th Street, New York, NY 10003, Sophia Haeri, B.A, David Roane M.D, Igor Galynker Ph.D, M.D*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to have increased knowledge of both the need for research training during residency, as well as concrete methods through which that need can be met by programs which do not have access to extramural funding.

**SUMMARY:**

Background: The National Institute of Mental Health (NIMH) report in 2003 warned that the number of psychiatrist-researchers does not appear to be keeping up with needs in the mental health field (Institute of Medicine, 2003). Despite the need for researchers, the proportion of physician investigators applying for clinical research is down by 25%, showing a significant trend of decline (Nathan, 1998), which presents a great challenge to psychiatry and its subspecialties (Kupfer et al, 2002 & Jeste et al, 1999). Methods: In response to this need, the Psychiatry Research Residency Training Program (PRRTP) was created at Beth Israel Medical Center in 2002 with two goals: 1) to ensure research competency in all psychiatry residents, 2) to ensure that residents who either are or may become interested in pursuing research careers in psychiatry will have full opportunity to establish those interests in residency. Innovations of the program include: a) that it can be replicated in any academic setting as it does not require government funding or major financial support; b) research competency is required for all residents; c) research competency is taught as a discipline unto itself, separate from other academic courses. All publications, presentations and awards from 2001-2007 were reviewed. Results: Of 89 residents followed over 7 years, 52 resident publications were recorded during the 2001-2007 academic years. All residents are trained in how to prepare and give national meeting level professional presentations and a total of 87 presentations were given to local, national and international audiences since the inception of the program. Additionally, psychiatry residents received 12 research awards since the start of the program, with prestigious honors ranging from departmental awards to national awards such as NIMH Fellowships. The consensus is that residents' participation in research has been advanced through participation in PRRTP.

**REFERENCES:**

1. Institute of Medicine: Research Training in Psychiatry Resi dency: Strategies for reform. Washington, DC, The National Academies Press, 2003
2. Kupfer DJ, Hyman, SE, Schatzberg, AF, et al: Recruiting and retaining future generations of physician scientist in men tal health. Arch Gen Psychiatry 2002; 59:657-660

**NR2-060**

**ATTITUDES TOWARDS SELECTING PSYCHIATRY AS A CAREER IN JUNIOR DOCTORS**

*Rehan A Siddiquee, M.B.B.S Queen Elizabeth Psychiatric Hospital Mindelsohn Way, Off Vincent Drive Birmingham, B15 2QZ, United Kingdom Mehran Javeed, M.B.B.S., Sabira Kanani, M.B.B.S.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to get an insight into what junior doctors perception of psychiatry and of a career in psychiatry are. Attendees will also learn what prejudices junior doctors have against psychiatry and what percentage of junior doctors are not considering a career in psychiatry and their reasons for doing so.

**SUMMARY:**

Introduction: The growth of any medical specialty depends on the number and quality of trainees that choose to pursue a career in it. It is of vital importance that psychiatrists understand the reasons why doctors at the beginning of their careers choose to pursue or not to pursue a career in psychiatry. In doing so psychiatrists will be able to address any prejudices that might turn potential psychiatrist away from the field. Hypothesis: Prejudice against psychiatry in junior doctors is likely to mirror prejudice in the general population. A brief clinical placement in psychiatry does not dispel these prejudices. Methods: Doctors about to choose a specialty as their career were surveyed. Surveys were conducted in Birmingham and Manchester to eliminate bias due to local training methods and resources. Doctors were asked if they were considering a career in psychiatry and the reasons for their choice. Results: Of 56 responses collected, only 19% doctors are considering a career in pcyhiatry and the bias reflects misinformation and prejudice even after completing a placement in psychiatry. West Midlands respondents were more likely to choose psychiatry compared to their North West peers (25% V 16%). 48% of the respondents made uninformed or misinformed assumptions about psychiatry. Of the respondents not considering psychiatry 51% were misinformed but 36% of those considering psychiatry were misinformed as well.
Conclusions: Psychiatrists should work harder at eliminating prejudices against psychiatry not just amongst the geneal population but also amongst medical students. This will encourage more doctors to take up the field and also improve understanding of psychiatry in doctors who take up other specialties. Discussion: In not working towards addressing medical students attitudes and prejudices towards psychiatry during their training we are perhaps losing high quality doctors that graduate from medcial schools.

**REFERENCES:**


1. Katharina Manassis, Mark Katz, Jodi Lofchy, Stephanie Wi esenthal: Choosing a Career in Psychiatry: Influential Fac tors Within a Medical School Program. Academic Psychiatry 2006; 30:325-329
2. Sundararajan Rajagopal, Kamaljit Singh Rehill, Emma Godfrey: Psychiatry as a career choice compared with other specialties: a survey of medical students. Psychiatric Bulletin 2004; 28: 444-446


**NR2-061**

## MEDICATION PREFERENCES AND ADHERENCE OF INDIVIDUALS WITH SEVERE MENTAL ILLNESS WHO COMPLETED PSYCHIATRIC ADVANCE DIRECTIVES


*Christine M Wilder, M.D. DUMC Box 3071Dept. of Psychiatry and Behavioral Sciences, Duke University Medical Center, Durham NC 27710, Lorna L. Moser, Ph.D., Eric B. Elbogen, Ph.D., Jeffrey Swanson, Ph.D, Marvin Swartz, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to; 1) demonstrate an understanding of the nature and intent of psychiatric advance directives (PADs); and 2) identify how PADs may improve medication adherence; and 3) describe general psychotropic medication p**references** among people with severe mental illness.


**SUMMARY:**

Objective: Psychiatric advance directives (PADs) are legal documents that allow individuals with mental illness to designate preferences for future treatment if they lose capacity to make decisions during psychiatric crisis. We investigated 147 participants' PAD medication preferences, the extent that these preferences were aligned with prescribed medications, and whether concordance between prescribed and preferred medications predicted medication adherence at 12-month follow-up (n=123). Method: Study participants completed PADs as part of a larger trial of facilitated advance directives. Methodological details are described in Swanson et al (2006). Results: The most frequently requested medications were valproate (n=31) and risperidone (n=25); the most frequently refused were haloperidol (n=30) and lithium (n=28). However, chlorpromazine and thioridazine had the highest rates of refusal relative to current use, while clozapine and quetiapine had the lowest. Refusal relative to current use was inversely correlated with FDA approval year of medication (R2=0.44). At 1 year follow-up there was a 26% increase from baseline in number of currently prescribed medications that had been requested on the PAD (Wilcoxon matched pairs $p<0.01$). After correcting for number of medications listed on the PAD, a 9% increase remained significant ($p<0.01$). In a multivariate logistic model that controlled for medication adherence at baseline, lack of preferred medications at 12 months predicted poor self-reported medication adherence at 12 months (OR=0.13, CI=0.03-0.58). Conclusions: Our results imply that patients who take medications they believe are helpful are significantly more likely to adhere to those medications, suggesting the need for patient participation in medication choice. Completing PADs allowed patients in this study to express medication preferences and may have influenced long-term treatment and medication adherence.


This study was funded by NIH grant 5-R01-MH-063949.


**REFERENCES:**


1. Swanson JW, Swartz MS, Elbogen EB, Van Dorn RA, Ferron J, Wagner HR, McCauley BJ, Kim M: Facilitated psychiat ric advance directives: a randomized trial of an intervention to foster advance treatment planning among persons with severe mental illness. Am J Psychiatry 2006; 163:1943-1951.
2. Scheyett AM, Kim MM, Swanson JW, Swartz MS: Psychiat ric advance directives: a tool for consumer empowerment and recovery. Psychiatric 3Rehabilitation Journal 2007; 31:70-75.


**NR2-062**

## DEVELOPMENT OF THE KOREAN VERSION OF THE SOCIAL FUNCTIONING SCALE IN THE SCHIZOPHRENICS: A STUDY ON THE RELIABILITY AND VALIDITY


*Jiah Lee, M.D. Department of psychiatry, Dong-A University Medical Center, Dongdaesin-dong 3ga-1, Seo-gu, Busan, South Korea, Chul-kwon Kim, M.D., Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize that KSFS was found to be a valid, reliable, and sensitive instrument which can be used to evaluate the degree of social functioning in the patients with schizophrenia.

**SUMMARY:**

Objectives: The purpose of this study was to develop the Korean version of the Social Functioning Scale(KSFS) in the patients with schizophrenia.
Methods: KSFS was administered to 90 schizophrenic patients and 80 their parents and 90 normal controls for examining the reliability and validity.
Results: Data analysis showed statistically significant reliabilities and validities of KSFS. The test-retest reliability, inter-rater reliability, and internal consistency for total scores of KSFS were 0.93, 0.44. and 0.94 consecutively. Evidence for discriminant validity of KSFS comes from the results that the mean scores of schizophrenic patients were significantly high than those of normal controls. Construct validity was assessed by calculating the 7 inter-areas correlations of the KSFS, and all area were statistically significant. Significant correlations between the total scores of KSFS and those of SOFAS lend support for the concurrent validity of this instrument.
Factor analysis were performed and one single factor was extracted with an eigenvalue of 3.96, accounting for 56.6% of the variance. Sensitivity was assessed indirectly via the distribution and range of scores on the SFS. The normal control group showed a distribution around a higher mean with a moderate positive skew.
Conclusion: KSFS was found to be a valid, reliable, and sensitive instrument which can be used to evaluate the degree of social functioning in the patients with schizophrenia.

**REFERENCES:**

1. Birchwood M, Smith J, Cochrane R, Wetton S, Copestake S: The Social Functioning Scale. The development and valida tion of a new scale of social adjustment for use in family intervention programmes with schizophrenic patients. Br J Psychiatry 1990; 157:853-859
2. Kim CK, Seo JM, Kim SS, Cho JS, Ha JS, Kim JO, Byun WT: Development of the Korean Version of the Social Ad justment Scale in the Schizophrenics: A Study on the Reli ability and Validity. J Korean Neuropsychiatr Assoc 1999; 38:1351-1364

**NR2-063**

## A COMPARISON OF CONCEPTS OF MENTAL CAPACITY IN FORENSIC PSYCHIATRY AND TALMUDIC LAW

*Jacob Widroff, M.D. Department of PsychiatryThomas Jefferson University HospitalSuite 210 833 Chestnut Street Philadelphia, PA 19107, PhiladelphiaPA 19107, Rajnish Mago, M.D., Rabbi Jerome Widroff, D.S.W.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of the presentation the participant should be able to; 1) Understand the importance of incorporating patients' and families' religious beliefs into clinical decision-making; and 2) Understand key concepts of decision-making capacity in Talmudic law; and 3) Understand the general similarity, as well as the differences, in concepts of decision-making capacity in Talmudic law and modern forensic psychiatry

**SUMMARY:**

Introduction
There is increasing interest in incorporating patients' religious beliefs in clinical decision making. Psychiatrists may be asked to opine in rabbinical courts about patients' decision-making capacity in matters regarding marriage and divorce. In routine clinical situations, too, lack of understanding of patients' and family's religious beliefs regarding decision-making issues may hamper appropriate resolution of challenging situations. However, clinicians often have limited understanding of religious law relevant to decision-making capacity.
Methods
A MEDLINE search using the Mesh terms 'mental competency' and 'religion' and a search of the Bar-Ilan University database of Rabbinical literature. Relevant Talmudic law is summarized and two illustrative cases relevant to psychiatry are presented briefly.
Results
In Talmudic law, individuals lack or have capacity when obviously "deranged" or not. When mentally ill patients' degree of understanding is undetermined, they are presumed to lack capacity. In witness testimony, a person with any delusion or hallucination, even unrelated to the issue at hand, is barred from being a witness. In mental retardation, there is no presumption of lacking capacity. Some rabbinical authorities do not consider patients with rapidly changing mental status to have decision-making capacity even during lucid intervals.
Conclusions
Talmudic Law and modern Forensic Psychiatry view decision-making capacity similarly, but with important differences. An understanding of religious issues relevant to clinical situations can assist clinicians to forge stronger alliances with patients and their families to resolve clinical dilemmas about decision-making capacity.

**REFERENCES:**

1. Bleich JD: Mental incompetence and its implications in Jewish law. J Halacha Contemporary Society 1981 Fall; 2:123-43.
2. Elon M: Medicine, halacha, and law: the values of a Jewish and democratic state. J Jew Med Ethics Halacha. 2005 Aug; V(1):4-21.

**NR2-064**

## SUICIDAL IDEATION AMONG HEALTH-AREA STUDENTS: A CROSS-SECTIONAL STUDY

*Clóvis Alexandrino-Silva, Lauro Gomes Avenue, 2000 Vila Sacadura Cabral Santo André - SP, 09060-870, Brazil, Maira L. G. Pereira, Carlos Bustamante, André C. T. Ferraz, Sérgio P. Baldassin, M.D., Arthur G. Andrade, M.D., Ph.D., Tânia C. T. Ferraz Alves, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the importance of investigating depressive symptoms in health-area students, which seem to be neglected in many universities. Considering the increased association of depressive symptoms and risk of suicide, it is important to take care of students´ mental health, offering them adequate support in order to keep their life safe and healthy.

**SUMMARY:**

ntroduction: despite an increased risk of suicide among physicians we lack studies on prevalence of both depression and suicidal ideation among medical students compared to nursing and pharmaceutical students. Methods: we conducted a cross-sectional study in ABC region Medical School, Brazil,

in which the students were asked to complet anonymously the Beck Scale for Suicide Ideation (BSI), Beck Depression Inventory (BDI), and Beck Hopeless Scale (BHS). The response rate of overall medical, nursing and pharmaceutical students was, respectively, 35% (n=209), 43% (n=86), and 56% (n=112). Statistical analyses were performed using ANOVA and post hoc Tukey to identify which course has the increased depressive symptoms as well as suicidal ideation. We also performed Pearson correlation among BSI, BDI and BHS. Results: the BHS scores were significantly different (F=3.3; p=0.37) among medical (3.29±2.76), nursing (2.47±1.68) and pharmaceutical courses (2.95±2.01). Post hoc Tukey has shown that the medicine had significant higher BHS scores in comparison to nursing (p=0.027), but not to pharmaceutical (p=0.518). There was no significative difference among the courses regarding to BDI total score (7.90±7.32; 8.60±6.46; 8.45±5.89, respectively; p=0.714). There was no significative difference in the BSI scores (0.53±2.97; 0.38±1.43; 0.16±0.58, respectively; p=0.44) among the courses. The BSI scores had a significant correlation with both BHS and BDI scores (p<0.001). Conclusions: health-area students are at higher risk for depression, affecting their lives and patient care. Medical students showed more hopeless than nursing ones. Although increased risk of suicide has not been observed in medical students, a positive correlation between the scores of suicide risk with the presence of depressive and hopeless symptoms was noticed, as well as presence of suicidal ideation. Future researches with students of different areas are necessary. Acknowledgement: FAPESP (06/02214-4).

**REFERENCES:**

1. Rosal MC, Ockene IS, Ockene JK, Barrett SV, Ma Y, Hebert JR. A longitudinal study of students´ depression at one medi cal school. Acad Med. 1997;72:542-6.
2. Tyssen R, Vaglum P, Grønvold NT, Ekeberg Ø. Suicidal ideation among medical students and young physicians: a nationwide and prospective study of prevalence and predic tors. J Affect Disord. 2001;64:69-79.

**NR2-065**

## RESPONSE RATES TO SURVEYS IN MENTAL HEALTH RESEARCH

*Rajeev Mahajan, M.B.B.S. 833 South Chestnut East, Suite 210 E Philadelphia, PA 19107, Rajnish Mago, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand: 1) the potentially important role of non-response bias in survey research; 2) the importance of systematic attempts to improve response rates in survey research; and 3) the importance of attempting to assess how the non-responders may affect interpretation of the study results.

**SUMMARY:**

Introduction: Non-response bias is one of the most important factors affecting validity of the results of survey research wcommonly conducted in mental health. However, attempts to improve response rates and reporting of issues related to them have been neglected. Methods: Four leading psychiatry journals were hand searched for primary reports of surveys published in a defined period. Data about the conduct and reporting of the survey were extracted using a structured form prepared based on a separate pilot study. Results: Seventy-nine surveys were included. The vast majority are conducted by interview (50.6%) or paper questionnaires (38.9%), with computer or internet-based surveys being rare. Response rate was not reported in 11.4% surveys, potential reasons for non-response were not discussed in 67.1%, and potential effects of non-response on the findings of the study were not discussed in 57.0%. The majority (83.5%) of surveys did not mention whether or not respondents were remunerated for completing the survey, and only 19.0% mentioned that the survey was anonymous. Only 16.5% surveys noted attempts to increase response rate by following up on non-responders. Surveys with response rates less than 50% were more likely to discuss reasons for non-response (p=.02) and effect of non-response on study results (p=.003), and to report following up on non-responders (p=.02) though many still failed to do so. Mean response rate was 71.1%. Compared to outpatients (mean 75.9%), response rate was lower in inpatients (mean 56.8%; p=.04), and in physicians (mean 52.3%; p=.007). Response rates were somewhat higher when conducted by interview (74.5%) than paper questionnaires (67.0%), but the difference was not statistically significant (p=.11). Discussion: Validity of survey research requires systematic attempts to improve response rates, and to reporting and discussing issues related to them. In addition, predictors of lower response rates should be explored.

**REFERENCES:**

1. Sierles FS: How to Do Research with Self-administered Surveys. Acad Psych 2003;27:104-13
2. Edwards P, Roberts I, Clarke M, DiGuiseppi C, Pratap S, Wentz R: Increasing Response Rates to Postal Questionnaires: Systematic Review. BMJ 2002; 324: 1183-91

**NR2-066**

## MENTORING INCREASES CONNECTEDNESS AND KNOWLEDGE: A CROSS-SECTIONAL EVALUATION OF TWO PROGRAMS IN CHILD AND ADOLESCENT PSYCHIATRY

*Michelle S Horner, D.O. 3811 O'Hara Street, Pittsburgh, PA 15213, Susan Milam Miller, M.D., David C. Rettew, M.D., Robert Althoff, M.D., Ph.D., Mary Ehmann, M.A., James J. Hudziak, M.D., Andrés Martin, M.D., MPH*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to: 1) recognize the potential importance of group and peer mentoring for trainees, including reports of increased knowledge and connectedness to the field and host institution; and 2) be able to discuss implementing similar programs within the participant's institution/ affiliated organizations.

**SUMMARY:**

Introduction:Mentorship can be a highly meaningful experience for trainees1,2, yet such experiences may be difficult to obtain in the under-represented field of child and adolescent psychiatry (CAP). We hypothesized that participation in brief mentoring programs would increase knowledge and feelings of connectedness to the field of CAP.
Methods: Similar mentorship programs were implemented at two CAP conferences, one national (N=119 participants), one international (N=53). The four-day programs included daily small group meetings (mode of 2 mentors, 6 participants).

We created a survey with 40 quantitative questions designed to measure change in participants' perceptions due to the conference and mentoring program, and provided fields for unstructured narrative comments. Results:Mean participant ratings were positive for all questions on the survey. Changes in connectedness were rated higher than those in knowledge ($p<0.001$). The highest mean ratings were related to feeling more connected to the host organization, to CAP, and to other program participants. Outcomes were similar between the two conferences. Outcomes were similar across demographic variables, except for internationally trained participants rating higher on research knowledge ($p<0.001$), connectedness ($p=0.03$), and overall knowledge ($p=0.04$). Over 75% of participants felt they made a connection with their mentor, bonded as a group, and learned new things about CAP and the host organization. Qualitative review revealed several themes, including heightened importance of networking, increased awareness of the field, improved connectedness. We are currently evaluating a survey created for the participating mentors. Conclusions:A brief group-style mentoring program is logistically feasible within large conferences, and can result in broad positive impact for trainees. Future studies are warranted to determine if these programs have lasting effects on connectedness, career choice and career development.

**REFERENCES:**


1. Sambunjak D, Straus SE, Marusi A: Mentoring in academic medicine: a systematic review. JAMA 2006; 296(9):1103-15
2. Stub1be DE: Preparation for practice: child and adolescent psychiatry graduates' assessment of training experiences. Journal of the American Academy of Child and Adolescent Psychiatry 2002; 41(2):131-9


**NR2-067**

## SUPPORTIVE PSYCHOTHERAPY – A CRASH COURSE FOR MEDICAL STUDENTS


*Noah S Philip, M.D. 345 Blackstone Blvd, Providence, RI 02906, Scott Shaffer, M.D., Donald Rost-Banik, D.O., Ben Johnson, Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of the session, participants will be able to recognize the need for further medical student education in psychotherapy. Participants will be able to identify the applicability and generalizability of the supportive psychotherapy module to teaching medical students and advancing psychotherapy teaching in general.

**SUMMARY:**


Background: Medical students report frustration with the lack of therapy training during their psychiatry clerkship, and we have also observed some medical students have difficulty being supportive with psychiatric patients. To address these issues, we created a module to teach students key elements of supportive psychotherapy and a brief overview of other psychotherapies. Our goal is to give them tools they can apply during and beyond their psychiatry clerkship and foster a greater understanding of the use of therapy in psychiatry.

Methods: Medical students complete a 50-minute module on supportive psychotherapy during their 6-week psychiatry clerkship. The didactics explore core elements of supportive psychotherapy: empathize and normalize, being non-judgmental, developing a shared formulation and mobilizing hope. Students then participate in a role-playing activity between a physician and patient which is discussed. The module ends with a brief overview of other psychotherapies. Medical students are encouraged to discuss their own cases.

Results: Experience with medical students has been positive. Students participate enthusiastically, but may have difficulty with certain elements of the role-play. Students state that the experience taught them how to better interact with patients in a supportive fashion. Course evaluations from medical students have been positive, and different residents have been able to conduct the module easily.

Conclusion: There is a clear need for increased teaching of supportive psychotherapy and psychotherapy during medical school. Specific outcome measures from faculty on student interactions with patients would be of significant benefit to establish our methods as evidence-based practice. Overall, this module is a step forward in teaching psychotherapy; it is an easy-to-use teaching exercise, provides an immediately useful tool for students, and educates students about the multifaceted nature of psychiatry.


**REFERENCES:**


1. Medical School Objectives Project (MSOP). http://www.aamc.org/meded/msop accessed 9/07.
2. Stepien KA, Baernstein A. Educating for empathy. A review. 2006. Journal of General Internal Medicine 21(5): 73-84.


**NR2-068**

## PUBLISHING AS RESIDENT EDUCATION: THE ASCP MODEL PSYCHOPHARMACOLOGY CURRICULUM


*Vishal Madaan, M.D. 3528, Dodge St, Omaha, NE 68131, Christopher J. Kratochvil, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able: 1) to develop and update a standardized psychopharmacology curriculum 'for the residents, by a resident; 2) to enhance collaboration and contact between resident and senior faculty; and 3) to improve understanding of the publishing process, including planning, authoring, reviewing, and editing, at a resident level.

**SUMMARY:**


Introduction: Apart from defining six core competencies for residents, the ACGME also requires them to participate in research and scholarly projects as an important aspect of their training. While clinical learning and experience help improve core competencies such as interpersonal skills and medical knowledge, residents & training programs struggle with educational models that help address more rigorous education in evidence-based medicine and scholarly projects. In this regard, we developed a collaborative academic project that exemplifies these ACGME requirements in a practical & purposeful manner. This project was aimed to enhance the resident's psychopharmacology knowledge, learn evidence based child psychiatry, and develop writing and editing skills; a means to improve clinical and academic abilities.

Methods: One senior faculty member and one child psychiatry resident were invited to become section editors for the child and adolescent section of the ASCP Model Psychopharmacology

Curriculum for psychiatry residents. Authors from various university programs nationally, prepared lectures based on their expertise & areas of interest. The authors were provided with as much assistance as they desired from the section editors. The resident author/editor met in person with the faculty to plan the project and throughout the process, with frequent e-mail communication throughout the writing & editorial work. After submission of lectures, the section was again reviewed & revised by the resident and faculty editors. The final series of lectures was sent for final approval and publication. Results & Conclusions: This experience for the resident will continue through biennial revisions. This model curriculum is an exciting tool for psychiatry residency programs and training directors, that encompasses psychopharmacology in a standardized format, yet can be individually modified to help the resident get a better understanding of recent advances in psychopharmacology.

**REFERENCES:**


1. http://www.acgme.org/acWebsite/downloads/RRC_progReq/400pr1104.pdf
2. Swick, S., Hall, S., Beresin, E: Assessing the ACGME Com petencies in Psychiatry Training Programs.Academic Psy chiatry 2006; 30:4


**NR2-069**

## PREVALENCE OF IMPULSE CONTROL DISORDERS IN A COLLEGE SAMPLE


*Brian L Odlaug, B.A. University of Minnesota Department of Psychiatry Ambulatory Research Center, 606 24th Avenue South, Suite 602, Minneapolis MN 55454, Jon E. Grant, M.D., J.D., M.P.H.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should, 1) be aware of the prevalence of ICDs among college students; and 2) be able to identify certain ICDs that are more common in men while others are more common in women.

**SUMMARY:**


Introduction: Impulse control disorders (ICDs), including pathological gambling, kleptomania, intermittent explosive disorder, trichotillomania, pyromania, compulsive sexual behavior, and compulsive buying, are relatively common in both clinical and inpatient psychiatric samples, however, limited information is available regarding their prevalence in the general population. The aims of the present study are to provide prevalence estimates for a college population and highlight gender differences.

Methods: The Minnesota Impulsive Disorders Interview, a screening instrument with excellent classification accuracy, was modified into an anonymous self-report version and distributed to 3,945 collegiate students at two private colleges in the Midwest. All surveys were to be returned in an anonymous drop-box at one school and via campus mail at the other school. Demographic variables, including age, gender, ethnicity, and sexual orientation, were also included on the survey. Results: A total of 791 (20.1%) surveys were returned (67.9% female). Overall, 10.4% of the sample screened positive for at least one ICD. The most common ICDs were trichotillomania (3.9%), compulsive sexual behavior (3.7%), and compulsive buying (1.9%). Male students reported higher rates of gambling (2.0%), compulsive sexual behavior (6.7%), intermittent explosive (1.2%) and pyromania (1.6%). Female students endorsed higher rates of compulsive buying (2.6%), trichotillomania (4.1%), and kleptomania (0.6%). Discussion: The overall high rate of ICDs in a college sample suggests that theses behaviors are common among young adults and that certain ICDs may affect males and females differently. Colleges should be aware of how common these behaviors are within the student population and provide appropriate clinical services to treatment-seeking students.


**REFERENCES:**


1. Grant JE, Levine L, Kim D, Potenza MN: Impulse control disorders in adult psychiatric inpatients. Am J Psychiatry 2005 Nov; 162(11):2184-2188
2. Kessler RC, Chiu WT, Demler O, Merikangas KR, Walters EE: Prevalence, severity, and comorbidity of 12-month DSM-IV disorders in the National Comorbidity Survey Replication. Arch Gen Psychiatry 2005 Jun; 62(6):617-627


**NR2-070**

## HOUSECALLS FROM PSYCHIATRISTS: WHAT ARE THE OBSERVED BENEFITS?


*George D Annas, M.D., M.P.H., 57 Lake Avenue, Newton Centre, MA 02459*


**EDUCATIONAL OBJECTIVES:**

At the conclusion of this session, the participant should be able to have a more clear understanding of what has been examined in regard to the practice of Psychiatry and Home Visits and what research avenues still need to be explored.

**SUMMARY:**


Background and Purpose

The practice of home visits by physicians is not as common as it once was. However in regard to primary care- especially among Geriatric patients- there is data suggesting benefits in regard to reduced hospital stays and delays in nursing home placement. However there appears to be less data investigating Psychiatric home visits. The purpose of this poster is to examine the data on Psychiatric home visits and attempt to determine if this practice has shown benefits in regard to decreases in acute inpatient admissions. In addition I will look at studies examining the other potential benefits and challenges in this practice.

Methods

Articles were searched via Medline and PubMed with the search strings “Home visits” and “Psychiatry” as well as related terms. All primary research articles were used, including Case reports and Case Series.

Results

While there is little data in regard to Psychiatry and home visits, the data thus far suggest that there is a benefit from periodic home visits from Psychiatrists.

Conclusions

While there is a suggestion that home visits may decrease the number of acute psychiatric admissions for the chronically mentally ill, there is the need for more data in this regard. Studying this is a challenge due to the fact that there are many reasons for acute psychiatric inpatient stays as well as the fact that there is great heterogeneity in regard to social support systems from one patient to the next. Should future data show an irrefutable benefit of Psychiatric home visits, there still will

be obstacles to overcome when advocating for this practice.

**REFERENCES:**


1. Kates N. Webb S. LePage P.: Therapy begins at home: the psychiatric house call. Canadian Journal of Psychiatry - Re vue Canadienne de Psychiatrie. 36(9):673-6, 1991 Nov.
2. Reding KM. Raphelson M. Montgomery CB:Title Home visits: psychiatrists' attitudes and practice patterns. Commu nity Mental Health Journal. 30(3):285-96, 1994 Jun.
3. Ahrens C, Frey J, Knoedler WH, Senn-Burke SC.: Effect of PACT on inpatient psychiatric treatment for adolescents with severe mental illness: a preliminary analysis. Psychiatr Serv. 2007 Nov;58(11):1486-8


**NR2-071**

## COMPARISON OF ATTITUDE TOWARD ANTIDEPRESSANTS BETWEEN MEDICAL AND SURGICAL GROUP OUTPATIENTS IN A KOREAN UNIVERSITY HOSPITAL


*Sang Soo Lee, M.D. Department of Psychiatry, Konkuk University Hospital 620-5 Kyohyun 2 Dong,, Chungchu city South Korea 380704, Jung Seok Seo, MD.Ph.D, Seok Woo Moon, MD., Beom Woo Nam MD.Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize there are highly negative attitudes toward antidepresants between medical and surgical group outpatients and the impotance of active education on antidepressants to nonpsychiatric outpatients to maximize their therapeutic effect and compliance.

**SUMMARY:**


Objectives: Antidepressants are prescribed by not only psychiatrists but also general practitioners. However, patients' negative attitude and stigma against antidepressants are major obstacles to prescribe antidepressants in nonpsychiatric outpatient departments. We, therefore, examined patients' attitude toward antidepressant in medical and surgical group outpatient. Methods: Short item questionnaire was applied to medical group and surgical group outpatients who consented to this survey in a Korean university hospital. Results: Of the 116 recipients, exclusive of erroneous and missing ones, we analyzed 101 recipients and found: 1) negative attitude toward antidepressants; 2) the higher the education year, the less negative responding for antidepressants, but it is not statistically significantl; 3) persons who didn't take antidepressants previously responded less 'antidepressants are addictive' and more 'antidepressants are only for depression.'; 4) medical group outpatients are answered more 'antidepressants are addictive' and more 'antidepressants cause physically ill'; 5) it was more surgical group outpatients that the persons who had heard about antidepressants before than medical outpatients. It is more medical group outpatients that if current medications are combined with antidepressants, I would take the medications. Conclusion: There are highly negative attitudes toward antidepressants between medical and surgical group outpatients. Study findings suggest the need for an active education on antidepressants to nonpsychiatric outpatients to maximize their therapeutic effect and compliance.


**REFERENCES:**


1. Srinivasan J, Cohen NL, Parikh SV: Patient attitudes regarding causes of depression: implications for psychoeducation Canadian Journal of Psychiatry 48, 493-495
2. Hoencamp E, Stevens A, Haffmans J: Patients' attitudes toward antidepressants. Psychiatr Serv 2002;53;1180-1181


**NR2-072**

## SUICIDAL BEHAVIOUR WITHIN A PSYCHIATRIC FACILITY: RESTROSPECTIVE ANALYSIS OF ONE YEAR DATA


*Enrique Gaspar, M.D. Calz. Mexico Xochimilco 101 Col. San Lorenzo Huipulcodeleg. Tlalpan, Mexico DF, 14370, Martha Ontiveros-uribe, M.D., M.S., Armando Vázque-lópez-guerra, M.D., Juan Cervantes-navarrete, M.D., Xochitl Duque-alarcón, M.D., Ilyamin Merlin-garcia, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to recognize the clinical characteristics associated to suicidal behaviour.

**SUMMARY:**


Introduction. Suicide is a public health issue in our country. Suicidal behaviours includes not only completed suicide but also suicidal gestures, attempts and suicidal thoughts. Suicidal behaviour is highly prevalent in psychiatric patients.

The objective of this study was to relate types of suicidal behaviours with clinical variables obtained during the inpatient treatment of the whole sample of hospitalizad patients during a period of one year at National Psychiatric Institute.

Methods. We reviewed and analyzed a sample from hospitalized patients (N=614) from july 2005 to july 2006, dividing the whole sample in three groups: the group one was formed by patients that presented a suicidal attempt (n=103), the group two was formed by patients that presented only suicidal thoughts (n=156), and the group three by patients without suicidal behaviour (n= 355).

Results. One of the most important results was the fact that women were hospitalized with a higher rate of suicidal thoughts and attempts ($x2= 7.21$; 2 df; $p<0.02$). Borderline personality disorder was significantly higher in the groups one and two compare to the group three ($x2= 54.36$; 2 df; $p<0.001$). Patients with affective disorders presented also a higher proportion of suicidal behaviour than patients with anxiety, psychotic and medical disorders ($x2= 81.10$; 6 df; $p<0.001$). Laboratory and image studies were significantly more abnormal among patients of group three [without suicidal behaviour ($x2= 1.25$; 2 df; $p<0.05$)].

Conclusions. Patients with suicidal behaviour showed a different clinical pattern regarding clinical and demograhpic characteristics in comparison with non suicidal patients. The knowledge of characteristics of patients with suicidal behaviour will encourage future efforts for the study and understanding of suicidal behaviour in this population.


**REFERENCES:**


1. MONDRAGON L: La medicion de la conducta suicida en Mexico. Salud Mental 2001, 24: 4-15.
2. CORYELL WH: Clinical assessment of suicide risk in de pressive disorder. CNS Spectr 2006, 11: 455-61.


**NR2-073**

**THE USE OF A DSM-IV BASED ADHD RATING SCALE IS FOUND USEFUL IN THE EVALUATION OF SUICIDE ATTEMPTERS**

*Gülay Özdemir, Samsun Mehmet Aydin Hospital Psychiatry clinic Samsun Turkey, 55070, Atilla Turgay, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to determine the use of a *DSM-IV* Based adult ADHD Rating Scale in the evaluation of adult suicide attempters.

**SUMMARY:**

Objectives: to determine the use of a *DSM-IV* Based adult ADHD Rating Scale in the evaluation of adult suicide attempters. Methods: It was hypothesized that the use of a rating scale with strong impulsivity measurement can be useful in the evaluation of suicidal risk in psychiatric patients. The study group consisted of involved 54 adults age 18- (45 females, 9 males). The comparison group consisted of age and gender matched 35 hospital volunteers with no psychiatric disorder history and treatment. Turgay Adult ADHD Rating Scale is based on 9 inattentive, 9 hyperactive-impulsive symptoms and 30 commonly associated signs and symptoms of adult ADHD. The validity, reliability, sensitivity of this scale had been studied and validated and published. The scale was completed by both groups. Results: The total ADHD score, inattention score and overall ADHD scores were statistically significantly higher in suicidal patients as compared to volunteers. Higher ADHD Ratings were obtained from adults with earlier suicide attempts then the first time attempters. Suicidal patients as a group had statistically significantly higher impulsivity and hyperactivity scores than the healthy volunteers (p=0.008). Conclusions: In the evaluation of suicide risk in psychiatric patients the use of a *DSM IV* Based rating scale can be useful in increasing the clinician's understanding for serious risk for self-injurious behaviour. "Impulsivity" and "inattention" seem to be high risk symptoms with significant correlations with self-injurious behaviour.

**REFERENCES:**

1. Oades RD, Slusarek M, Velling S. Serotonin platelet-trans porter measures in childhood attention-deficit/hyperactivity disorder (ADHD): clinical versus experimental measures of impulsivity.World J Biol Psychiatry. 2002 Apr;3(2):96-100.
2. Murphy KR, Barkley RA, Bush T. Young adults with atten tion deficit hyperactivity disorder: subtype differences in comorbidity, educational, and clinical history. J Nerv Ment Dis. 2002 Mar;190(3):147-57

**NR2-074**

**FACTORIAL ANALYSIS OF THE INTERNATIONAL PERSONALITY DISORDER-SCREENING QUESTIONNAIRE IN A SAMPLE OF SUICIDE ATTEMPTERS: A CLINICAL APPLICATION**

*Hilario Blasco-Fontecilla, M.D. Dr. R. Lafora Hospital,, Madrid, Spain 28004, Enrique Baca-García, M.D., Ph.D., Antonio Ceverino-Domínguez, M.D., Ph.D., Dolores Braquehais-Conesa, M.D., Ph.D., Carmen Díaz-Sastre, M.D., Ph.D., José de León, M.D., Ph.D., Maria Oquendo, M.D., Ph.D., Jerónimo Sáiz-Ruiz, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able know which personality dimensions are associated to a suicide attempter status. A dimensional approach might be more efficient and less time-consuming when assessing suicide risk in an emergency room setting.

**SUMMARY:**

Introduction/objectives: categorical approaches to preventing suicide attempts have not been successful. A dimensional approach might be more successful. Method: We carried out an exploratory factorial analysis of the International Personality Disorders Examination screening questionnaire (IPDE-SQ) –*DSM-IV* version- by using SPSS 13.0 in a sample of 446 suicide attempters (SA) and 515 blood donnors (control group) recruited at two general Hospitals in Spain in order to find a manageable set of personality factors that might help clinicians to preventing suicide behaviors. The items were subjected to principal component analysis with varimax rotation. A suicide attempt was defined as a self-destructive behavior with the intention of ending one's life, independent of the resulting damage. Results: In the sample of SA a total of 17 factors with eigenvalues greater than one were found, but a break in the scree plot was evident particularly after the first 6 factors. They cumulatively accounted for 62.20% of the variance in the item set. We retained and varimax-rotated the 6 factors. The first three components accounted for 51.56% of the variance. The eigenvalues of the 6 first factors were 24.99, 10.53, 4.18, 3.14, 2.63 and, 2.41. In the control group a total of 19 factors with eigenvalues greater than one were found. They cumulatively accounted for 82.93% of the variance. Eigenvalues ranged from 1.10 to 40.63, accounting for 1.43% to 52.77% of the variance each. The profile of factors found in both samples was completely different. Discussion: in the sample of SA, six easily readable factors (socio-emotional ambivalence, identity diffusion, sociopathy, paranoidism, schizotipy, and narcissism) accounted for nearly two thirds (62.20%) of suicide attempts. The first factor accounted for 32.35% of variance. Conclusion: the six described factor are related to well-known personality dimensions. Its assessment may help in preventing suicidal behaviors. Funding: FIS PI06009

**REFERENCES:**

1. Shedler J, Westen D. Dimensions of personality pathol ogy: an alternative to the five-factor model. Am J Psychiatry 2004;161(10):1743-1754
2. Widiger T. Categorical versus dimensional classification: im plications from and for research. J Personal Disord 1992;6:287-300

**NR2-075**

**RECENT LIFE EVENTS (RLE) AND PPERSONALITY DISORDERS (PDS) IN A SAMPLE OF SUICIDE ATTEMPTERS**

*Hilario Blasco-Fontecilla, M.D. Dr. R. Lafora Hospital,, Madrid, Spain 28004, Enrique Baca-García, M.D., Ph.D., Hilario Blasco-Fontecilla, M.D., Ph.D., (presenting) Antonio Ceverino-Domínguez, M.D., Ph.D., Luis Jiménez-Treviño, M.D., Ph.D., Carmen Díaz-Sastre, M.D., Ph.D., Philippe Courtet, M.D., Ph.D., José de León, M.D., Ph.D., Maria Oquendo, M.D., Ph.D., Jerónimo Sáiz-Ruiz, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to know which are the main associations between RLE and PDs in suicide attempters, thus allowing clinicians to explore particular RLE that might be particularly harmful in subjects with a determined personality structure –e.g., narcissistic subjects may live "being fired" as a narcissistic injury and in turn a suicidal behavior might take place, while in subjects with other personality structure might not be that dangerous.

**SUMMARY:**
Background: Subjects diagnosed with a personality disorder (PD) are at increased risk for suicidal behavior. The study of certain recent life events (RLE) as specific precipitants of suicide attempts in subjects diagnosed with a specified PD has been neglected. Objectives: to determine the role of RLE as precipitants of suicide attempts. Method: We compared 446 suicide attempters (SAs) admitted to the emergency room to a sample of healthy controls (n=515) and psychiatric inpatients (n=86). The diagnosis of PD was made by using an adjusted cut-off point of the DSM-IV version of the International Personality Disorder Questionnaire-Screening Questionnaire (IPDE-SQ). Results: SAs diagnosed with a PD had more frequently "separation from spouse" (Fisher's Exact Test (FET) p= 0.009) and "an important change in social activities" (FET p= 0.089) than non-PD SAs. In the sample of SAs, we found several significant associations between particular RLE and specified PDs, like those between schizoid PD and "an important personal success" (FET p= 0.012), narcissistic PD and "being fired" (FET p= 0.005), or antisocial PD and "arrest" (FET p= 0.020), "minor law problems" (FET p= 0.039) and "death of partner" (FET p= 0.047). Conclusion: particular RLE might be specific precipitants of suicide attempts in subjects diagnosed with specified PDs. Funding: FIS PI060092 CIBER EN RED

**REFERENCES:**

1. Weyrauch KF, Roy-Byrne P, Katon W, Wilson L (2001). Stressful life events and impulsiveness in failed suicide. Sui cide Life Threatening Behavior 31, 311-319.
2. McGlashan TH, Grilo CM, Skodol AE, Gunderson JG, Shea MT, Morey LC, Zanarini MC, Stout RL (2000). The col laborative longitudinal personality disorders study: baseline axis I/II and II/II diagnostic co-occurrence. Acta Psychiatrica Scandinavica 102, 256-264.

**NR2-076**

## ASSOCIATION OF CHOLESTEROL AND METABOLIC SYNDROME PARAMETERS WITH SUICIDALITY IN THE MALE PATIENTS WITH FIRST EPISODE OF PSYCHOSIS

*Marcinko Darko, M.D. Department of Psychiatry, University Hospital Zagreb, Kispaticeva 12, 10000 Zagreb, Croatia, 385 Bjanka Vuksan-Cusa,M.D., Marina Šagud,M.D., Ph.D., Radmila Topic, M.D., Miro Jakovljevic, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this presentation, the participant should be able to recognize the significance of cholesterol assessment and other metabolic syndrome parameters related to suicidal behavior in psychotic patients.

**SUMMARY:**
Introduction.Suicidal behavior is a major health risk in psychiatric disorders, especially in psychosis. The neurobiology of suicide is still unclear. Hypothesis.The hypothesis was that suicidal patients in the first episode of psychosis would have different serum cholesterol concentrations than non-suicidal patients in the first episode of psychosis. The aim of this study was to evaluate serum cholesterol and parameters of metabolic syndrome in suicidal and non-suicidal men in the first episode of psychosis and in healthy male controls.
Methods.Subjects were male patients treated at the Department of Psychiatry, University Hospital Zagreb. Positive and negative syndrome scale, PANSS was used to estimate psychotic symptoms. Hamilton Depression Rating Scale, HDRS-17 was applied to assess depressive symptoms. The trained psychiatrists performed clinical evaluation. Patients were classified as suicidal at the hospital admission if a suicidal ideation, or a suicide attempts, or both, were present. Suicidality was assessed positive if item 3 of the HDRS-17 scale was scored positively. Results.Metabolic syndrome was present in 38% of male first episode psychotic patients. The patients who were not met criteria for metabolic syndrome showed higher values on PANSS and HDRS and higher level of suicidality. Results show that serum cholesterol concentrations, were significantly lower in suicidal than in non-suicidal patients in the first episode of psychosis, and than in healthy controls. It could means that higher cholesterol levels that lead to the metabolic syndrome also protect from suicidal behavior, which we were published in our earlier publications.Conclusion and Discussion.Our results suggest that lower concentrations of serum cholesterol in patients with the first episode of psychosis might be risk factor for suicidal behavior while higher cholesterol lead to the metabolic syndrome.

**REFERENCES:**

1. Marcinko D, Pivac N, Martinac M, Jakovljevic M, Mi haljevic-Peleš A, Muck-Šeler D. Platelet serotonin and serum cholesterol concentrations in suicidal and non-suicidal male patients with first episode of psychosis. Psychiatry Res 2007;150:105–108
2. Marcinko D, Marcinko V, Karlovic D, Marcinko A, Martinac M, Begic D, Jakovljevic M. Serum lipid levels and suicidal ity among male patients with schizoaffective disorder. Prog ress in Neuropsychopharmacology and Biological Psychiatry - In Press, 2008.

**NR2-077**

## SUICIDAL RISK IN A SAMPLE OF ARAB PATIENTS WITH PANIC DISORDER

*Moustafa H Mohamed, M.S. Alamal Complex for Mental Health PO 5054, Dammam, Saudi Arabia 31422, Yasser A., M.D., Ghada R., M.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to know the relation between suicide and panic disorder identify the risk factors for suicide in panic disorder compare the risk of suicide in panic disorder in different cultures.

**SUMMARY:**
Introduction : The relationship between suicide and panic remains a controversial one Aim: The study attempted to find the risk of suicidal ideation and suicide attempts associated with panic disorder. Methods: Hundred patients with panic disorder were included. Patients diagnosed according to SCID. Measures

done are Hamilton Depression Scale, Montgomery Asperg depression rating scale, Beck scale for suicidal ideation BSS. Results: Seventeen percent of the patients with panic disorder reported suicidal ideation in the past year, but only 3% of the patients with panic disorder actually made suicide attempts in the past year. 7% of the patients with panic disorder reported making suicide attempts at other times in their lives. Patients who had made past suicide attempts were significantly more likely to report previous psychiatric hospitalizations and past treatment for depression than were patients who had never attempted suicide. Conclusions: A significant proportion of individuals with panic disorder report suicidal ideation. Few individuals had actually made recent suicide attempts. Although 7% of the patients reported lifetime suicide attempts, there is evidence to suggest that these were in the context of depressive symptoms. All suicidal rates in this study were less than other western studies and this is consistent with lower rates of suicide in eastern culture due to religious factors and cohesion of the families.

**REFERENCES:**


1. Beck AT, Steer RA, Sanderson WC, Skeie TM (1991): Panic disorder and suicidal ideation and behavior: discrepant find ings in psychiatric outpatients. Am J Psychiatry ; 148:1195 —1199
2. Rudd MD, Dahm PF, Rajab MH (1993): Diagnostic comor bidity in persons with suicidal ideation and behavior. Am J Psychiatry ; 150:928 —934


**NR2-078**

## SUICIDE IDEATION AND BEHAVIOR IN PATIENTS WITH FIRST-EPISODE PSYCHOSIS


*Nikolina Jovanovic, M.D. Zagreb University Hospital, Kispaticeva 12, Zagreb, Croatia 385, Andrej Marusic, M.D., Ph.D., Martina Rojnic Kuzman, M.D., Vesna Medved, M.D., Ph.D., Jasmina Grubisin, M.D., Marija Slijepcevic Kudumija, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize specific aspects of suicide ideation and behavior in patients with first-episode psychosis in order to identify possible risk factors in everyday clinical practice and improve management of these patients.

**SUMMARY:**


INTRODUCTIONSuicide accounts for about 5% of premature deaths in schizophrenia and risk is strikingly higher early in the course of illness(1). Our aim was to explore suicide ideation and behavior among patients with first psychotic episode. METHODS107 female patients hospitalized at the Department of Psychiatry, University Hospital Zagreb, Croatia were followed up for one year. Psychopathology was assessed using PANSS. Lifetime suicide ideation and behavior were evaluated by "Questionnaire on Suicide Ideation and Behaviour", an instrument designed to analyze suicide behavior from an unspecific negative thinking to attempted or completed suicide(2). A factor-analysis generated two factors (suicide ideation and behavior) explaining 75.46% of variance. Each patient signed informed consent. RESULTS56% patients had passive suicide thoughts, 28% suicide intent, 21% suicide plan and 15% actually attempted suicide (drug overdose, chemical poisoning, jumping from heights, self-burning, suffocating). One person suicided soon after discharge. 12% had suicide in family and 21% were admitted due to suicide risk. Mean age at onset of psychosis was 28,9 ± 10,4 yrs and mean duration of untreated psychosis 58,7 ± 96 weeks. Most had high school education, 2/3 were unemployed and 1/2 single. After one year we found significant clinical improvement measured by change of total PANSS (paired t-test: t=18.3, df=99, p=0.002). None of these parameters predicted suicide behavior. However, married persons had significantly less suicidal ideation (ANOVA, F=12,72,df=1, p=0.001).
CONCLUSION AND DISCUSSIONMost of our patients were affected by suicide ideation. Attempts were serious and violent. Marriage may protect from suicide ideation, but not behavior. Specific interventions are required throughout the course of illness. In this group most important are early detection of psychotic symptoms, limited access to lethal methods and integration of suicide prevention into the treatment.


**REFERENCES:**


1. Palmer BA, Pankratz VS, Bostwick JM: The lifetime risk of suicide in schizophrenia: a re-examination. Arch Gen Psy chiatry 2005; 62:247-53
2. Marusic A, Roskar S, Sveticic J, Zorko M: Assessment and Measurement of Suicide Risk. In Suicide prevention in devel oping countries, edited by Amresh KS, London, Gaskell, 2007. (sent to publisher, in press)


**NR2-080**

## IMPACT OF SOCIODEMOGRAPHIC VARIABLES ON SUICIDE RATES


*Yilmaz Yildirim, M.D. Child & Adolescent PsychiatryDepartment of Psychiatric Medicine Brody School of Medicine, Greenville, NC 27834, Richard M. Bloch, Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) Recognize the sociodemographic factors related to suicide risk; and 2) identify the factors best related to county suicide rates in North Carolina.

**SUMMARY:**


In the U.S., suicide is the 11th leading cause of death and 3rd within the 10–24 age group(1). Several studies have shown that suicide rates are related to sociodemographic variables(2). For example, unemployment, poverty and rurality are frequently associated with increased suicide rates. This study seeks to measure the extent to which county suicide rates in North Carolina are related to similar variables. Method: County suicide data for 2000–2005 was obtained from N.C. Department of Health Statistics and averaged over the 5 years. The US Census Bureau and North Carolina State Data Center web sites provided 23 sociodemographic indicators for the 100 counties. Descriptive statistics, bivariate correlation analysis and stepwise regression analysis was done by SPSS(v15.0). Results: Contrary to previous findings(2) unemployment and poverty were inversely related to suicide rate. Percent of each county's population that is white (white%) had the highest correlation with suicide rate(r=.61), while black% (r=-.57) and other-minority%(r=-.32) had the highest negative correlations. Elderly%, churches per 1000 pop., divorced-seperated% and mentally disabled% also had significant positive correlations with suicide rate, whereas poverty%, hospital/nursing

home%, 10-24 age%, unemployed% and arrested% were significantly inversely related. In the stepwise regression, only white%, divorced/separated%, and mentally disabled% were independently predictive (R=.73) and accounted for 54% of the variance in county suicide rate. Conclusion: Some variables reported in other studies to predict suicide rate positively did not do so while others replicated their positive relationships. This modeling study of county suicide rates found a three factor model which explained over 50% of the variance in suicide rate, but differed from models found in other studies so that predictive models of suicide in southern counties cannot rely on factors already identified in the literature.

**REFERENCES:**


1. National Suicide Prevention Week-September 9-15, 2007; Morbidity and Mortality Weekly Report, 2007: http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5635a1.htm
2. Gunnell DJ: Relation Between Parasuicide, Suicide, Psychi atric Admissions, and Socioeconomic Deprivation. BMJ 1995; 3111: 226 - 230


**NR2-081**

## HE IMPACT OF PERSONALITY TRAITS AND NEGATIVE AFFECT ON PTSD SYMPTOMS IN A PROSPECTIVE STUDY OF URBAN POLICE OFFICERS


*Brigitte Apfel, M.D. Department of Psychiatry UCSF401 Parnassus Avenue, San Francisco, CA 94143, Shannon E. McCaslin, Ph.D., Thomas Metzler, M.A., Sabra S. Inslicht, Ph.D., Wang Chen, M.D., Charles Marmar, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand the relationships between previous trauma, personality traits and negative affect prior to traumatic exposure, peritraumatic distress/dissociation and PTSD symptoms.

**SUMMARY:**


Introduction: Peritraumatic emotional distress and dissociation are known risk factors for the development of PTSD. Less is known about the influence of personality traits and negative emotion prior to trauma on post-trauma symptomatology. These relationships were examined in a prospective cohort study of newly recruited police officers. Hypothesis: Trauma outcome is associated not only with the peritraumatic reaction but also with personality traits and negative emotion at baseline. Methods: 262 police recruits were assessed during academy training and after 12 months of active duty. Personality traits (NEO-FFI), negative emotion (PANAS), and prior trauma (LSC-R) were assessed during training. Critical incident exposure (CIHQ), peritraumatic distress and dissociation (PDI; PDEQ), and PTSD symptoms (MCS-CV) were assessed at 12 months. Linear correlations were analyzed using SPSS, path analysis was performed using AMOS. Results: PTSD symptoms were significantly correlated with more prior trauma, higher neuroticism, less extraversion, more negative affect, higher critical incident exposure, and higher peritraumatic dissociation and distress. In the path analysis negative affect at baseline mediated the relationship of prior trauma to peritraumatic distress which in turn was associated with more PTSD symptoms. The relationship of neuroticism to PTSD symptoms was no longer significant in the context of the other variables. Extraversion had a direct inverse effect on the trauma outcome. Conclusions: Negative affect at baseline mediates the effect of prior trauma on critical incident related PTSD symptoms by increased peritraumatic distress. Extraversion is negatively associated with PTSD symptoms, and therefore is protective. Discussion: Greater negative affect at baseline may lead to greater peritraumatic distress which then results in more PTSD symptoms. Extraversion may be protective by conferring greater emotion regulation during exposure and enabling social support.


**REFERENCES:**


1. Marmar CR, McCaslin SE, Metzler TJ, Best S, Weiss DS, Fagan J, Liberman A, Pole N, Otte C, Yehuda R, Mohr D, Neylan T: Predictors of posttraumatic stress in police and other first responders. Ann N Y Acad Sci 2006 Jul; 1071:1-18.
2. Cox BJ, MacPherson PSR, Enns MW, McWilliams LA: Neuroticism and self-criticism associated with posttraumatic stress disorder in a nationally representative sample. Behav iour Research and Therapy 2004; 42:105-114.


**NR2-082**

## EXISTENTIAL POSTURES OF RESILIENCE AND THEIR ROLE IN RECOVERY FROM POSTTRAUMATIC STRESS SYMPTOMS


*Madhuri K Shors, M.P.H. 2150 Pennsylvania Avenue NW 8th Floor, Washington, DC 20037-3201, James Griffith, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) appreciate the need for research to better understand mechanisms of resilience in trauma survivors, particularly in a multicultural population; 2) understand this pilot study's methodology and the new hypotheses generated regarding resilience among trauma-survivors; and 3) recognize the applicability of existential postures to understanding resilience among trauma-survivors.

**SUMMARY:**


INTRODUCTION: Resilience refers to a person's capacities for prevailing against adversity or for emerging from adversity stronger and more capable. It is poorly understood why some patients with posttraumatic stress disorder (PTSD) develop chronic symptoms while others recover. This pilot study explored applicability for PTSD patients of resilience-focused interview methods drawn from consultation-liaison psychiatry. These methods systematically assessed how a patient sustained coherence, hope, communion with others, purpose, personal agency, meaning, and gratitude as existential postures of resilience. METHODOLOGY: Semi-structured interviews with 10 patients in PTSD treatment were conducted to inquire systematically about existential postures of resilience. Using transcripted audio-recordings, coping strategies were identified during duration of exposure to the stressor, its immediate aftermath, and subsequent recovery from symptoms. RESULTS: Richly-detailed accounts of patients' coping methods were elicited at a level of specificity that had not appeared during previous clinical treatment. In some cases this included new, relevant clinical facts of which the clinician had been unaware. Detailed descriptions about use of spiritual resources in recovery were elicited in some cases. Resilience-focused interview questions did not re-activate PTSD symptoms during interviews. CONCLUSIONS/DISCUSSION: For patients with PTSD, inquiry about existential postures of resilience shows

promise as a safe, effective interviewing format for identifying coping methods that may confer resilience for PTSD patients.

**REFERENCES:**


1. Griffith JL, & Gaby L: Brief psychotherapy at the bedside: Countering demoralization from medical illness. Psychoso matics 46:109-116, 2005.
2. Connor JK, Davidson JRT, & Lee L-C: Spirituality, resilience, and anger in survivors of violent trauma: A community sur vey. Journal of Traumatic Stress 16:487-494, 2003.


**NR2-083**

## NOVEL COMPUTER-BASED BEHAVIORAL ASSESSMENT OF CHECKING BEHAVIOR IN OBSESSIVE-COMPULSIVE DISORDER


*Kim Kwanguk, Ph.D. kwang6@bme.hanyang.ac.kr, Seoul Korea 133-605, Sun I. Kim, Ph. D., Kyung Ryeol Cha, M.D, Junyoung Park, B.S., M. Zachary Rosenthal, Ph.D., Jae-Jin Kim, M.D, Ph.D., Kiwan Han, M.S., In Young Kim, M.D., Ph.D, Chan-Hyung Kim, M.D., Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the utility of computer-based technology in a behavioral measure of compulsive checking in OCD patients.

**SUMMARY:**


Objective: The goal of the current study was to develop and obtain preliminary psychometric data for a computer-based behavioral measure of compulsive checking behavior in a sample of patients with obsessive–compulsive disorder (OCD). Method: Performance on a novel behavioral measure was investigated in 30 patients with OCD and 27 matched healthy controls. In the computerized assessment, participants navigated through two virtual environments (home and office) using a joystick and head mounted display. The experiment consisted of three phases: training, distraction, and the main task. After the training and distraction phases, participants were allowed to check the virtual environments freely, and were instructed to do so as they would in their natural environment. Primary dependent variables included several indices of frequency and duration of checking behaviors. Construct validity for the task was examined by comparing the novel behavioral measures with standardized self-report and interviewer-rated measures. Results: Results indicated that (1) OCD patients demonstrated significantly greater problems with compulsive checking compared to controls, and (2) performance on the task was positively correlated with both self-reported symptoms and interviewer-rated measures associated with OCD. Conclusions: This study provides preliminary data to support the use of this task as a novel behavioral measure of compulsive checking behavior in OCD.


**REFERENCES:**


1. Rothbaum BO, Hodges LF, Kooper R, Opdyke D, Williford JS, North M: Effectiveness of computer-generated (virtual reality) graded exposure in the treatment of acrophobia. Am J Psychiatry 1995; 152(4):626–8
2. Sorkin A, Weinshall D, Modai I, Peled A: Improving the accuracy of the diagnosis of schizophrenia by means of vir tual reality. Am J Psychiatry 2006; 163(3):512–20


**NR2-084**

## DEVELOPING A CULTURALLY COMPETENT SCREENING TOOL FOR POSTPARTUM DEPRESSION IN BLACK WOMEN


*Aeva N Gaymon-Doomes, M.D. 701 W.Pratt Street, Baltimore, MD 21202, Jasmine Kenney, M.P.H.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) understand the reasons a culturally competent screening tool is necessary to screen for postpartum depression in Black women; and 2) learn about examining the differences in depressive illness in postpartum Black women and how the families of those women understand their illness and symptoms.

**SUMMARY:**


The 4th edition of the *DSM-IV-TR* describes post partum depression (PPD) as a major depressive episode with postpartum onset. PPD has a negative impact on women and infants that may last for years. If untreated, PPD may impair mother-infant attachment and damage a mother's sense of self, and also alter an infant's cognitive and emotional development during the first years of life. Early screening and intervention for depression has been shown to improve outcomes and heightens the chance for an earlier recovery. According to a survey of 655 women who were 2 to 6 weeks postpartum when surveyed, nearly one-half of Hispanic (47 percent) and black (45 percent) mothers reported depressive symptoms, compared with less than one-third (31 percent) of white mothers. However, according to the 2003 Institute of Medicine report African Americans are less likely to be diagnosed as having depression and, once diagnosed, less likely to receive antidepressants. This indicates that while symptoms are present in minority women, questions regarding signs and symptoms are not being asked in a culturally competent manner. While there has been an increasing focus on the etiology of postpartum depression, little focus has been directed toward the study of the cultural dimensions of this disease. My plan is to develop and pilot a study of a culturally competent PPD screening scale for Black women. The tool will consist of eleven questions in a 5-point Likert scale format that will take 5-10 minutes for a new mother to complete. This format was chosen for ease of use and usefulness in statistical analyses. The scores that the tool will yield as well as the clinical indication for suggestion of treatment will be analyzed in the form of a pilot study. This tool was created with the idea that phrases in the questions were taken from a cultural context that would be relevant to Black women in particular. The validity will be tested by using the Edinburg postnatal depression scale.


**REFERENCES:**


1. Barbee, E. (1992). African-American women and depression: A review and critique of the literature. Archives of Psychiatric Nursing, 6, 257-265.
2. Young, A. S., Klap, R., Sherbourne, C. D., & Wells, K. B. (2001). The quality of care for depressive and anxiety disor ders in the United States. Archives of General Psychiatry, 52, 472–478.


**NR2-085**

## EVALUATION OF AROUSAL AND STRESS REACTIVITY IN PREGNANT WOMEN WITH PRIOR PREGNANCY COMPLICATIONS USING THE

**ACOUSTIC STARTLE PARADIGM**

*Ariadna Forray, M.D. Department of PsychiatryYale University School of Medicine100 York St., Suite 2H, New Haven, CT 06511, Michael Crowley, Ph.D., Linda Mayes, M.D., C. Neill Epperson, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand the effects previous pregnancy complications on maternal anxiety, and how the level of anxiety, treatment intervention (cognitive behavioral therapy; CBT) and stage of pregnancy impact measures of arousal and stress reactivity in pregnant women.

**SUMMARY:**

Introduction: This study examined the impact of anxiety, CBT, and stage of pregnancy on physiologic arousal as assessed using the acoustic startle paradigm in pregnant women with a history of pregnancy loss or serious complication. Methods: Five pregnant women between 8-20 wks gestation with a history of a previous pregnancy complicated by recurrent miscarriages, genetic abnormality/anomaly, stillbirth, poor obstetric outcome underwent a 12-wk course of CBT. The State-Trait Anxiety Inventory (STAI) was administered pre and post treatment, 2 wks, 2 mo and 6 mo postpartum (PP). Acoustic startle response (ASR) was examined pre and post treatment, and at 2 mo PP. The startle response was measured using the eyeblink reflex by recording activity from the orbicularis oculi muscle. Twenty auditory (40-ms duration 100 dB white noise) startle stimuli were delivered to the participants at random time intervals over a 40-min study period. Results: The mean ± SD ASR amplitude at the pretreatment baseline was 30.3±15.1, it decreased to 19.5±25.1 after 12 wks of CBT, and returned to baseline levels 2 wks PP 29.7 ±17.7. The STAI-State subscale scores progressively decreased throughout the study period from baseline 41.8 ±9.0 to 25.2±2.9 and 6 mo PP.Conclusions: The preliminary data show a decrease in arousal and stress reactivity as seen by the decrease in ASR amplitude following CBT treatment. This effect was not a durable one, unlike the decrease in overall anxiety, which was sustained into the postnatal period. Whether the decrease in ASR magnitude from early to late pregnancy was secondary to treatment related reductions in anxiety and/or the hormonal milieu of pregnancy can not be determined with this sample and is the subject of on-going research. Interestingly, ASR magnitude increased in the early postnatal period despite continued decreases in anxiety. The impact of early PP sleep deprivation and hormonal fluctuations on ASR magnitude is not known.

**REFERENCES:**

1. Grillion C, Ameli R, Foot M, Davis M: Fear-potentiated startle: relationship to the level of state/trait anxiety in healthy subjects. Biol Psychiatry 1993; 133:566-574.
2. Turton P, Hughes P, Evans CDH, Fainman D: Incidence, correlates and predictors of post-traumatic stress disorder in the pregnancy after stillbirth. Br J Psychiatry 2001; 178:556-560.

**NR2-086**

**THE RELATIONSHIP BETWEEN SUICIDE ATTEMPT AND MENSTRUAL CYCLE PHASE**

*Evrim Ebru Oztekin Ylmazer, M.D. Tatvan State Hospital, Tatvan, Bitlis, Turkey 13200, Ahmet Kocabiyik, M.D., Nesrin Karamustafalioglu, M.D., Bilge Askan-Akyuz, M.D., Julide Güler-Kenar, M.D., Nihat Alpay, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to learn that menstrual cycle plays an important role in women's life. The frequency of impulsive and suicidal behaviours rises significantly at the premenstrual and menstrual phase of menstrual cycle. In our study, we found positive correlation between impulsivity and suicidality but as a result there was no significant difference between the menstrual cycle phases and suicidality. This area needs further investigations.

**SUMMARY:**

Objective: The objective was to determine the relationship between suicide attempt and menstrual cycle phase in women applied to our hospital within the first 24 hours of their suicide attempt. Method: 86 women who applied to Bakirkoy State Hospital for Mental Health and Neurological Disorders outpatient treatment and emergency policlinics after a suicide attempt between December 2005 and July 2006 were evaluated and 41 women were recruited. The control group was composed of 41healthy, volunteer women most of which were hospital employers. All women's menstrual cycle periods were assesed by detailed anamnesis and blood hormon levels. Suicide Intention Scale, Back Hopelessness Scale, Hamilton Depression Scale and Young Mania Scale were applied to the first group. Results: The evaluation revealed that 19.5 % of the cases were in menstrual phase at the time of attempting suicide while 39.1% were in follicular, 14.6% in midcyclus and 26.8% were in luteal phases. In case of the control group 22% of the women were in menstrual phase while the remaining 39% were in follicular, 22% in midcyclus and 17% in luteal phases. No significant relationship was found between the menstrual cycle phases and suicide attempts. No significant differences were found when we compared the distribution of the suicide attempt to the menstrual cycle phase with sociodemographic data, psychiatric assesment and clinical features, characteristics of the suicide attempt and scale ratings. Conclusion: Although some conflict exists in the literature, the relationship between the women's hormonal physiology being menstrual siclus and the complex suicide behavior having multifactorial etiology is a topic that deserves comprehensive investigation and one needs more elaborate studies that shall overcome methodological diffuculties.

**REFERENCES:**

1. Baca-Garcia E, Diaz-Sastre C, Ceverino A ve ark: Association between the menses and suicide attempts: A replication study. Psychosomatic Medicine; 2003; 65:237-244.
2. Saunders KA ve Hawton K: Suicidal behaviour and the men strual cycle. Psychological Medicine 2006; 36: 901-912.

**NR2-087**

**ANTIDEPRESSANT EXPOSURE DURING PREGNANCY: CHILD BEHAVIOR AND TEMPERAMENT**

*Hope D Courtney, B.S. 1365 Clifton Rd NEClinic Building B Ste 6100, Atlanta, GA 30322, Patricia Brennan, Ph.D., D. Jeffrey Newport, M.D., M.S., M.Div., Natalie Morris, B.S., Bettina Knight, R.N., Zachary N. Stowe, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participants will be familiar with the impact of antidepressant exposure in pregnancy on child behavior and temperament.

**SUMMARY:**
The impact of antidepressant (AD) exposure during pregnancy has been debated amongst researchers and draws considerable attention in the media. Recent reports indicate a dramatic rise in the number of AD prescriptions to pregnant women. Few investigations of long term child outcome have been completed (Nulman et al, 2002). Previous studies are limited in sample size, rely on maternal report for antidepressant and environmental toxin exposure, and typically retrospectively assess maternal depression – if at all. The offspring of women participating in prospective investigations of maternal depression and the pharmacokinetics of ADs during pregnancy at the Emory Women's Mental Health Program were eligible for study participation. A total of 340 children were identified, 268 which have laboratory-confirmed AD exposure in gestation, with ages ranging from 18-132 months. The remaining 72 children have no AD exposure in utero. Outcome assessment included age appropriate maternal report versions of the Child Behavior Checklist (CBCL) and Rothbart's Temperament Scales. Currently, 96 women with laboratory-confirmed exposure to ADs during pregnancy completed a CBCL, Rothbart's temperament measures, and maternal Beck Depression Inventory (BDI). A total of 22 children (22.9% of results thus far) scored in the "Clinical or Borderline" ranges on the CBCL. Analysis by individual AD that demonstrated CBCL scores of concern included: 1) sertraline (6/29); 2) fluoxetine (3/22); 3) paroxetine (5/14); 4) citalopram/escitalopram (4/15); and 5) venlafaxine (1/10). The impact of maternal illness, trimester of AD exposure, and extent of AD exposure (maternal dose/umbilical cord concentration) will be assessed in the larger sample size. Further analysis will attempt to isolate the effects of AD exposure on child behavior and temperament. Our expanded sample size will allow us to ascertain a more accurate picture of the effects of AD exposure during pregnancy.
Supported by P50 MH 68036

**REFERENCES:**

1. The American College of Obstetricians and Gynecologists (ACOG), Practice Bulletin. November 2007. "Use of Psy chiatric Medications During Pregnancy and Lactation."
2. Nulman I, Rovet J, Stewart D, Wolpin J, Pace-Asciak P, Shuhaiber S, Koren G. (2002) "Child Devlopment Following Exposure to Tricyclic Antidepressants or Fluoxetine Through out Fetal Life: A Prospective, Controlled Study." American Journal of Psychiatry, 159 (11); 1889-1895.

**NR2-088**

## ADOLESCENT PREGNANCY: CURRENT TRENDS, CONTRIBUTING FACTORS AND OUTCOMES

*Jayashree S John, M.D. 104 St. Mary's Court. Johnson City TN - 37601, Umesh Vyas, M.D., Terrance Clark, M.D., Hetal Brahmbhatt, M.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to identify current trends, contributing factors and diverse outcomes of adolescent pregnancy. In addition, the participant will recognize the features of pregnancy denial with associated risk of neonaticide and learn to formulate an empathic, yet practical plan of care.

**SUMMARY:**
Introduction and Hypothesis: Pregnancy is a major life event, and it is especially stressful for an adolescent who has not yet established her sense of self, who seeks independence and who has ill-defined cognitive skills for her future life planning. Several studies have been done to identify the contributing factors which include poverty, dysfunctional family, early school failure and substance abuse. Psychological consequences involving the teen mother and offspring are important to recognize and deal with early, to prevent post partum depression, neonaticide and child abuse. However, recent studies have documented that as time passes, many young mothers make a successful transition into adulthood. Objective: A literature review was performed to determine an overview of the current trends, contributing factors and diverse outcomes of adolescent pregnancy. Method: Pubmed.gov was searched by using pre-determined key words: Adolescent pregnancy, post partum depression, teen parenting. Results: Studies indicate that about 1 million teenage girls become pregnant annually in the US; several predisposing factors have been identified. Babies born to adolescent mothers are at risk for mental retardation, physical illnesses, poor school performance and behavioral problems. Though outcomes include school dropout, abortion and public assistance to name a few, Furstenberg's studies do raise questions about some positive transitions.
Conclusion: Psychological and social outcomes of adolescent pregnancy are affected by many factors other than maternal age alone. However, teen mothers do require referrals to appropriate programs for close follow-up and monitoring after delivery. Finally, teenagers have the right to obtain confidential and exemplary health care to help minimize the risk of negative outcomes that may occur. Author does not have anything to disclose for this poster presentation.

**REFERENCES:**

1. Journal article:Donald B. Langille. Teenage pregnancy: trends, contributing factors and the physician's role, Canadian Medical Association Journal, 2007:176(11):1601-02.
2. Journal article:Monica L. Oxford et al. Predicting Variation in the Life Course of Adolescent Mothers as They Enter Adult hood, Original article, Journal of Adolescent Health, 2006(39) 20-26.

**NR2-089**

## THE PERSONALITY CHARACTER RELATE TO PREMENSTRUAL DYSPHORIC DISORDER(PMDD)

*Kim Seon Young, M.S.C. Department of Neuropsychiatry, Chonnam National University Hospital, 5 Hak-dong, Dong-ku Kwang Ju, South Seon-Young Kim, M.D., M.Sc.,Jae-Min Kim,M.D., Ph.D., Su-Jin Yang,M.D., Ph.D., Il-Seon Shin,M.D., Ph.D., Jin-sang Yoon,M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to identify personality character relate to premenstrual dysphoric disorder.

**SUMMARY:**
Objective : Premenstrual dysphoric disorder(PMDD) is a result in low quality of life and functional decrease in woman. This

study aimed to investigate the associations of premenstrual dysphoric disorder(PMDD) in relations to personalty character.
Methods : 170 nurses were recruited from two general hospitals. Interviews were made at baseline and at four follow-up points (two mid follicular and two late luteal phases of the two consecutive menstrual cycles). The baseline evaluation consisted of sociodemographic characteristics, menstrual history, and personality character. The personality character evaluated by Big 5 Inventory and PMDD was diagnosed by DSM-IV criteria after observation of the two menstrual cycles.
Results : PMDD was detected 15(8.8%) of 170 participants. The PMDD group showed more neuroticism character than calm-relaxed character(p=0.027). No significant differences were found in sociodemographic characteristics and menstrual history between those with and without PMDD.
Conclusion : The prevalence of PMDD was 8.8% in Korea, and PMDD group more relations to neuroticism character.

**REFERENCES:**


1. Halbreich U, Borenstein J, Pearlstein T, Kahn LS: The preva lence, impairment, impact, and burden of premenstrual dys phoric disorder. Psychoneuroendocrinology 2003; 28:1-23
2. Critochlow DG, Bond AJ, Wingrove J: Mood disorder history and personality assessment in premenstrual dysphoric disor der. J Clin Psychiatry, 2001; 62:688-693


**NR2-090**

## DEPRESSIVE SYMPTOMS DURING PREGNANCY AND THE POSTPARTUM PERIOD IN WOMEN WITH EPILEPSY


*Melanie B Galanti, B.A. 1365 Clifton Rd. NE, Bldg B, Ste 6100, Atlanta, GA 30322, D. Jeffrey Newport, MD, Page Pennell, MD, Denicia Holley, BA, Bettina Knight, RN, Zachary Stowe, MD*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, participants/audience will be familiar with the extant literature on the risk of postpartum depression in women with Epilepsy and novel prospective data regarding depression during pregnancy and the postpartum period.

**SUMMARY:**


The co-morbidity of mood disorders in women with epilepsy is well established. Similarly, pregnancy and the postpartum period can be a time of increased vulnerability for depression. The risk of perinatal depression in women with epilepsy has received limited investigation. A single study in women with epilepsy using the Edinburgh Postnatal Depression Scale found that 29% experienced postpartum depression (PPD) compared to 11% in women without epilepsy (Turner, 2006). Of particular relevance is the potential for anti-epileptic drug (AED) treatment - typically continued throughout pregnancy - to moderate the risk of depression. Treatment with AEDs has been found to alleviate seizures while also reducing psychological symptoms (Ketter et al, 1999; Boylan et al, 2002; Ovsiew, 2004). The current investigation seeks to confirm and extend previous investigations of PPD in women with epilepsy.One hundred ten women with epilepsy were followed prospectively during pregnancy and the postpartum period in the Emory Women's Epilepsy Program. Follow up visits included a structured diagnostic interview, measures of depressive symptoms (Hamilton Rating Scale for Depression, Beck Depression Inventory), seizure diaries, and documentation of medication and environmental exposures. Preliminary analysis in fifty-six women with measures during both pregnancy and the postpartum period utilized a BDI score of >12 to identify depression. 13.9% of women with epilepsy were depressed during pregnancy, and 27.9% had BDI>12 during the early postpartum period. These data confirm previous findings and indicate higher rates of depression during pregnancy compared to non-epileptic women. Additional analyses for the impact of seizure frequency, subtype of epilepsy, and history of mood disorder will be incorporated as potential risk factors. The impact, if any, of individual AEDs on the risk for perinatal maternal depression will be examined.


**REFERENCES:**


1. Turner K. Postpartum depression in women with epilepsy ver sus women without epilepsy. Epilepsy Behav 2006;9(2):293-297
2. Ketter TA, Post RM, Theodore WH. Positive and negative psychiatric effects of antiepileptic drugs in patients with sei zure disorders. Neurology 1999;53(Suppl 2):53-67


**NR2-091**

## THE COURSE AND SEVERITY OF ANXIETY DISORDERS IN PREGNANCY


*Natalie J Morris, B.S. 1365 Clifton Rd NE Suite 6100, AtlantaGA 30322, D. Jeffrey Newport, M.D., Hope Courtney, B.S., Elizabeth Zach, B.A., Bettina Knight, R.N., Zachary N. Stowe, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, participants will be familiar with the course and predictors of severity of anxiety disorders in pregnancy.

**SUMMARY:**


The course of anxiety disorders (OCD, PTSD, Panic, GAD) in pregnancy has received limited prospective investigation (Ross et al, 2006). The Emory Women's Mental Health Program enrolled pregnant or pre-conception women with a SCID diagnosis of an anxiety disorder (n=177) to determine the course and severity of anxiety disorders in pregnancy. Specifically, individual diagnoses included: obsessive compulsive disorder (n=37), posttraumatic stress disorder (n=40), panic disorder (n=48), and generalized anxiety disorder (n=52). Women were followed prospectively at 4-6 week intervals for depressive symptoms and the clinical global impression (CGI). All treatment – pharmacological and psychotherapeutic was documented at each visit. In addition, indices of thyroid function and urine toxicology were obtained. At the time of submission, data from a subset of women completing diagnostic specific tools (Yale-Brown Obsessive Compulsive Scale [YBOCS], the PTSD checklist, the Panic Disorder Severity Scale [PDSS], the Hamilton Rating Scale for Anxiety [HamA]) were available for preliminary analysis. Briefly, repeated measures indicated a broad range over the course of pregnancy: 1) YBOCS (score range 0-17); 2) PTSD (score range 0-81); and 3) PDSS (score range 0-17). Significant individual variation (e.g. asymptomatic to significant symptoms) occurred in 57.9 % of this subset (22/38). These data provide initial evidence that the majority of women with anxiety disorders may experience significant symptoms during pregnancy. Further analysis of repeated measures, inclusion of the impact of co-morbidity with mood

disorders, and the influence of treatment and/or change in treatment on anxiety symptom morbidity will be conducted. Given the potential impact of maternal anxiety on obstetrical and child outcome, there is an urgent need to delineate the course and predictors of severity for anxiety disorders during pregnancy. Supported by P50 MH 68036 (ZNS).

**REFERENCES:**


1. Ross LE & Mclean LM (2006). "Anxiety disorders during pregnancy and the postpartum period: a systematic review". Journal of Clinical Psychiatry. 67(8): 1285-1298.
2. Heron J, O'Connor TG, Evans J, Golding J, and Glover V (2004). "The course of anxiety and depression throughout pregnancy and postpartum in a community sample." Journal of Affective Disorders. 80: 65-73.


**NR2-092**

## ZOLPIDEM TARTRATE IN PREGNANCY: FETAL EXPOSURE AND OUTCOME


*Sandra Juric, B.A. Women's Mental health ProgramEmory Clinic Building B1365 Clifton Rd., N.E.,Suite 6100, Atlanta, GA 30322, D. Jeffrey Newport, M.D., James C. Ritchie, M.D., Zachary N. Stowe, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, attendees will be familiar with the extent of placental passage of zolpidem tartrate (Ambien) and the observed obstetrical outcome associated with this in utero exposure.

**SUMMARY:**


Sleep disturbances are relatively common in pregnancy and have been associated with increased obstetrical complications. Zolpidem tartrate (Ambien) has emerged as a commonly utilized sleep medication in the obstetrical setting. The extent of fetal exposure remains obscure with limited outcome data. In a single case, the cord blood concentration obtained at delivery from a woman with a history of Zolpidem abuse was 41 ng/ml. There were no obstetrical or neonatal complications observed (Askew, 2007). The objective of the current study was to quantify placental passage to Zolpidem and document obstetrical outcome. Pregnant women enrolled in a prospective observational study at the Emory Women's Mental Health Program who were prescribed zolpidem during pregnancy were included in the study. Maternal and umbilical cord sera obtained at delivery were analyzed for medication concentrations. Obstetrical outcome data was obtained from the medical record and direct interview of the women. The group was very homogeneous–white 89.6%, mean age 35.0±3.83, mean education 15.7±2.03, married 87.5%, and 100% with ongoing pre-natal care. A total of 48 women reported taking zolpidem at some point during pregnancy. A subset of 9 women reported taking zolpidem proximate to delivery (<24 hours), mean 15.1±4.03 hours post dose. The concentration of zolpidem at delivery was low in both maternal plasma (range <4ng/ml-64ng/ml, mean 12.3±20.9) and umbilical cord blood (range <4ng/ml-15ng/ml, mean 6.97±4.40). Obstetrical outcome was compared to a group of pregnant women on sertraline monotherapy (n=147). There were trends toward higher rates of C-Sections, premature deliveries, and low birth weight among women/neonates exposed to zolpidem. This investigation raises questions regarding the impact of zolpidem and/or sleep disturbance in women with psychiatric illness. These novel data confirm zolpidem crosses the human placenta and may influence obstetrical outcome. Supported by P50 MH 68036


**REFERENCES:**


1. Akew J. (2007). Zolpidem Addiction in a Pregnant Woman with a History of Second-Trimester Bleeding. Pharamaco therapy 27(2): 306-308.
2. Lee KA, Zaffke ME, McEnany G. (2000). Parity and sleep patterns during and after pregnancy. Obstetrics and Gynecol ogy, 95(1), 14-18.


**NR2-093**

## RISK FACTORS FOR POOR SLEEP AND DEPRESSION AMONG POSTNATAL WOMEN: A POPULATION-BASED QUESTIONNAIRE STUDY WITH BY SLEEP DIARY AND ACTIGRAPHY


*Signe D Ho-Yen, M.D. Stavanger University Hospital and University of BergenP.O. Box 8100,NO-4068, Gunnar T. Bondevik, M.D., Ph.D., Malin Eberhard-Gran, M.D., Ph.D., Bjørn Bjorvatn, M.D., PhD.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation the participant should know about normal sleep among postnatal women in the third month after delivery, as well as prevalence of sleep problems and depressive symptoms in this group. She should also know possible risk factors for poor sleep and for depression in this period. Although depressed women have more subjective complaints of poor sleep, this might not correspond with an objective difference in sleep as compared to non-depressed women.

**SUMMARY:**


Women sleep less in the postnatal period, and mothers diagnosed with depression could alternatively be suffering from the effects of chronic sleep deprivation. Population based studies of depressive symptoms along with prospective sleep reports and objective sleep registrations have been lacking. Our aim was to study the prevalences of sleep problems and depressive symptoms in a normal population of postnatal women to identify risk factors, and to compare retrospective reports with objective and prospective sleep registrations. Methods: All women (4191) delivering at Stavanger University Hospital, Norway, during one year were mailed a questionnaire 7 weeks after delivery, 2831 (67%) participated. Pittsburgh Sleep Quality Index (PSQI) was used to measure sleep, and depressive symptoms were measured by the Edinburgh Postnatal Depression Scale (EPDS). A sub-study using sleep diaries and actigraphy recordings for 14 days was performed among 42 women, of whom 21 scored =10 on the EPDS. Results: The prevalence of PSQI >5 was 57.4%, and the prevalence of EPDS =10 was 16.5%. The mothers slept on average 6.5 hours nightly, with 73% sleep efficiency. Depression and sleep quality was strongly associated. There were significant differences according to depressive status in daytime fatigue, but not in sleep, measured prospectively by sleep diaries and actigraphy. Independent of depression, primiparity, not fully breastfeeding, younger infant, male infant or co-sleeping with baby were associated with poorer sleep quality. In addition to sleep quality, depression was associated with poor partner relationship, depression during pregnancy or previously, and

stressful life events. Conclusion: Although reporting poorer sleep at the PSQI, postnatal women with depression did not show worse sleep parameters than non-depressed women when measured objectively and prospectively. Women complaining of poor sleep or fatigue in the postnatal period should be evaluated for possible depression.

**REFERENCES:**


1. Ross LE, Murray BJ, Steiner M: Sleep and perinatal mood disorders: a critical review. J Psychiatry Neurosci 2005; 30(4):247-56
2. Krystal AD: Depression and insomnia in women. Clin Cor nerstone 2004; 6 Suppl 1B:S19-28


**NR2-094**

## PREDICTORS OF SUICIDAL IDEATION IN POST-PARTUM WOMEN WITH A HISTORY OF NEURO-PSYCHIATRIC ILLNESS


*Tamara E Weiss, M.D. Women's Mental Health ProgramEmory University1365 Clifton Road, NE Suite 6100, Atlanta GA 30322, D. Jeffrey Newport, M.D., M.S., M.Div., Bettina Knight, R.N., Page Pennell, M.D., Zachary Stowe, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant will: 1) be familiar with the incidence of suicidal ideation in postpartum women; and 2) appreciate the clinical and psychosocial predictors of suicidal ideation in the postpartum period.

**SUMMARY:**


Introduction: Postpartum mental illness is a leading cause of maternal mortality. Despite the high incidence and deleterious impact of postnatal maternal mental illness, there are limited prospective studies in at risk populations. The current investigation sought to prospectively identify predictors of suicidal ideation (SI) in postpartum women. Methods: Women with neuropsychiatric illnesses (n=460) were followed through pregnancy and the postpartum period. SI was defined as any endorsement of SI (question #9) on the BDI at the initial postnatal follow-up visit. Lifetime and current psychiatric diagnoses were assessed using the SCID. Results: The initial postnatal visit occurred at 5.8 weeks (range 0.3 to 21.9) postpartum. In this high risk sample, 10.3% of women met criteria for current major depressive episode (MDE) at the initial postpartum visit. Remarkably, 9.8% of the sample endorsed suicidal ideation despite being identified and followed during pregnancy and the postpartum period. Several factors emerged as predictors of postnatal SI including: current MDE (OR 25.0; CI [6.8-91.6]), history of opiate abuse or dependence (OR 71.0; CI [3.6->999.9]), history of eating disorder (OR 8.1; CI [2.3-28.9]), and undesired pregnancy (OR 8.1; CI [1.2-57.0]). Conclusions: The low rate of MDE in this high risk sample is most likely a result of active treatment planning prior to delivery. It is of concern that despite this planning almost 10% of postpartum women endorsed some degree of suicidal ideation. Further study is warranted to investigate the utility of risk factor assessment in the management of psychiatric patients during the postpartum period.


**REFERENCES:**


1. Gissler M, Hemminki E, Lonnqvist J: Suicides after preg nancy in Finland, 1987-1994: register linkage study. British Medical Journal 1996; 313:1431-1434
2. Oates M: Psychiatric deaths from suicide or attributed to physical causes: key recommendations. In Confidential En quiry into Maternal and Child Health. Why mothers die 2000-2002. Sixth report of the Confidential Enquiries into Maternal Deaths in the United Kingdom, edited by Lewis G, London, RCOG Press, 2004, pp 152-173


**NR2-095**

## EFFECTS OF INDUCED HYPOGONADISM ON MOOD AND BEHAVIOR IN HEALTHY WOMEN


*Veronica L Harsh, M.D. 10 Center Dr Rm 3N 244, Bethesda, MD 20892, David R. Rubinow, M.D., Peter J. Schmidt, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to better understand the following: 1) the relationship between medically-induced menopause and depression symptoms; 2) the effects of depot leuprolide treatment on mood and behavior in young healthy women; and 3) the differential behavioral effects of induced hypogonadism on mood.

**SUMMARY:**


Background: The relationship between declining ovarian function, estrogen withdrawal, and midlife-onset depression is the source of considerable controversy. In this study, we examined the effects of GnRH agonist-induced hypogonadism on mood and behavior. We asked the following questions: 1) Does the acute induction of hypogonadism affect mood in young healthy women? 2) Do changes in plasma ovarian hormone levels correlate with changes in mood symptoms? 3) Are hot flushes associated with the development of depressive symptoms? Objective: Examination of effects of pharmacologically-induced ovarian suppression on mood. Participants: 53 Healthy adult women (mean age 33.8 yrs +/- 8.1) with no history of Axis I psychiatric diagnosis or medical/ gynecologic illness. Interventions: Subjects received depot leuprolide acetate (Lupron), 3.75 mg IM q monthly for up to three months. Outcome Measures: Mood and behavior rating scores on Beck Depression Inventory (BDI), Rating Scale for Premenstrual Tension Syndrome (PMTS), daily symptom rating forms, and serum levels of estradiol and progesterone. Results: Relative to baseline, GnRH agonist-induced hypogonadism was associated with the following: 1) Significantly decreased libido, disturbed sleep, and increased hot flushes; 2) No significant effects on any mood symptom score; 3) BDI scores of 10 or greater in 3 of 53 women (5.7%), consistent with clinically significant depressive symptoms; 4) No significant correlation between mood ratings and plasma hormone levels. Conclusions: These data, the first to describe the effects on mood of induced hypogonadism in healthy young women, suggest that short term hypogonadism is sufficient to precipitate depressive symptoms in only a small minority of younger women. The predictors of this susceptibility remain to be determined.


**REFERENCES:**


1. Morrison JH, Brinton RD, Schmidt PJ, Gore AC. Estrogen, menopause, and the aging brain: how basic neuroscience can inform hormone therapy in women. J Neurosci. 2006 Oct 11;26(41):10332-48.
2. Warnock, J,Bundren JC, Morris, DW. Depressive symptoms associated with gonadotropin-releasing hormone agonists.

Depression and Anxiety 1998;7:171-177

**NEW RESEARCH POSTER SESSION 3**

**MONDAY, MAY 5, 2008 3:00 P.M. – 5:00 P.M.**
**WEST LOBBY, LEVEL ONE, WASHINGTON CONVENTION CENTER**

**NR3-001**

**THE DEVELOPMENT AND PSYCHOMETRIC ASSESSMENT OF AN INSTRUMENT TO MEASURE ADHERENCE IN PATIENTS WITH DEPRESSION**

*Adel Gabriel, M.R.C. 2000 Pegasus Rd., NE Calgary, T2E 8K7 Canada*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to: 1) evaluate the adequacy of a measure for assessing patient clinical and psycho educational outcomes; and 2) develop instruments to use when delivering psyco-education.

**SUMMARY:**
BACKGROUND: Evidence in the literature supports the introduction of interventions to enhance adherence to antidepressant therapy, especially in patients with major depression. OBJECTIVE: The objectives of this study are; (1) to examine literature on patient's adherence to antidepressants and (2) to develop and psychometrically assess a four-item instrument to measure adherence to antidepressants. METHOD: Although causes for non-adherence are multifatorial, drug omissions could occur in one or more, of main four mechanisms; forgetting, carelessness, stopping the drug when feeling worse, or stopping the drug when feeling better. To our knowledge, no reliable valid instruments were developed to measure adherence to antidepressants. Authors modified an instrument that was developed by (Morisky 1986), to measure adherence to antihypertensive drugs. The modified instrument was distributed to experts in depression (n=12), to rate the instruments' relevancy, as a measure of patients' adherence to antidepressants, and was administered to patients (n=63), who are on antidepressants. RESULTS: The modified instrument has an improved reliability (Chronbachs' Alpha = 0.66), there is 90 %, overall agreement among experts that the instrument relevant to measure adherence in outpatients with depression, supporting a strong evidence for content validity. Also there is also strong evidence for convergent and criterion related validity. CONCLUSION: The developed instrument is short, and could be completed in 2-3 minutes. Although it was developed for outpatients, it could be applied in different sittings, with wide range of psychiatric population who suffer from depression. Also, it could be utilized in research evaluating the effectiveness of adherence promotion programs.

**REFERENCES:**
1. Demyttenaere K, Bruffaerts R, Albert A, Mesters P, Dewe´ W, Debruyckere K, Sangeleer M: Development of an antidepres sant compliance questionnaire. Acta Psychiatr Scand 2004: 110: 201–207.
2. Bulloch AG, Adair CE, Patten SB: Forgetfulness: a role in noncompliance with antidepressant treatment. Can J Psychia try. 2006;51(11):719-22.

**NR3-002**

**ACUTE AND RELAPSE PREVENTION EFFECTS OF SELEGILINE TRANSDERMAL SYSTEM ON SYMPTOMS OF ANXIETY IN PATIENTS WITH MDD**

*J. Alexander Bodkin, M.D. McLean Hospital Belmont, MA and Consolidated Department of Psychiatry, Harvard Medical School, Boston, MA 02478, B. McCabe, Ph.D., R.A. Baker, Ph.D., M. Sharoky ,M.D., Y. Yang, Ph.D., J.D. Amsterdam, M.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this presentation, the audience should be able to understand the effects of selegiline transdermal system on anxiety symptoms after acute treatment, understand the impact of STS on relapse prevention, as well as the effect of STS in keeping patients free of anxiety symptoms up to one year after initiation of treatment.

**SUMMARY:**
Introduction: Major depressive disorder (MDD) and anxiety are highly comorbid. Anxiety with MDD is associated with a more severe depressive presentation and greater psychosocial impairments (1). This post-hoc analysis investigated the acute effect of selegiline transdermal system (STS) on anxiety, and the effect of STS on preventing recurring anxiety symptoms over 52 weeks. Methods: This is a subanalysis of a study in which STS (6 mg/day) was effective in preventing relapse of MDD (2). After 10 weeks of open-label treatment with STS, patients were randomized under double blind conditions to placebo or to continue STS for up to 52 weeks. Anxiety was measured on item 10 (0 to 4 scale, 0 = no anxiety symptoms) of the HAMD-17. In the open-label phase, the effect of STS on anxiety scores was tested using a Wilcoxon signed rant test of distributions in all patients with a baseline and visit 8 score. In the double-blind phase, prevention of recurrence of anxiety was measured by comparing the proportion of those patients treated with STS or placebo who were anxiety-free at randomization and remained anxiety-free (Ham-D item 10 score = 0) using LOCF. Results: At baseline of the open-label phase, 445 patients had anxiety scores >=2, 68 had scores =1, and six patients has scores = 0. By visit eight, 137 patients had scores >=2, 191 had scores = 1, and 191 had scores = 0, ($p<0.001$ for change in distribution). After the double-blind treatment phase, a significantly greater number of STS treated patients remained "anxiety-free" (32/75, 43%) compared with placebo (19/77, 25%; difference versus STS = 0.18, 95% CI [0.02, 0.34]; $p<0.05$). Adverse events where STS rates were 1.5X greater than the placebo rate were application site reaction (15.2% vs. 3.7%) and insomnia (12.0% vs. 7.4%). Conclusions: STS is safe and effective in the acute and long term treatment of anxiety symptoms co-morbid with MDD. Supported by Bristol-Myers Squibb and Somerset Pharmaceuticals, Inc.

**REFERENCES:**
1. Pollack MH. Comorbid Anxiety and Depression. Journal of Clinical Psychiatry 2005;66 (Suppl 8):22-29.
2. Amsterdam JD and Bodkin JA. Journal of Clinical Psycho pharmacology 2006;26: 579-586.

**NR3-003**

**VALIDATION OF THE MOOD DISORDER QUESTIONNAIRE (SPANISH) TO DETECT BIPOLAR**

**DISORDER TYPE II IN PATIENTS WITH MAJOR DEPRESSION DISORDER**

*Alfonso V Gonzalez, Ph.D. Universidad Central de Venezuela. Cátedra de Psiquiatría. Hospital Vargas de Caracas. San José. Z.P. 1010., Caracas, Venezuela 1010, Astrid Arias, M.D., Salvador Mata, Ph.D., Lucimey Lima, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the validity of the Spanish version of the MDQ to diagnose Bipolar Disorder Type II in Spanish-speaking patients with major depression disorder.

**SUMMARY:**

Introduction: The Mood Disorder Questionnaire (MDQ) is a self-report inventory used to detect bipolar disorder type II (BD II), and it can be quickly and easily scored by physicians. The MDQ has been validated in several countries, other than Venezuela. For this reason, the authors tried to determine the criterion validity of the Spanish version of the MDQ in Venezuelan patients. Methods: The study was carried out in two stages at the Psychiatric Department of the Hospital Vargas de Caracas, Venezuela, which is a general teaching hospital. A group of 199 adult outpatients who had been previously diagnosed as suffering from major depression disorder - single episode or recurrent- were evaluated. Initially they were diagnosed using the Structured Clinical Interview for DSM-IV for Axis I Disorders (SCID-I). Afterwards, they were asked to answer the MDQ using a cut-off point = 7/13. The protocol was approved by the institutional review board of the Hospital Vargas de Caracas. Results: A total of 78.4% of the subjects were female. The mean age was 43.60 years for males (SD=14.19) and 43.94 years for females (SD=12.06). A total of 78.4% had an education of high school level or higher. The frequency of false unipolar patients was 28.1% (23.6% bipolar disorder type I and 4.5% BD II). While comparing the results of the SCID-I and the MDQ, a sensibility of 100.0% (95% confidence interval [CI] = 0.66 - 1) and a specificity of 61.1% (95% CI: 0.53 – 0.68) were found for the diagnosis of BD II. Conclusions: According to our results, the MDQ with a cut-off point = 7/13 is a valid instrument to detect the bipolar disorder type II in Venezuelan depressed outpatients.

**REFERENCES:**

1. Hirschfeld RM, Williams JB, Spitzer RL, Calabrese JR, Flynn L, Keck PE, Lewis L, McElroy SL, Post RM, Rapport DJ, Russell JM, Sachs GS, Zajecka J: Development and valida tion of a screening instrument for bipolar spectrum disorder: The Mood Disorder Questionnaire. Am J Psychiatry 2000; 157: 1873-1875
2. Hardoy MC,Cadeddu M, Murru A, Dell'Osso B, Carpiniello B, Morosini PL, Calabrese JR, Carta MG:Validation of the Italian version of the "Mood Disorder Questionnaire" for the screening of bipolar disorders. Clin Pract Epidemol Ment Health 2005;1:8-12

**NR3-004**

**A DOUBLE-BLIND, PLACEBO-CONTROLLED STUDY WITH ACUTE AND CONTINUATION PHASE OF QUETIAPINE AND LITHIUM IN ADULTS WITH BIPOLAR DEPRESSION**

*Allan H Young, Ph.D. UBC Institute of Mentqal Health 2255 Wesbrook Mall, Detwiller Pavilion, Vancouver, British Columbia V4C 4K1, Canada, Anders Carlsson, M.Sc., Bengt Olausson, M.D., Björn Paulsson, M.D., Martin Brecher, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, participants should gain an understanding of the effect of quetiapine on improving acute depressive symptoms in patients with bipolar I and II disorder. Participants will also obtain information on quetiapine's longer-term maintenance treatment effect in patients with bipolar depression.

**SUMMARY:**

Introduction: Two previous 8-week studies have demonstrated quetiapine's efficacy in bipolar depression. This study evaluated the efficacy and tolerability of quetiapine and lithium monotherapy for major depressive episodes in bipolar disorder during an acute 8-week period and up to 52-week continuation phase. Methods: 802 patients (499 bipolar I, 303 bipolar II) were randomized to quetiapine 300 mg/d (n=265), quetiapine 600 mg/d (n=268), lithium 600 mg/d (n=136), or placebo (n=133) for 8 weeks. Primary endpoint was change from baseline to 8 weeks in MADRS total score. After 8 weeks, patients with MADRS =12 and YMRS =12 entered a 26- to 52-week continuation phase of quetiapine (300 mg/d or 600 mg/d) or placebo. Patients on lithium or placebo received 300 mg/d of quetiapine (results of continuation phase not included here and to be presented separately). Results: Mean MADRS score change at 8 weeks was -15.36 (quetiapine 300 mg/d), -16.10 (quetiapine 600 mg/d), -13.60 (lithium), and -11.81 (placebo; P<0.001 for both quetiapine doses, P=0.123 for lithium, versus placebo; LOCF ANCOVA). Quetiapine (both doses)-treated, but not lithium-treated, patients showed significantly greater improvements (P=0.05) in MADRS response and remission rates, HAM-D, CGI-BP-S, CGI-BP-Change, and HAM-A at Week 8 versus placebo; MADRS item 10 (suicidal thoughts) improved with quetiapine 600 mg/d versus placebo (P=0.013). Most common adverse events considered drug-related included somnolence, dry mouth, and dizziness with quetiapine (both doses) and nausea with lithium. Conclusions: Quetiapine (300 mg/d or 600 mg/d) was more effective than placebo for the treatment of acute depressive episodes in bipolar I and bipolar II disorder. Quetiapine treatment was generally well tolerated.
Supported by funding from AstraZeneca Pharmaceuticals LP.

**REFERENCES:**

1. Thase ME, Macfadden W, Weisler RH, Chang W, Paulsson B, Khan A, et al; BOLDER II Study Group. Efficacy of que tiapine monotherapy in bipolar I and II depression: a double-blind, placebo-controlled study (the BOLDER II study). J Clin Psychopharmacol 2006; 6:600-609.
2. Calabrese JR, Keck PE Jr, Macfadden W, Minkwitz M, Ketter TA, Weisler RH, Cutler AJ, McCoy R, Wilson E, Mullen J A randomized, double-blind, placebo-controlled trial of quetiap ine in the treatment of bipolar I or II depression. Am J Psy chiatry 2005; 162:1351-1360.

**NR3-005**

**ANXIETY, DEPRESSION, AND QUALITY OF LIFE IN BIPOLAR PATIENTS PARTICIPATING IN FAMILY-INCLUSIVE TREATMENT**

*Allison M Lee, M.D. Fierman Hall, 9th Floor, 317 East 17th*

*Street, New York, NY 10003, Jacqueline Shafiroff, Alexander Norinsky, Simay Gokbayrak, Diana Hofshi, Annie Steele, Lisa Cohen, Ph.D., Susan Tross, Ph.D., Igor Galynker, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to describe the importance of including caregivers in the treatment of bipolar disorder, and should be aware of our findings regarding anxiety, depression, and quality of life in bipolar patients during the first three months of family-inclusive treatment.

**SUMMARY:**

Objective: With the goal of involving informal caregivers in bipolar patient care in a way that is both beneficial and practical in a clinic setting, we recruited patients and caregivers into Family Inclusive Treatment (FIT). Here, we report patient characteristics and outcomes over the first 3 months. Methods: FIT consisted of medication management by a psychiatrist, as-needed communication between psychiatrist and caregiver about patient symptoms, and quarterly visits including the caregiver. At baseline and quarterly, patients and caregivers were assessed using the Center for Epidemiologic Studies Depression Scale (CESD), State-Trait Anxiety Inventory (STAI), and the Quality of Life Enjoyment and Satisfaction Questionnaire (QLESQ). Results: Our cohort of 15 patients had a mean age of 47.6, were 82% white and 53% female. Most caregivers (62%) were spouses. Patients' initial anxiety was 56.5 (SD=10.1), with all scores above threshold for clinical anxiety. At 3-month follow-up, anxiety decreased (p=.002, independent samples t-test) to 41.8 (SD=11.7). Eight anxiety scores were reduced to below clinical significance. Initial depression was 20.5 (SD=12.2), with eight scores exceeding threshold for clinical depression. Mean at three-month follow-up was 12.4 (SD=9.3), with five decreasing to below the clinically significant level. None increased from below threshold to above. Patients endorsed quality of life items reflecting totals of 53.1 (SD=13.8) initially and 59.4 (SD=8.7) at three months. Ten improved over the first three months, while four worsened. Conclusions: Our results suggest feasibility of enrolling patients in FIT and collecting anxiety, depression, and quality of life data. We found a high prevalence of anxiety and depression, which appeared to decrease after three months of treatment. These results suggest that the FIT strategy of caregiver involvement in treatment may have clinical utility in bipolar patients.

**REFERENCES:**

1. Reinares M, Colom F, Martinez-Arán A, Benabarre A, Vieta E: Therapeutic interventions focused on the family of bipolar patients. Psychother Psychosom 2002; 71: 2-10
2. Miklowitz DJ, George EL, Richards JA, Simoneau TL, Sud dath RL: A randomized study of family-focused psychoedu cation and pharmacotherapy in the outpatient management of bipolar disorder. Arch Gen Psychiatry 2003; 60: 904-12

**NR3-006**

## EFFECTIVENESS OF EXTENDED RELEASE FORMULATION OF QUETIAPINE AS MONOTHERAPY FOR THE TREATMENT OF ACUTE BIPOLAR MANIA (TRIAL D144CC00004)

*Andrew J Cutler, M.D. 2300 Maitland Center Pkwy Suite 230, Maitland, FL 32751, Catherine Datto, Arvid Nordenhem, Margaret Minkwitz, Bonnie Dettore, Larisa Acevedo, Denny Darko*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to gain an understanding of the efficacy and safety of quetiapine extended release once daily dosing in reducing manic symptoms in patients with bipolar disorder.

**SUMMARY:**

Objective: Quetiapine (twice daily) is approved in several countries for acute manic episodes associated with bipolar disorder. This study evaluated effectiveness of extended release (XR) once daily (QD) quetiapine in improving manic symptoms in bipolar I disorder. Methods: This was a 3-week, randomized, parallel-group, double-blind, placebo-controlled study. Patients aged18–65 with bipolar I disorder (most recent episode manic or mixed; with or without rapid cycling) were randomized to placebo or quetiapine XR monotherapy QD (300 mg on Day 1; 600 mg on Day 2; flexible dosing, 400–800 mg from Day 3 through Week 3). Primary outcome measure was change from baseline to Week 3 in YMRS total score. Secondary outcome measures included YMRS response and remission, and change from baseline to Week 3 in CGI-BP severity of illness and change. Change from baseline between groups was compared with ANCOVA, using LOCF approach for missing data. Results: Compared with placebo (n=159), quetiapine XR monotherapy (n=149; mean daily dose 603.8 mg/d) significantly improved manic symptoms starting at Day 4 (first assessment; $P<0.001$), with sustained improvement to endpoint (Week 3; $P<0.001$). The mean change in YMRS total score at Week 3 was -14.34 for quetiapine XR versus -10.52 for placebo ($P<0.001$; baseline YMRS total score: quetiapine XR 28.8; placebo 28.4). Response (=50% reduction in YMRS) and remission (YMRS score =12) rates were significantly greater ($P<0.01$) with quetiapine XR than with placebo at Week 3. Quetiapine XR treatment also resulted in significant improvements over placebo in CGI-BP severity and change. Adverse events were mild to moderate in intensity; the most common adverse events with quetiapine XR included sedation, dry mouth, and somnolence. Conclusions: Quetiapine XR (400–800 mg) once daily monotherapy was efficacious (from day 4) and generally well-tolerated in manic or mixed episodes of bipolar I disorder. Supported by funding from AstraZeneca Pharmaceuticals

**REFERENCES:**

1. American Psychiatric Association: Practice guidelines for the treatment of patients with bipolar disorder. Am J Psychia try 2002; 159(Suppl):S2-S50
2. Seroquel [Package Insert]. Wilmington, DE: AstraZeneca Pharmaceuticals; 2007

**NR3-007**

## BIOMARKERS FOR RAPID IDENTIFICATION OF TREATMENT EFFECTIVENESS (BRITE): TESTING SYMPTOMS AND BIOMARKERS AS PREDICTORS OF RESPONSE AND REMISSION

*Andrew F Leuchter, M.D. 760 Westwood PlazaRoom 37-452, Los AngelesCA 90024, Lauren B. Marangell, M.D., Karl S. Burgoyne, M.D., Jeff Sigl, Ph.D., Rakesh Jain, M.D., M.P.H., Sidney Zisook, M.D., James T. McCracken, M.D., Daniel Iosifescu, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be

able to recognize that a simple-to-use frontal quantitative electroencephalographic (fqEEG) biomarker of treatment response (ATR) may predict the therapeutic benefit of antidepressant treatment with escitalopram in Major Depressive Disorder (MDD) more effectively than clinical symptom measures or genetic biomarkers.

**SUMMARY:**

Objective: To evaluate predictive accuracy of frontal quantitative electroencephalography (fqEEG) for response and remission in MDD relative to symptom measures and genetic biomarkers. Method: 73 subjects (age: 43±13; 62% female) meeting *DSM-IV* criteria for MDD entered treatment with escitalopram (ESC 10 mg/day) for 7 weeks in one limb of a study (www.BRITE-MD.org). At each visit we assessed severity of depression with the Hamilton Depression Rating Scale (HAM-D-17), and we recorded 4-channel fqEEG (At1-Fpz, At2-Fpz, A1-Fpz, A2-Fpz). A composite EEG index (Antidepressant Treatment Response (ATR)) was developed to predict clinical response assessed at baseline and week 1. Clinicians predicted likelihood of response or remission based on clinical impression at the week 1 visit, and genetic polymorphisms associated with antidepressant treatment response as well as serum drug levels were examined. Response to treatment was defined as a reduction of baseline HAM-D at week 7 of >= 50%, and remission as HAM-D <= 7 at week 7. Results: 39(52%)subjects responded and 28(37%) remitted. ATR correlated with % change in HAM-D from baseline to week 7 (r=-0.433, p<.001). ATR was higher in responders than non-responders (59±10 vs 50±8, p<.001) and remitters than non-remitters (59 ± 11 vs. 52 ± 9, p=.002). Clinician prediction of response and remission was not statistically significant, and there was no significant association between genetic biomarkers or serum drug levels and response. Logistic regression showed that ATR was the single strongest predictor of remission (p=.011).

Discussion: EEG response to initial dosing predicted clinical response and remission and was superior to clinical predictors as well as putative genetic biomarkers.

Conclusions: This prospective evaluation confirms that an EEG biomarker can be used to predict treatment efficacy after one week of ESC. Future studies should evaluate the utility of this EEG predictor in guiding treatment decisions.

**REFERENCES:**

1. Iosifescu D, Greenwald S, Smith C, Devlin P, Alpert J, Hamill S, Fava M. Frontal EEG at 1 Week Predicts Clinical Response to SSRI Treatment in Major Depressive Disorder . Presented at the 2006 Annual Meeting of the American Psychiatric As sociation, Toronto, CA(#231).
2. Cook IA, Leuchter AF, Witte EA, Stubberman WF, Abrams M, Rosenberg S. Early Changes in Prefrontal Activity Char acterize Clinical Re sponders to Antidepressants. Neuropsy chopharmacology 2002; 27:130-131.

**NR3-008**

## SCREENING FOR BIPOLAR DISORDER IN A CLINICAL SAMPLE OF ADULT PATIENTS WITH ATTENTION- DEFICIT/HYPERACTIVITY DISORDER (ADHD)

*Anne Halmoy, M.D. Institute of Biomedicine University of Bergen Jonas Liesvei 915009 Bergen, Norway 5009,*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand the inter-relationship between bipolar spectrum disorder and adult ADHD.

**SUMMARY:**

Introduction: ADHD is affecting about 3-7% of the school aged population. Most children will have persisting symptoms and be disabled also in adulthood. However, adult ADHD is a clinically heterogeneous condition, with high rates of psychiatric co-morbidity. Aim: The main aim of this study was to investigate the prevalence of co-morbid affective disorders in a Norwegian sample of clinical sample of adult ADHD patients.

Method: Adult patients already diagnosed with ADHD (n= 488) and a population based control group (n = 455) were recruited nation-wide. All recruited patients and controls filled out auto-questionnaires including socio-demographic data, self-report scales of current and childhood ADHD-symptoms (ASRS and WURS), questions on co-morbidity (patients and families) and the Mood Disorder Questionnaire (MDQ), a screening questionnaire for bipolar spectrum disorders. In addition, the patient´s physician filled in questions about diagnosis, medication and treatment response. Results: A history of severe depression or anxiety was reported by 68.7% of the patients and 13.9 % of the controls. Bipolar disorder was reported by 11.8% of adult ADHD patients and 1.1 % of the controls. Eleven percent (11.4) of the patients, and 2.7 % of the controls, reported having a first degree relative with bipolar disorder. Interestingly, as much as 56.2 % of the patients scored positive on the MDQ, contrasted to 10.4 % of the controls. The MDQ positive patients had significantly lower educational and occupational levels, more co-morbid drug problems and reported more bipolar disorder in first degree family members. Conclusion: About seventy percent of the adult ADHD patients reported a history of depression/anxiety, of which 52.9% screened positive for a bipolar disorder according to the MDQ. Discussion: Adult patients with symptoms of bipolar spectrum disorder may represent a sub-group of adult ADHD patients.

**REFERENCES:**

1. Fayyad J, De Graaf R, Kessler R, Alonso J, Angermeyer M, Demyttenaere K, De Girolamo G, Haro JM, Karam EG, Lara C, Lepine JP, Ormel J, Posada-Villa J, Zaslavsky AM, Jin R (2007) Cross-national prevalence and correlates of adult attention-deficit hyperactivity disorder. Br J Psychiatry 190:402-409.
2. Sobanski E, Bruggemann D, Alm B, Kern S, Deschner M, Schubert T, Philipsen A, Rietschel M (2007) Psychiatric comorbidity and functional impairment in a clinically referred sample of adults with attention-deficit/hyperactivity disorder (ADHD). Eur Arch Psychiatry Clin Neurosci.

**NR3-009**

## COMPARISONS OF SYMPTOM IMPROVEMENT AND TOLERABILITY FOR DULOXETINE-TREATED MALE AND FEMALE PATIENTS WITH MAJOR DEPRESSIVE DISORDER (MDD)

*Apurva Prakash, B.A. Lilly Corporate Center, Indianapolis IN 46285, Susan G. Kornstein, M.D., Adam L. Meyers, M.S.,*

*James M. Martinez, M.D., Madelaine M. Wohlreich, M.D., Craig Mallinckrodt, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to discuss the differences in the profile of MDD symptom improvement and adverse events in male vs. female MDD patients treated with duloxetine.

**SUMMARY:**

Objective: To investigate differences in symptom improvement and tolerability between male and female MDD patients. Methods: This was a post-hoc analysis from a double-blind, parallel design trial. Patients were randomized to one of three initial duloxetine doses: 30mg QD, 30mg BID, or 60mg QD. After the first week of treatment, all patients received 60mg QD for an additional 5 weeks. For this analysis, all dose groups were pooled and patients were stratified by gender (N=232 male; N=420 female). Symptoms (SX) were solicited using the Association for Methodology and Documentation in Psychiatry adverse event scale (AMDP) and the HAMD17. Results: Mean baseline AMDP scores indicated mild to moderate severity of sleep disturbances, and mild severity of other symptoms. Sleep disturbances improved starting at Week 1 with 32% vs. 34% improvement from baseline to endpoint in males vs. females (p=.7). Appetite disturbances improved starting at Week 2 with 42% vs. 33% improvement from baseline to endpoint in males vs. females (p=.1). GI disturbances worsened initially and then improved starting at Week 2 with 29% vs. 31% improvement from baseline to endpoint in males vs. females (p=.8). Other somatic disturbances improved starting at Week 1 with 36% vs. 39% improvement from baseline to endpoint in males vs. females (p=.7). Significant differences in baseline to endpoint change were observed for decreased appetite (56% vs. 33% improvement for males vs. females, p=.05); micturition difficulty (worsening in males and improvement in females, p<.001); and backache (17% vs. 45% improvement in males vs. females, p=.004). Sleep disturbances and decreased libido were among the more severe SX at endpoint (on average mild severity) for both genders. Mean HAMD17 score at endpoint was approximately 10 for both genders. Conclusions: Symptom change profiles were similar between genders with some significant differences for specific symptoms. Funding provided by Eli Lilly and Company.

**REFERENCES:**

1. Whitmyer VG, Dunner DL, Kornstein SG, Meyers AL, Mallinckrodt CH, Wohlreich MM, Gonzales JS, Greist JH. A comparison of initial duloxetine dosing strategies in patients with major depressive disorder. J Clin Psychiatry 2007; in press.
2. Stieglitz RD, Faehndrich E, Helmchen H. The AMDP system. In: Mezzich JE, von Cranach M, et al, eds. The International Classification in Psychiatry: Unity & Diversity. New York, NY: Cambridge University Press; 1988:180-204.

**NR3-010**

## EFFECTS OF ASENAPINE ON DEPRESSIVE SYMPTOMS IN PATIENTS WITH BIPOLAR DISORDER

*Armin Szegedi, Organon, a part of Schering-Plough Corporation 56 Livingston Ave, Roseland, NJ 07068, Jun Zhao, Arjen van Willigenburg, John Panagides*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) explain the pharmacological and preclinical evidence supporting the hypothesis that asenapine possesses antidepressant activity; and 2) summarize the effects of asenapine versus placebo on depressive symptoms in patients with bipolar disorder.

**SUMMARY:**

Objective: Asenapine is a novel psychopharmacologic agent being developed for the treatment of schizophrenia and bipolar disorder. In 2 clinical trials, asenapine reduced acute mania associated with bipolar I disorder. Here, we report a post hoc analysis of the effects of asenapine on depressive symptoms in these trials.
Methods: Patients were randomized to asenapine (10 mg BID adjustable to 5 mg BID), placebo, or olanzapine (15 mg QD adjustable to 5–20 mg QD, given to verify assay sensitivity). Changes from baseline were assessed on the Montgomery-Asberg Depression Rating Scale (MADRS) and Clinical Global Impression for Bipolar Disorder–Depression scale (CGI-BP-D). Three subgroups were identified: patients with baseline MADRS score >=20 (45, 33, and 54 patients for asenapine, placebo, and olanzapine, respectively); baseline CGI-BP-D score >=4 (59, 37 and 74), and mixed bipolar symptoms (111, 68 and 125). Results: Mean changes on MADRS and on CGI-BP-D with asenapine and placebo, in each patient subgroup, are shown at day 7 and 21 (P values = asenapine vs placebo). In most groups, asenapine was significantly better than placebo in reducing scores on MADRS and CGI-BP-D. Change from baseline (Asenapine, Placebo, P value) in Baseline MADRS >=20: MADRS (Day7) –11.3, –4.48, 0.002 (Day21) –13.6, –6.99, 0.009; CGI-BP-D (Day7) –1.00, –0.36, 0.011 (Day21) –1.43, –0.65, 0.020. Baseline CGI-BP-D >=4: MADRS (Day7) –7.70, –3.61, 0.023 (Day21) –9.90 –5.41 0.030; CGI-BP-D (Day7) –1.17, –0.58, 0.015 (Day21) –1.56, –1.18, NS. Mixed symptoms: MADRS (Day7) –6.69, –3.63, 0.011 (Day21) –8.29, –5.73 NS; CGI-BP-D (Day7) –0.71, –0.29, 0.007 (Day21) –1.02, –0.68 NS.
Corresponding changes with olanzapine were also numerically or significantly greater than with placebo. Conclusions:
The results of this explorative posthoc analysis suggest that asenapine may be clinically useful in bipolar patients with depressive symptoms. Supported by Organon, a part of Schering-Plough Corporation.

**REFERENCES:**

1. Brugue E, Vieta E: Atypical antipsychotics in bipolar depres sion: neurobiological basis and clinical implications. Prog Neuropsychopharmacol Biol Psychiatry 2007; 31:275-82.
2. Yatham LN, Goldstein JM, Vieta E, et al: Atypical antipsy chotics in bipolar depression: potential mechanisms of action. J Clin Psychiatry 2005; 66 (Suppl 5):40-48.

**NR3-011**

## THE IMPACT OF COMORBID SUBSTANCE AND ALCOHOL USE DISORDERS ON CAREGIVERS OF BIPOLAR PATIENTS

*Astrid Desrosiers, M.D. Massachusetts General HospitalBipolar Clinic and Research Program50 Staniford Street, Suite 580*

*Boston, MA 02114, Michael J. Ostacher, M.D., MPH, Claire A. Tilley, B.A., Rebecca Ametrano, B.A., Sarah Bhagat, B.A., Louisa Sylvia, Ph.D., Andrew A. Nierenberg, M.D., Gary S. Sachs, M.D., Deborah Perlick, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand the association between caregiver burden and comorbid alcohol abuse and substance use disorders in bipolar disorder.

**SUMMARY:**

Objective: The course of illness for patients with bipolar disorder (BD) is more severe when associated with comorbid substance use disorders, but the extent of the burden this comorbidity has on their caregivers is not known. We examined burden on caregivers of patients with BD and comorbid substance use disorders (SUD) and alcohol use disorders (AUD). Method: Caregivers of 502 patients with BD were enrolled in an ancillary study of the Systematic Treatment Enhancement Program for Bipolar Disorder (STEP-BD). Caregivers were interviewed using measures of objective and subjective burden, stigma, illness appraisal and coping. Patients were evaluated using structured and semi-structured assessments. Results: Of the bipolar subjects, 47 had a current AUD (9.4%), 30 had a current SUD (6.0%) and 424 had no AUD or SUD (84.4%). After controlling for multiple comparisons (?=0.005), current SUD was associated with elevated objective burden scores in caregivers [24.0, SD=12.5 vs. 12.5, SD=11.2, p=.003] compared to caregivers of subjects without comorbid SUD, with no significant difference found in subjective burden scores in caregivers of those with comorbid SUD [19.9, SD=14.1 vs. 13.8, SD=11.8, p>.003] compared to no SUD. Caregivers of subjects with comorbid AUD did not report increased subjective burden [mean 16.0, SD=12.0 vs. mean 14.0, SD=11.9, p=.277] or objective burden [mean 19.9, SD=10.6 vs. mean 17.7, SD=11.4, p=.228] compared to caregivers of bipolar patients without comorbid AUD.
The association between SUD and burden remained after controlling for possible confounders in a multiple regression. Conclusions: Caregivers of patients with BD and comorbid SUD experience elevated burden, while caregivers of patients with BD with comorbid AUD did not report increased burden compared to caregivers of subjects with BD alone. Why caregivers of patient with BD and AUD do not experience elevated burden remains unknown.

**REFERENCES:**

1. Perlick DA, Rosenheck, RA, Miklowitz DJ, Chessick C, Wolff N, Kaczynski R, Ostacher M, Patel J, Desai R, and the STEP-BD Family Experience Collaborative Study Group. Prevalence and correlates of burden in caregivers of bipolar patients. Bipolar Disord. 2007; 9(3):262-73.
2. Gonzalez J, Perlick D, Miklowitz DJ, Kaczynski R, Hernan dez M, Rosenheck RA, Culver J, Ostacher MJ, Bowden CL, and the STEP-BD Family Experience Collaborative Study Group. Factors Associated with Stigma among the Caregivers of Patients with Bipolar Disorder. Psychiatr Serv. 2007;58(1):41-8.

**NR3-012**

**DOES SNRI EDGE OVER SSRI FOR MAJOR DEPRESSION? A COCHRANE SYSTEMATIC REVIEW OF MILNACIPRAN, A DUAL SEROTONIN-NOREPINEPHRINE REUPTAKE INHIBIT**

*Atsuo Nakagawa, M.D. Shinanomachi 35, Shinjuku-ku, Tokyo Japan 160-8582, Norio Watanabe, M.D., Ph.D., Ichiro M. Omori, M.D., Ph.D., Corrado Barbui, M.D., Andrea Cipriani, M.D., Hugh McGuire, M.Sc., Rachel Churchill, MSc, Ph.D., Toshiaki A. Furukawa, M.D., Ph.D., on behalf of the Meta-Analysis of New Generation Antidepressants (MANGA) Study group*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participants should be familiar with the findings from the best available RCTs on comparative positive and adverse events of milnacipran against tricyclic antidepressants, selective serotonin reuptake inhibitiors and other agents in the acute-phase treatment of major depression.

**SUMMARY:**

Introduction: Milnacipran, a dual serotonin-norepinephrine reuptake inhibitor, is one of the newer antidepressants that clinician use for the routine care in major depression. We undertook a systematic review and meta-analysis of RCTs that compared the efficacy and acceptability of milnacipran in comparison with tricyclic antidepressants (TCAs), selective serotonin reuptake inhibitiors (SSRIs) within the framework of the Cochrane Collaboration. Methods: We searched all published and unpublished RCTs that compared the efficacy and adverse events of milnacipran versus any other antidepressant in the acute phase treatment of major depression. Participants were aged 18 or older, of both sexes with a primary diagnosis of unipolar major depression. Studies were excluded when the participants had specific psychiatric and medical comorbidities. Two independent reviewers independently assessed the quality of trials for inclusion and extracted data. Results: 16 randomized controlled trials (n=2277) were included in the meta-analysis. There were no differences in achieving clinical improvement, remission or overall acceptability when comparing milnacipran with other antidepressants. However, compared with TCAs, patients taking milnacipran were associated with fewer patients to leave the trial early due to adverse events (Number Needed to Harm (NNH=15, 95%CI:10-48). Significantly more patients taking TCAs experienced adverse events compared with milnacipran (NNH=4, 95%CI 3-7). Conclusions: The overall effectiveness and acceptability of milnacipran versus other antidepressants seem not to differ in acute phase treatment for major depression. However, there is some evidence in favor of milnacipran over TCAs in terms of premature dropouts due to adverse events and the rates of experiencing adverse events. Milnacipran may benefit some populations that suffer from side effects of other antidepressants in the acute phase treatment for major depression.

**REFERENCES:**

1. Papakostas GI, Fava M. A meta-analysis of clinical trials comparing milnacipran, a serotonin-norepinephrine reuptake inhibitor, with a selective serotonin reuptake inhibitor for the treatment of major depressive disorder. Eur Neuropsycho pharmacol. 2007;17:32-36
2. Papakostas GI, Thase ME, Fava M, Nelson JC, Shelton RC. Are antidepressant drugs that combine serotonergic and noradrenergic mechanisms of action more effective than the

selective serotonin reuptake inhibitors in treating major depressive disorder? A meta-analysis of studies of newer agents. Biol Psychiatry 2007;62:1217-1227.

**NR3-013**

## A DOUBLE-BLIND, PLACEBO-CONTROLLED STUDY WITH OF QUETIAPINE AND PAROXETINE IN ADULTS WITH BIPOLAR DEPRESSION (EMBOLDEN II)

*Bengt Olausson, M.D. AstraZenecaSodertalje, SE-151 85, Sodertalje, Sweden SE-151 85, Susan McElroy, M.D., Allan H. Young, M.B., Ch.B., M.Phil., Ph.D., Anders Carlsson, M.Sc., Arvid Nordenhem, M.D., Björn Paulsson, M.D., Martin Brecher, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to gain an understanding of the efficacy and safety of quetiapine and paroxetine monotherapy in the treatment of major depressive episodes in patients with bipolar I and II disorder. Participants will also obtain information on quetiapine's long-term maintenance effect in patients with bipolar depression.

**SUMMARY:**

Introduction: Previous studies have demonstrated quetiapine's efficacy as monotherapy in improving depressive symptoms associated with bipolar disorder. This study evaluated the efficacy and tolerability of quetiapine and paroxetine monotherapy for major depressive episodes in bipolar disorder during an acute 8-week period and up to 52-week continuation phase. Methods: 740 patients (478 bipolar I, 262 bipolar II) were randomized to quetiapine 300 mg/d (n=245), quetiapine 600 mg/d (n=247), paroxetine 20 mg/d (n=122), or placebo (n=126) for 8 weeks. Primary endpoint was change from baseline to 8 weeks in MADRS total score. After 8 weeks, patients with MADRS =12 and YMRS =12 entered a 26- to 52-week continuation phase of quetiapine (300 mg/d or 600 mg/d) or placebo. Patients on paroxetine or placebo received 300 mg/d of quetiapine (continuation phase results not included here and to be presented separately). Results: Mean MADRS score change at 8 weeks was -16.19 (quetiapine 300 mg/d), -16.31 (quetiapine 600 mg/d), -13.76 (paroxetine), and -12.60 (placebo; P<0.001 for both quetiapine doses, P=0.313 for paroxetine, versus placebo; LOCF ANCOVA). Quetiapine (both doses)-treated patients showed significantly greater improvements (P=0.05) in MADRS response rate, HAM-D, CGI-BP-S, CGI-BP-Change, HAM-A, and MADRS item 10 (suicidal thoughts) at Week 8 versus placebo; MADRS remission rates improved with quetiapine 600 mg/d versus placebo (P=0.012). Paroxetine improved HAM-A scores versus placebo (P=0.033). Most common adverse events considered drug-related included dry mouth, somnolence, sedation, and dizziness with quetiapine (both doses); dry mouth, sedation, headache, insomnia, and nausea with paroxetine. Conclusions: Quetiapine (300 mg/d or 600 mg/d) was more effective than placebo for the treatment of acute depressive episodes in bipolar I and II disorder. Quetiapine treatment was generally well tolerated. Supported by funding from AstraZeneca Pharmaceuticals LP.

**REFERENCES:**

1. Calabrese JR, Keck PE Jr, Macfadden W, et al. A random ized, double-blind, placebo-controlled trial of quetiapine in the treatment of Bipolar I or II depression. Am J Psychiatry 2005; 162(7):1351-60.
2. Thase ME, Macfadden W, Weisler RH, Chang W, Paulsson B, Khan A, et al; BOLDER II Study Group. Efficacy of que tiapine monotherapy in bipolar I and II depression: a double-blind, placebo-controlled study (the BOLDER II study). J Clin Psychopharmacol 2006; 6:600-609.

**NR3-014**

## SAFETY AND TOLERABILITY OF ARIPIPRAZOLE AUGMENTATION IN MAJOR DEPRESSIVE DISORDER: A POOLED ANALYSIS (CN138-139 AND CN138-163)

*Berit Carlson, Ph.D. Bristol-Myers Squibb Company, 777 Scudders Mill Road, Plainsboro, NJ 08536, J. Craig Nelson, M.D., René Swanink, M.S., Quynh-Van Tran, Pharm.D., Andrei Pikalov, M.D., Ying Qi, Ph.D., Ronald N Marcus, M.D., Robert M Berman, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to understand the safety and tolerability of aripiprazole augmentation to standard antidepressants across different subgroups of patients diagnosed with major depressive disorder.

**SUMMARY:**

Objective: To evaluate the safety and tolerability of adjunctive aripiprazole therapy to standard antidepressant therapy (ADT) across different subgroups with major depression. Methods: Data from two identical studies of aripiprazole augmentation, consisting of an 8-week prospective ADT phase and a 6-week randomized controlled trial phase were pooled to evaluate safety in patients with major depression without psychotic features. Patients with an inadequate response (<50% reduction HAM-D17 Total, HAM-D 17 =>14 and CGI-I =>3 at the end of the ADT phase) were randomized to adjunctive placebo or adjunctive aripiprazole (2-20 mg/day) for 6 weeks. The incidence of treatment-emergent adverse events (TEAEs), weight, ECG, and laboratory measurements were assessed during the 6-week phase, including time course, severity, resolution and predictors. Results: This pooled safety analysis included 737 patients; aripiprazole n=371; placebo n=366. Common TEAEs (=>5% and 2×placebo) occurring in the adjunctive aripiprazole arm were akathisia (25%), restlessness (12%), insomnia (8%), fatigue (8%), blurred vision (6%) and constipation (5%). Incidence rates of TEAEs did not differ by ADT, age or sex. Discontinuation due to TEAEs was low; 3.5% for adjunctive aripiprazole versus 1.6% for adjunctive placebo. The mean change in weight was higher in the aripiprazole group versus placebo (1.73 kg vs. 0.38 kg, p<0.001). In the aripiprazole group, the majority of new onset akathisia events occurred in the first 3 weeks (76%), were of mild-to-moderate severity (92%), and led to few discontinuations (n=3, 0.8%). Half (47/91) of the akathisia events resolved by endpoint. Dose reduction was associated with an 80% rate of resolution of akathisia. Conclusion: In this patient population with MDD, completion rates were high and accompanied by low discontinuation rates for AEs and akathisia. Long-term safety data will be presented separately. Supported by Bristol-Myers Squibb and Otsuka.

**REFERENCES:**

1. Berman RM, Marcus RN, Swanink R, et al: The Efficacy

and Safety of Aripiprazole as Adjunctive Therapy in Major Depressive Disorder: A Multicenter, Randomized, Double-blind, Placebo-controlled Study. J Clin Psych. 2007;68:843-853.
2. Pae C-U, Patkar AA, Jun T-Y, et al: Aripiprazole Augmenta tion for Treatment of Patients With Inadequate Antidepres sants Response. Depress Anxiety 2007;24(7):522-526.

**NR3-015**

## A CANDIDATE GENE ASSOCIATION ANALYSIS OF THE COMMON ADVERSE EVENTS IN A RANDOMIZED CLINICAL TRIAL FOR MAJOR DEPRESSION

*Bonnie Fijal, Ph.D. Lilly Corporate Center, Indianapolis IN 46285, John P. Houston,M.D., Roy H. Perlis, M.D., David H. Adams,PhD, Virginia K. Sutton,Ph.D., Madhukar H. Trivedi,M. D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to have a better understanding of possible associations of genetic variants in NET1 and SLC6A4 with the common treatment-emergent adverse events of decreased appetite and gastric discomfort in patients with MDD treated with duloxetine.

**SUMMARY:**

Objective: We hypothesized that genetic variations related to sites of activity and metabolism of duloxetine would be associated with common treatment emergent adverse events (TEAEs) in treatment of major depressive disorder (MDD) with duloxetine. Methods: We assessed solicited Association for Methodology and Documentation in Psychiatry-Module 5 (AMDP-5) AE ratings made at each visit for 243 Caucasian patients in a randomized, double-blind study of patients with MDD treated with 30-60 mg duloxetine over 6 weeks. Association analyses between non-intronic single nucleotide polymorphisms (SNPs) in 14 candidate genes and 8 AMDP-5 items corresponding to the most commonly observed TEAEs in the duloxetine MDD product label were performed. AMDP-5 item scores were classified as TEAEs based on a score increase from baseline during treatment. Subjects were split equally into two samples and analyzed separately. Significance was defined as $p < .05$ in both samples with consistent impact of the variant allele in both samples. Results: Decreased appetite in the two samples was significantly associated with norepinephrine transporter (SLC6A2/NET1) SNP rs5569 ($p = .040$ and .001). The progressively decreasing frequencies of decreased appetite in the two samples were 40% (18/45) and 47% (20/43) for CC, 28% (16/58) and 23% (15/64) for CT, and 6% (1/16) and 15% (2/13) for TT subjects. Gastric discomfort was significantly associated with serotonin transporter (SLC6A4) SNP rs8071667 ($p = .039$ and 0.028). The progressively decreasing frequencies of gastric discomfort were 27% (23/85) and 26% (23/87) for CC, 6% (2/33) and 10% (3/30) for CT, and 0% (0/2) and 0% (0/4) for TT subjects. No SNPs were significantly associated with drowsiness, dry mouth, nausea, constipation, or increased perspiration. Conclusions: SNPs in NET1 and SLC6A4 genes were associated with common TEAEs in duloxetine-treated patients with MDD. Replication in a placebo-controlled data set is needed. Supported by Eli Lilly & Co

**REFERENCES:**

1. Whitmyer VG, Dunner DL, Kornstein SG. A comparison of initial duloxetine dosing strategies in patients with major depressive disorder. J Clin Psychiatry, in press.
2. Hu XZ, Rush AJ, Charney D, et al. Association between a functional serotonin transporter promoter polymorphism and citalopram treatment in adult outpatients with major depres sion. Arch Gen Psychiatry. 2007; 64:783-792.

**NR3-016**

## IS POST-STROKE DEPRESSION A MINOR DEPRESSION?

*Carlos E Rocha e Silva, M.D. Av. Ataulfo de Paiva n. 1079 sl.510, Rio de Janeiro,Brazil 22440-034, Basílio B. Pereira, Ph.D., Marco Antonio A. Brasil, M.D., Ph.D., Charles André, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the importance of a thorough assessment of stroke patients with a structure clinical interview for the diagnosis of depression. Probably, minor depression is the typical form of post-stroke depression, instead of literature reports post-stroke depression as a major depression.

**SUMMARY:**

INTRODUCTION: Depression is one of the most frequent neuropsychiatric disorders after a stroke. Few published studies evaluate post-stroke depressive symptomatology. Usually, these studies only used scales to measure depressive symptoms and did not thoroughly evaluate patients with any clinical interview, and hence the diagnosis of major depression in these patients should be seen as controversial. OBJECTIVE: To describe the clinical presentation of depressive symptoms in a sample of 40 stroke patients. This study is part of an ongoing project evaluating the psychopathology of the post-stroke depression (PSD) in comparison with primary major depression disorder (*DSM-IV)*.
METHODS:. We evaluate 40 patients, 36 ischemic, 4 hemorrhagic strokes; median time from stroke 7,5 months (a range from 1,5 to 31 months); median age 57 years ( a range from 20 to 83 years). Patients were assessed by the Structured Clinical Interview for DSM-IV AXIS I Disorders (SCID-I), supplemented by Hamilton Scale for Depression (HAM-D), Beck Depression Inventory (BDI), Hamilton Scale for Anxiety (HAM-A), Hospital Anxiety and Depression Scale (HADS) and Mini-Mental State Examination (MMSE). The results are shown in a graph based on the Parallel Coordinates scheme. RESULTS: Twenty-two patients had no diagnosis of depression; minor depression was diagnosed in 10, and major depression in 8. Even in patients with clinical criteria for major depression the depressive symptoms were usually mild. CONCLUSION: Our results suggest that depressive symptoms are indeed frequent after a stroke, but the clinical syndrome tends to be less severe, better fitting the provisional diagnostic criteria of minor depressive disorder.

**REFERENCES:**

1. Lipsey JR,Spencer WC, Rabins PV, Robinson RG. Phenom enological comparison of poststroke depression and func tional depression. Am J Psychiatry 1986; 143: 143-4.
2. Paradiso S, Robinson RG. Minor depression after stroke. Am

J Geriatr Psychiatry 1999; 7:244-51.

**NR3-017**

## DOUBLE-BLIND STUDY OF EXTENDED RELEASE QUETIAPINE FUMARATE (XR) MONOTHERAPY FOR MAINTENANCE TREATMENT OF MAJOR DEPRESSIVE DISORDER

*Catherine Datto, M.D. AstraZeneca Pharmaceuticals1800 Concord Pike, Wilmington DE 19897, Raymond W. Lam, M.D., Ulla Lepola, M.D., Dennis Sweitzer, Ph.D., Hans A. Eriksson, M.D., Martin Brecher, M.D., DMSc., MBA*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to demonstrate knowledge and understanding of the efficacy and safety of once-daily extended release quetiapine fumarate (quetiapine XR) as a monotherapy in the maintenance treatment of patients with MDD as demonstrated by the results of a double-blind, randomized, placebo-controlled study.

**SUMMARY:**

Objective:MDD is a chronic and disabling condition, requiring long-term treatment.1,2 This study (D1448C00005) evaluated the efficacy and safety of extended release quetiapine fumarate (quetiapine XR) as once-daily monotherapy for maintenance treatment of MDD.

Methods:This study was a time-to-event (maximum 52-weeks), double-blind, randomized-withdrawal, parallel-group, placebo-controlled study of quetiapine XR monotherapy following minimum 12 weeks open-label stabilization. Patients initially received quetiapine XR:4-8-week open-label treatment, 12-18-week stabilization. Eligible patients (MADRS=/<12; CGI-S=/<3) were randomized to quetiapine XR or placebo (same dose as last open-label visit); dose adjusted to 50, 150 or 300mg/day as clinically indicated. Primary objective:to evaluate the efficacy of quetiapine XR vs placebo in increasing time from randomization to depressed event by predefined criteria. Secondary variables included MADRS and CGI-S for the randomized phase. Adverse events (AEs) were recorded throughout the study.

Results:787 patients were randomized to double-blind treatment: 391 quetiapine XR; 385 placebo. The risk of a depressed event was significantly reduced for quetiapine XR vs placebo (implying increased time to the event):HR=0.34 (0.25, 0.48); p<0.0001. 55 (14.2%) quetiapine XR- and 132 (34.4%) placebo-treated patients experienced a depressed event. During the randomized phase, mean changes were 0.17 vs 2.03 (p<0.001) MADRS and -0.03 vs 0.23 (p<0.001) CGI-S for quetiapine XR vs placebo. Open label AEs were similar to previous experience with quetiapine XR; most common AEs (>10% placebo group) during the randomized phase were headache and insomnia. Incidence of serious AEs (randomized phase) was low (<2.5%) in both groups. Conclusion:In patients with MDD quetiapine XR was generally well tolerated and significantly reduced the risk of relapse of depression when given as monotherapy for maintenance therapy. Research sponsored by AstraZene.

**REFERENCES:**

1. Prince M, Patel V, Saxena S, Maj M, Maselko J, Phillips MR, Rahman A: No health without mental health. Lancet 2007; 370:859-877.
2. No authors listed. Preventing recurrent depression: long-term treatment for major depressive disorder. J Clin Psychiatry 2007; 68:619-630.

**NR3-018**

## ROPINIROLE XL AUGMENTATION OF ANTIDEPRESSANT RESPONSE IN THE TREATMENT OF RESISTANT DEPRESSION

*Charles DeBattista, Stanford University, Stanford, CA 94002, Ashwin Patkar,MD., Jessica Hawkins, BA., Rowena Gomez, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand the potential role of ropirole XL in the augmentation of antidepressant response

**SUMMARY:**

Background: Many patients have inadequate response to antidepressant monotherapy. Some dopamine agonists are known to potentially have antidepressant effects and also may have clinical benefits on cognitive and sexual function. Therefore, dopamine agonists would be expected to have a role in the augmentation of antidepressant response. In this open-label study, the utility of the dopamine agonist ropinirole extended release (XL) in augmenting response to standard antidepressant is evaluated.

Methods: Patients who met *DSM IV* criteria for Major Depressive Disorder by SCID and had inadequate response to a therapeutic trial of monotherapy with one or more standard antidepressants were eligible to participate. Patients were treated open label for 8 weeks with ropinirole XL in addition to continuing their existing antidepressant. Ropinirole XL was started at 1 mg/day and titrated weekly to a maximum dose of 12 mg/day based on clinical response and tolerability. Neuropsychological and sexual function was also evaluated. The primary efficacy measure was change from baseline to end of treatment in Hamilton Depression Rating (HAM-D) Scores. Secondary efficacy measures included changes in Montgomery Asberg Rating Scale (MADRS) and CGI scores.

Results: 73 patients were enrolled and 52 of these were considered evaluable patients a priori in that they were treated with ropinirole XL for at least 4 weeks at a minimum dose of 2 mg/day. From baseline to end of treatment, patients had a significant reduction in HAMD total scores (p<.001 with a large effect size (PES=.68), MADRS total scores (p<.001) and CGI-S (p < .001) at week 8. There was a moderate improvement on some measures of cognition.

Conclusions: Ropinirole XL was well tolerated and appeared to be efficacious in the augmentation of antidepressant response in this open-label study. In addition, there may be benefits in cognition. Controlled trials are needed to further evaluate the role of ropinirole XL in the aug

**REFERENCES:**

1. Cassano P, Lattanzi L, Fava M, Navari S, Battistini G, Abelli M, Cassano GB. Ropinirole in treatment-resistant depression: a 16-week pilot study. Can J Psychiatry. 2005 May;50(6):357-60.
2. DeBattista C, Solvason HB, Breen JA, Schatzberg AF Pramipexole augmentation of a selective serotonin reuptake inhibitor in the treatment of depression J Clin Psychopharma col. 2000 Apr;20(2):274-5.

**NR3-019**

## ASSOCIATION OF BIPOLAR PATIENTS' SUICIDAL IDEATION AND DEPRESSION AT BASELINE WITH CAREGIVER HEALTH STATUS PROSPECTIVELY

*Cheryl A Chessick, M.D. 4455 E. 12th Avenue, A01-21, Denver, CO 80220, Deborah A. Perlick, Ph.D., David J. Miklowitz, Ph.D., Miriam Dickinson Ph.D., Michael H. Allen, M.D., Chad D. Morris, Ph.D., Jody Gonzales, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand the association of bipolar patient's suicidal ideation and depression and it's associations with caregiver health over a year of follow.

**SUMMARY:**

Objective: This study presents one year follow-up data from the Family Experience Study (FES), an ancillary study to the Systematic Treatment Enhancement Program for Bipolar Disorder (STEP-BD). We examined whether caregiver health and mental health would be associated with patient suicidal ideation and depression. Methods: 500 patients with bipolar disorder were evaluated using a measure of suicidality and depression at baseline, 6 and 12 months. Caregivers were evaluated within one week of patient evaluations using measures of health and mental health. Using a one year prospective design, mixed effects general linear models were used to examine whether suicidal/depressed bipolar patients at baseline would be associated with caregivers reporting lower scores on measures of health and higher levels of depression after controlling for relevant patient and caregiver covariates. Results: Caregivers reporting more depressive symptoms and poor health at baseline and over the 12 months of follow-up were associated with patients (N = 469 who had available suicidal indices) reporting more depressive symptoms and suicidal ideation. Caregivers with patients reporting more suicidal ideation at baseline reported greater improvement of health than caregivers with patients not reporting suicidal ideation at baseline

Conclusions: This study underlines the importance of interventions to address depression and health status of caregivers.

**REFERENCES:**

1. Perlick, D.A., Rosenheck R.A., Miklowitz D.J., Chessick C.A., et al.: Prevalence and Correlates of Burden among Caregivers of Patients with Bipolar Disorder Enrolled in the Systematic Treatment Enhancement Program for Bipolar Disorder (STEP-BD). Bipolar Disorders 2007; 9, 262-273.
2. Chessick, C.A., Perlick, D.A., Miklowitz, D.J., Kaczynski R., et al.: Current Suicide Ideation and Prior Suicide Attempts of Bipolar Patients as Influences on Caregiver Burden. Suicide and Life Threatening Behavior 2007; 24(4), 482-491.

**NR3-020**

## BRAIN-TO-SERUM LITHIUM RATIOS IN AFRICAN AMERICANS AND CAUCASIANS WITH BIPOLAR DISORDER: A LITHIUM-7 MAGNETIC RESONANCE SPECTROSCOPY STUDY

*Chris C Streeter, M.D. Boston Univerisity School of Medicine,85 E Newton St, M912E,, Boston, MA 02114, Constance M. Moore, Ph.D., Theodore H. Whitfield, Sc.D., Hua Tian, M.S., Megan Wardrop B.A., Perry F. Renshaw, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to realize that although slower Na+-Li+ countertransfer seen in the red blood cells of African Americans compared to Caucasians, race did not effct the brain-to-serum lithium ratio as measured by magnetic resonance spectroscopy.

**SUMMARY:**

Introduction: Slower rates of Na+-Li+ countertransport in the red blood cells (RBCs) of African Americans compared to Caucasians is associated with higher RBC-to-plasma lithium ratios, that is some studies is associated with better treatment outcome. Hypothesis: The slower Na+-Li+ countertransport in the RBCs of African Americans will also be found in the neurons resulting in higher brain-to-serum lithium ratios compared to Caucasians. Method: Lithium (Li-7) Magnetic Resonance Spectroscopy (MRS) was used to measure brain lithium levels in two groups, African American and Caucasian subjects with Bipolar Disorder (BPD). Serum lithium levels obtained at the same time were used to calculate brain-to-serum lithium ratios. Results: There was a significant correlation between serum lithium levels and brain lithium levels for the whole cohort (n=24) with a one unit increase in serum lithium producing on average a 0.59 unit increase in brain lithium levels ($p < 0.001$). In Caucasian subjects (n=18) a one-unit increase in serum lithium produced a 0.65 unit increase in brain lithium levels ($p < 0.001$). In African American subjects (n=6) a trend was observed where a one-unit increase in serum lithium produced a 0.43 unit increase in brain lithium levels ($p = 0.11$). A regression model with the brain lithium level as the outcome and the serum lithium level and a race x serum lithium level interaction term as predictors resulted in a statistically non-significant interaction term ($p = 0.37$). Conclusions: There was no evidence for a difference in brain-to-serum lithium ratios between the African American and Caucasian groups. Discussion: These findings suggest group membership does not have to be considered when treating African Americans and Caucasians with lithium when brain-to-serum lithium ratios are used to assess the presence of lithium in the brain.

**REFERENCES:**

1. Strickland TL, Lin K, Fu P, Anderson D, Zheng Y: Compari son of lithium ratio between African-American and Caucasian bipolar patients. Biological Psychiatry 1995;37:325-330.
2. Mallinger AG, Frank E, Thase ME, Dippold CS, Kupfer DJ: Low rate of membrane lithium transport during treatment correlates with outcome of maintenance pharmacotherapy in bipolar disorder. Neuropsychopharmacology 1997; 16:325-332.

**NR3-021**

## THE MANAGEMENT OF BIPOLAR ILLNESS (MOBI) PROJECT FOR CAREGIVERS OF PATIENTS WITH BIPOLAR I OR BIPOLAR II DISORDER

*Christine E Ryan, Ph.D. Mood Disorders Program, R.I. Hospital*

*- Potter 3593 Eddy Street, Providence, R.I. 02903, Brown Medical School/R.I. HospitalRI 02903, Gabor I Keitner, M.D., David A. Solomon, M.D., Geoffrey Tremont, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should recognize that a brief intervention consisting of education and support can have a significant effect in significantly reducing the strain and improving the mood and social functioning of caregivers of patients with bipolar illness.

**SUMMARY:**

Introduction: The aim of this pilot study was to test an intervention for caregivers of patients with bipolar disorder focusing on improving caregivers' perceived quality of life and family functioning and relieving feelings of burden, strain, and depression. Methods: Patients diagnosed with bipolar I or bipolar II disorder and their caregivers participated in an intervention that consisted of a 1-2 hour psychoeducational meeting led by a psychiatrist. The meeting was followed by a series of brief telephone calls to the caregiver by a mental health worker (weekly for 4 weeks, bimonthly for the next 3 months). The telephone call was used to provide support to the caregiver, enhance coping strategies, and reiterate ideas discussed during the initial meeting. Pre- and post-intervention ratings were obtained by a trained rater blind to individual session content. Results: To date, 12 of 18 sets of patients/caregivers have completed the 4-month intervention. Most caregivers were female (14/18, 78%), and family members (8/18, 44% parent, 7/18, 39% spouse). 67% (12/18) of the patients were female; 44% (8/18) were depressed at intake. There was no change in patients' ratings of his/her mood or perceived family functioning. Caregivers, however, reported improvement in perceived quality of life ($p<.10$), significant reduction in caregiver depression and mood ratings ($p<.02$), significant decrease in caregiver strain ($p<.05$), and significant improvement in caregiver social functioning ($p<.05$). Caregivers reported no improvement in their overall family functioning or in work functioning ($p>.10$). Conclusion: A brief intervention focused on the caregiver of a patient with bipolar illness can improve a caregiver's ability to cope and manage stress even if the patient remains symptomatic.

**REFERENCES:**

1. GI Keitner, CE Ryan, Heru AM: The family of the patient with bipolar disorder. In Families of Persons with Mental Disorders: From Burden to Empowerment, edited by Sarto rius N, Leff J, Lopez-Ibor JJ, Maj M., Okasha A, Chichester, John Wiley and Sons, Ltd., 2004, pp 69-85.
2. Bland R, Harrison C: Developing and evaluating a psycho educational program for caregivers of bipolar affective disorder patients: Report of a pilot project. Research-on-So cial-Work-Practice 2000; 10(2):209-228.

**NR3-022**

## EFFECTS OF ARIPIPRAZOLE ADJUNCTIVE TO ANTIDEPRESSANT THERAPY ON LOSS OF INTEREST OR ENERGY, AND MOTOR RETARDATION IN OUTPATIENTS WITH MDD

*Craig Nelson, M.D. University of California San Francisco 401 Parnassus Avenue, PO Box 0984 San Francisco, CA 94143, Ross A Baker, Ph.D., M.B.A., Ying Qi, Ph.D., Michele K. Preminger, M.D., Andrei Pikalov, M.D., Ph.D., Robert D McQuade, Ph.D., Berit X. Carlson, Ph.D., Randall Owen, M.D., Robert M. Berman, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the audience should be able to understand the effects of aripiprazole augmentation of standard antidepressants on Hamilton Depression Rating Scale composite drive score in patients with major depressive disorder.

**SUMMARY:**

Objective: To evaluate the effects of aripiprazole adjunctive to standard antidepressant therapy (ADT) on core symptoms of major depressive disorder (MDD) (1,2) in data pooled from two short-term outpatient trials. Methods: Each trial had an 8-week prospective ADT phase and a 6-week randomized, double-blind phase. During prospective treatment, patients with MDD HAM-D17 Total score =>18) received standard ADT dosed per label guidelines: escitalopram, fluoxetine, paroxetine CR, sertraline or venlafaxine XR, each with single-blind, adjunctive placebo. Patients with an incomplete response (<50% reduction HAM-D17 Total score, including HAM-D17=14 and CGI=3 at the end of the ADT phase) were randomized to adjunctive placebo or adjunctive aripiprazole for 6 weeks. A composite drive score (1) was calculated using HAM-D items 7 (loss of interest), 8 (retardation), and 13 (lack of energy). Change in the composite drive score (from beginning of the randomized double blind phase to endpoint) was compared between adjunctive aripiprazole and adjunctive placebo using ANCOVA with LOCF. Results: Upon entry into the prospective ADT phase, the mean composite drive score was 5.91 (n=724). At the end of the prospective ADT phase, mean drive scores were 5.12 for patients in the adjunctive placebo group (n=344) and 5.32 for patients in the adjunctive aripiprazole group (n=356). Adjunctive aripiprazole produced significantly greater improvement (-1.61) than placebo (-1.12; $p<0.001$) on the composite drive score.

Conclusion: Aripiprazole adjunctive to ADT significantly improved the core symptoms of depression comprised of loss of interest, loss of energy and motor retardation in patients with inadequate response to traditional ADT. Supported by Bristol-Myers Squibb and Otsuka.

**REFERENCES:**

1. Nelson JC, Portera L, Leon AC: Residual symptoms in de pressed patients after treatment with fluoxetine or reboxetine. J Clin Psychiatry 2005;66:1409-1414.
2. Jefferson JW, Rush AJ, Nelson JC et al: Extended-release bupropion for patients with major depressive disorder pre senting with symptoms of reduced energy, pleasure, and interest: findings from a randomized, double-blind, placebo-controlled study. J Clin Psychiatry 2006;67:865-873.

**NR3-023**

## CARDIOVASCULAR RISK FACTORS AND TREATMENT OUTCOME IN DEPRESSION

*Dale Dmello, M.D. Department of PsychiatryMichigan State UniversitySt Lawrence/Sparrow Hospital1210 W Saginaw Lansing, MI 48915, Alric D. Hawkins, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be

able to: 1) appreciate the pathogenesis and clinical sequelae of comorbid cardiovascular risk factors in patients with depression; and 2) understand the impact of cardiovascular risk factors upon treatment outcome.

**SUMMARY:**
Patients with depression carry a disproportionate burden of cardiovascular risk factors such as cigarette smoking, obesity, dyslipidemia, diabetes, and hypertension. The impact of these risk factors on treatment outcome has not been satisfactorily elucidated. Objective: The purpose of the present study was to examine the impact of concurrent cardiovascular risk factors on depression treatment outcome. Methods: Patients who were hospitalized with depression on the adult psychiatry unit of a general hospital in mid-Michigan during calendar years 2006 and 2007 were invited to participate in the study. Following informed consent the patients completed a brief cardiovascular risk questionnaire. The cohort of patients who received electroconvulsive therapy (ECT)following failure to respond to drug treatment was compared to those who responded to antidepressant medications. Results: Seventy-five patients participated in the study. They included 44 women and 31 women, who ranged in age from 19 to 75 years. Forty percent of the patients had hypertension, 20% had diabetes mellitus, 39% had dyslipidemia, 45% were obese (BMI>30) and 56% smoked cigarettes. Twenty-one (28%) of the 75 patients received ECT following non-response to antidepressants. The patients who received ECT had a higher prevalence of cardiovascular risk factors than those who responded to drug therapy. The relative risk of hypertension in drug non-responders was 1.72, diabetes mellitus 1.33, dyslipidemia 1.58, myocardial infarction 2.67, and cerebrovascular accident 1.25. Conclusions: The presence of cardiovascular risk factors in patients hospitalized for depression appears to predict non-response to antidepressant medications. Whether prevention of hypertension, diabetes, and dyslipidemia will improve the outcome of depression treatment remains to be determined.

**REFERENCES:**

1. Kamphuis MH, Geerlings MI, Tijhuis MA, Giampaoli S, Nis sinen A, Grobbee DE, Kromhout D: Physical inactivity, depression, and risk of cardiovascular mortality. Med Sci Sports Exerc. 2007 Oct;39(10):1693-1699.
2. Iosifescu DV, Renshaw PF, Lyoo IK, Lee HK, Perlis RH, Papakostas GI, Nierenberg AA, Fava M: Brain white-mat ter hyperintensities and treatment outcome in major depressive disorder. Br J Psychiatry. 2006 Feb;188:180-185.

**NR3-024**

## NEUROTRANSMITTER AND BIOENERGETIC CHANGES ASSOCIATED WITH ANTIDEPRESSANT TREATMENT RESPONSE IN MDD

*Dan V Iosifescu, M.D. Massachusetts General Hospital50 Stanifford Street, Suite #401, BostonMA 02114, J. Eric Jensen, Ph.D., Dana Charles, B.A., Carissa L. Medeiros, M.A., Andrew A. Nierenberg, M.D., Maurizio Fava, M.D., Perry F. Renshaw, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to understand the association of antidepressant treatment response in MDD with increases in amino acid neurotransmitter levels (gamma-aminobutyric acid GABA, glutamate, glutamine) and with increases in brain energy stores in specific brain areas.

**SUMMARY:**
Background: Antidepressant response in major depressive disorder (MDD) has been independently associated with increased gamma-aminobutyric acid (GABA) in the occipital lobe and with increases in the brain bioenergetic metabolism. Improvement in brain energy stores (NTP and beta-NTP) is associated with, and may be necessary for, increases in brain amino acid neurotransmitter levels. In the current study we investigate changes in brain bioenergetics and in GABA levels during treatment with escitalopram in MDD. Method: 29 subjects meeting DSM-IV criteria for MDD, mean age = 44.6 + 11.8 years, (14 females, 48%) completed a 12-week treatment with escitalopram 10-20 mg/day. Phosphorus magnetic resonance spectroscopy (31P MRS) spectra at 4 T were obtained at baseline and at week 12 from a 25-cm3 effective voxel centered on the anterior cingulate cortex (ACC). We also acquired proton spectroscopy (1H-MRS) spectra at baseline and week 12 from six of the MDD patients, from two voxels (2x2x2cm) placed in the ACC and in the parieto-occipital cortex (POC). Results: 19 MDD subjects (66%) were treatment responders (Ham-D-17 reduction > 50%) after 12 weeks. At week 12 beta NTP and total NTP levels in the ACC increased from baseline in treatment responders, but not in non-responders ($p<0.05$). GABA levels in the ACC and the POC increased during treatment in the three responders, but not in the three non-responders ($p<0.05$). Glutamate and glutamine increased numerically in treatment responders (p=NS). In the ACC, increases in GABA during treatment were correlated with increases in glutamate ($r=0.90$, $p<0.02$) and glutamine ($r=0.83$, $p<0.04$). Conclusion: The antidepressant effect of the SSRI escitalopram is correlated with increases in GABA levels and in bioenergetic metabolism in specific brain areas. These results may clarify complex interactions between neurotransmitter changes and brain energy stores (representing mitochondrial function) in mood disorders.

**REFERENCES:**

1. Sanacora G, Mason GF, Rothman DL, Krystal JH. Increased occipital cortex GABA concentrations in depressed patients after therapy with selective 1serotonin reuptake inhibitors.Am J Psychiatry. 2002; 159(4): 663-5.
2. Iosifescu DV, Bolo NR, Nierenberg AA, Jensen JE, Fava M, Renshaw PF. Brain Bioenergetics And Response To T3 Aug mentation In Major Depressive Disorder. Biological Psychia try (in press).

**NR3-025**

## YOUTH-ONSET MAJOR DEPRESSIVE DISORDER: COURSE OF ILLNESS AND AXIS I COMORBIDITY IN A COMMUNITY SAMPLE

*Daphne J Korczak, M.D. Deaprtment of Psychiatry, The Hospital for Sick Children Room 7535A Roy C. Hill Wing 555 University Avenue, Toronto Canada M5G 1X8, Benjamin I. Goldstein, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to demonstrate awareness that in non-clinical samples youth-

onset MDD is a more familial illness associated with greater psychiatric comorbidity and suicidality than adult-onset disease.

**SUMMARY:**
Introduction: Previous studies have noted and association between early-onset major depressive disorder (MDD) and increased rates of Axis I and II comorbidity, disease severity and social and occupational dysfunction. Investigations to date have been limited to clinical samples of depressed adult outpatients. This study seeks to determine if age at onset of MDD is associated with increased severity and comorbidity of illness in a representative community sample. Methods: The National Epidemiologic Survey on Alcohol and Related Conditions was used to identify subjects with MDD (N=6189). For analyses, subjects were divided into groups based on youth-onset (=18 years of age; N=1397; 22.7% of MDD subjects) or adult-onset (=19 years of age; N=4792; 77.3% of MDD subjects) MDD. Analyses examined between-group differences in demographic, clinical, and family-history variables. Twenty-two variables were examined. Variables that remained significantly associated with youth-onset depression after controlling for multiple comparisons (=.002) were included in a logistic regression analysis. Results: Subjects with youth-onset MDD were younger ($p<0.001$) and less likely to be married (OR 0.73, 95% CI 0.64-0.84) than were subjects with adult-onset MDD. Youth-onset MDD was independently associated with lifetime social phobia (OR 1.34, 95% CI 1.09-1.63), comorbid personality disorders (OR 1.39, 95% CI 1.20-1.61), suicide attempts (OR 3.18, 95% CI 2.59-3.91), seeking professional help for depression (OR 1.32, 95% CI 1.15-1.53), and loaded family history of depression (OR 1.59, 95% CI 1.37-1.85). Among MDD subjects who had received treatment for depression, latency from MDD onset to treatment was significantly greater among youth-onset subjects as compared to adult-onset subjects (8.2±10.5 years vs. 2.3±5.7 years, $t=21.1$, $p<0.001$). After controlling for age, youth-onset subjects had greater pain impairment, and poorer general health than adult-onset subjects.

**REFERENCES:**

1. Zisook S, Lesser I, Stewart JW, Wisniewski, SR, Balasubra mani GK, Fava M, Gilmer WS: Effect of age at onset on the course of major depressive disorder. Am J Psychiatry 2007; 164:1539-1546.
2. Alpert JE, Fava M, Uebelacker LA, Nierenberg AA, Pava JA, Worthington JJ, Rosenbaum JF: Patterns of axis I comorbid ity in early-onset versus late-onset major depressive disorder. Biol Psychiatry 1999; 46:202-211.

**NR3-026**

## PREDICTIVE VALUE OF EARLY RESPONSE IN ARIPIPRAZOLE, 8-WEEK, BIPOLAR DEPRESSION TRIALS (STUDIES CN138-096 AND CN138-146)

*David Kemp, University Hospitals Case Medical CenterCase Western Reserve University School of Medicine 11400 Euclid Avenue, Suite 200, Cleveland, OH 44106, Joseph R Calabrese, M.D., James M. Eudicone, M.S., Stephan Ganocy, Ph.D., Robert D McQuade, Ph.D., Andrei Pikalov, M.D., Ronald N Marcus, M.D., Estelle Vester-Blokland, M.D., J Randall Owen, M.D., Berit X Carlson, Ph.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this presentation, the participant should be able to understand the predictive value of early response in bipolar I depression so that rational treatment decision can be made after two weeks of treatment.

**SUMMARY:**
Objective: To evaluate the predictive value of early improvement in patients with bipolar I depression from two double-blind, placebo-controlled trials with aripiprazole. Methods: Data pooled from two, aripiprazole, 8-week, randomized, double-blind, placebo-controlled trials with identical design in patients with bipolar I depression without psychotic features were used to determine if early improvement predicts response and remission. Early improvement was defined as =>20% reduction from baseline in MADRS (Montgomery-Asberg Depression Rating Scale) Total score at Week 2. Response was defined as =>50% reduction in MADRS Total score at endpoint, Week 8 (LOCF [last observation carried forward] and OC [observed cases]). Remission was defined as MADRS Total score <=10 at endpoint, Week 8 (LOCF and OC). Sensitivity, specificity, positive predictive value (PPV), and negative predictive value (NPV) were calculated. Results: In all, 311 patients were randomized to placebo and 306 to aripiprazole in this pooled analysis. Early improvement led to following values for response and remission, respectively. For aripiprazole: sensitivity: 81% and 83%; specificity: 43% and 41%; PPV: 54% and 44%; NPV: 74% and 81% (LOCF analyses). For placebo: sensitivity: 71% and 70%; specificity: 65% and 60%; PPV: 50% and 63%; and NPV: 77% and 73% (LOCF analyses). OC analysis yielded similar results. False negatives at Week 2 occurred at a lower rate with aripiprazole for response and remission (LOCF: 19%; 17%) as compared to placebo (LOCF: 29%; 30%). Conclusion: Consistent with the findings from antidepressants in patients with major depressive disorder, the lack of early response with aripiprazole is predictive of no response or remission over 8 weeks. These data in patients treated with aripiprazole suggest that treatment decisions in bipolar I depression may be possible after as little as 14 days. Supported by Bristol-Myers Squibb and Otsuka.

**REFERENCES:**

1. Szegedi A, Muller M, Anghelescu I, et al: Early Improve ment Under Mirtazapine and Paroxetine Predicts Later Stable Response and Remission With High Sensitivity in Patients With Major Depression. J Clin Psychiatry 2003;64:413-420.
2. Nierenberg AA, McLean NE, Alpert JE, et al: Early nonre sponse to fluoxetine as a predictor of poor 8-week outcome. Am J Psychiatry 1995;152:1500-1503.

**NR3-027**

## METHYLPHENIDATE ER FOR ANTIDEPRESSANT-RELATED SEXUAL DYSFUNCTION IN TREATMENT RESISTANT DEPRESSION: A 4-WEEK, DOUBLE-BLIND, PLACEBO-CONTROLLED TRIAL

*David M Marks, M.D. 605 Brookview Drive Chapel Hill, NC 27514, Chapel Hill, NC 27514, Chi-Un Pae, M.D., Prakash S. Masand, M.D., Paolo Minnelli, M.D., Kathleen Peindl, Ph.D., Ashwin A. Patkar, M.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to recognize the potential role of methylphenidate in the treatment of antidepressant-related sexual dysfunction and

understand the strengths and limitations of the literature to date related to managing the sexual side effects of antidepressants.

**SUMMARY:**
Limited data are available to identify effective treatment strategies for antidepressant-related sexual dysfunction, in particular for patients with treatment resistant major depression. We conducted a post hoc analysis of our published data from an efficacy trial of methylphenidate extended release (OROS MPH) augmentation (18 mg -54 mg/day) in subjects who were nonresponders or partial responders to antidepressants in order to determine whether augmentation with OROS MPH improved sexual dysfunction associated with antidepressants. Sixty subjects with treatment resistant depression were enrolled in this 4-week, double-blind, placebo-controlled trial. Preexisting antidepressants were kept unchanged. The primary outcome measure was the change in Arizona Sexual Experiences Survey (ASEX) from baseline to end of treatment in an ITT with LOCF approach. There were no significant differences between the two groups in terms of changes in ASEX scores over time (F (1, 35) = 1.14, p = 0.32), although the numerical decrease in ASEX score was greater in the OROS MPH group (mean change=4.5, 20.1% decrease) than in the placebo group (mean change=0.6, 2.6% decrease). There was no correlation between improvement in Hamilton Depression Rating Scale (HAM-D) and ASEX scores. Augmentation with OROS MPH showed no statistically significant benefit in antidepressant-related sexual dysfunction, although the trend indicates a numerical improvement in ASEX score in the OROS MPH group. The addition of OROS MPH to antidepressants did not worsen preexisting sexual dysfunction. Our findings should be interpreted in the context of relatively low statistical power, limitations in the sensitivity of the rating scale employed, and short trial duration. Adequately powered, controlled trials are warranted to fully evaluate the efficacy of OROS MPH in the treatment of antidepressant-related sexual dysfunction.

**REFERENCES:**

1. Patkar AA, Masand PS, Pae CU, et al. A randomized, double-blind, placebo-controlled trial of augmentation with an extended release formulation of methylphenidate in outpa tients with treatment-resistant depression. J Clin Psycho pharm 2006;26(6):653-656.
2. Talor MJ, Rudkin L, Hawton K. Strategies for managing an tidepressant-induced sexual dysfunction: a systematic review of randomized controlled trials. J Affect Disord 2005;88(3):241-54.

**NR3-028**

## A DOUBLE-BLIND, PLACEBO-CONTROLLED STUDY OF DIVALPROEX ER IN NEWLY DIAGNOSED MOOD STABILIZER NAÏVE PATIENTS WITH ACUTE BIPOLAR DEPRESSION

*David J Muzina, M.D. 9500 Euclid Ave, P57, Cleveland, OH 44195, Sammy Khalife, M.D.; Keming Gao, M.D., Ph.D.; David Kemp, M.D.; Stephen Ganocy, Ph.D.; Mary Beth Bachtel, M.A.; Elisa Colangelo, B.S.; Carla Conroy, B.A.; Sarah Bilali, M.A.; Joseph R. Calabrese, M.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of the presentation, the participant should be able to understand the efficacy and safety and tolerability of divalproex ER monotherapy in the acute treatment of newly diagnosed mood stabilizer naïve patients with bipolar I or II depression.

**SUMMARY:**
Introduction: Several small studies suggest that divalproex may have acute efficacy in the treatment of bipolar I or II depression (Davis et al 2004; n = 25), (Ghaemi et al. In Press; n = 18). To follow-up on this, 54 patients were randomized to double-blind, placebo-controlled divalproex sodium extended-release (DVPX-ER) monotherapy.
Methods: Subjects were required to be in a major depression with a minimum MADRS of 20, newly diagnosed bipolar I or II disorder, and naïve to prior treatment with lithium and divalproex. After a 24-hour washout of psychotropics other than lorazepam, patients were randomized to either DVPX-ER or placebo for 6 weeks. Divalproex was initiated at 500mg on Day 1, titrated to 1500-2000mg by Day 4, and a level of at least 50mg/L obtained on Days 7 and 21. The primary outcome measure was the mean change from baseline on MADRS and secondary outcomes included response rates (50% decrease in MADRS) and remissions rates (<10 on the MADRS).
Results: Twenty six subjects were randomized to DVPX-ER and 28 to placebo. No significant differences in baseline characteristics were detected between treatment arms nor the two sites. Subjects presented with high moderate symptom-severity(MADRS=29). The mean dose of valproate was 1606 mg/d and the mean blood level was 82 ug/ml. A comparison of improvement over baseline on the MADRS resulted in no significant differences (DVPX-ER=-9.4 vs. PBO=-6.0) with a corresponding Cohen's d effect size of 0.35. Response and remission rates were (38.5% vs 10.7%, {p = 0.02}) and (23.1% vs 10.7% {ns}), respectively. Side effects presenting in at least 5% of subjects included nausea (46 vs 18), fatigue (19 vs 11), diarrhea 19 vs 7), increased appetite 19 vs 7), stomach cramps (15 vs 0), dizziness (12 vs 7), and headaches 8 vs 11), respectively. Conclusions: These data support the evolving impression that a subgroup of patients with bipolar I or II depression may benefit from acute treatment with DVPX-ER.

**REFERENCES:**

1. Davis LL, Bartolucci A, Petty F. Divalproex in the treatment of bipolar depression: a placebo-controlled study. J Affect Disord 2005; 85:259-266.
2. Ghaemi SN, Gilmer WS, Goldberg JF, et al. Divalproex in the treatment of acute bipolar depression: A preliminary double-blind, randomized, placebo-controlled pilot study. Journal of Clinical Psychiatry (in press).

**NR3-029**

## EFFECTS OF ESCITALOPRAM ON DEPRESSIVE SYMPTOMS AS EVALUATED BY THE PATIENT

*Despoina Giailoglou , M.D. 64, Kifisias AveMarousi Athens GREECE -15125, Athens, Greece 15125, Stamouli S., Lagari V., Liakouras A., Giailoglou D.& Parashos I.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this presentation, the participant should be able to recognize that escitalopram produced a significant reduction in sadness, anxiety, sleep problems and somatic pain, based on patient evaluations using VAS scales.

**SUMMARY:**
Purpose: This study investigated the efficacy of escitalopram, as rated by the patient, in naturalist settings in psychiatric outpatients with clinical depression (1,2).
Methods: This was an open-label, 3-month surveillance study, conducted at 103 specialist sites. Data were from consecutively evaluated patients with clinical depression. Efficacy was assessed by the patient using visual analogue scales (VAS) for four symptoms: sadness, anxiety, sleep problems, and somatic pain. The scale was rated from 0 (absence of symptom) to 10 (symptom at its worse). Statistical analysis was made on a modified intent-to-treat dataset (ITT: at least valid one post-baseline VAS measurement) and by using observed cases (OC: VAS measurements at all 3 visits).
Results: 5175 patients were enrolled in the study and 1801 had VAS evaluations (doctors' standard practice). These patients were younger (p=0.016) and were more likely to suffer from comorbid anxiety and depression (p<0.001) than average. At baseline, patients rated their symptoms at 5.9 (±2.0) for sadness, 5.8 (±2.2) for anxiety, 4.8 (±2.7) for sleep problems, and 3.2 (±2.8) for somatic pain. All symptoms improved significantly throughout the duration of the study (Hotelling's test, p<0.001 in both ITT, LOCF and OC analyses). More specifically, after 3 months of treatment patients rated sadness at 2.0 (±1.8), anxiety at 1.9 (±1.8), sleep problems at 1.3 (±1.6), and somatic pain at 0.8 (±1.4) in the ITT LOCF analysis. The ratings for the OC analysis were 1.7 (±1.6), 1.6 (±1.6), 1.1 (±1.3), and 0.7 (±1.1), respectively. In addition there was significant correlation between CGI-S ratings by the physician and each of the symptom ratings at baseline (Pearson, p<0.001) and at 3 months (p<0.001).
Conclusion: Escitalopram treatment produces significant improvements in the symptoms of sadness, anxiety, sleep problems and somatic pain, as seen from patient evaluations.
**REFERENCES:**
1. Rush AJ, Bose A. Escitalopram in clinical practice: Results of an open-label trial in a naturalistic setting. Depress Anxiety 2005;21:26-32.
2. Moller H-J, Langer S, Schmauß M. Escitalopram in clini cal practice: Results of an open-label trial in outpatients with depression in a naturalistic setting in Germany. Pharmacopsy chiatry 2007;40:53-57.

**NR3-030**

## COGNITIVE PROFILE OF PATIENTS WITH TREATMENT-RESISTANT DEPRESSION (TRD): PRESENCE OF ABNORMAL VERBAL IQ/PERFORMANCE IQ SPLIT

*Donald A Davidoff, Ph.D. Donald A. Davidoff PhDMcLean Hospital Geriatric Psychiatry Program South Belknap 328115 Mill St. Belmont, MA 02478, Manjola Ujkaj, M.D., Ph.D., Joseph Berlow, B.A., Tarter Miles, Psy.D., Lauren Zeranski, B.A., Alex Vuckovich, M.D., Ph.D., Peter Choras, M.D., JoAnne Savoie, Ph.D.*
**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to: 1) recognize a distinct and characteristic cognitive profile of patients with both unipolar and bipolar Treatment-Resistant Depression (TRD); and 2) identify the clinical implications that this cognitive profile might have thus guiding toward different treatment strategies in TRD patients.
**SUMMARY:**
Introduction: Little is known about the cognitive profile of treatment-resistant depression (TRD) in unipolar and bipolar patients. TRD is a major public health problem. After observing repeated instances of atypical neuropsychological profiles within this population, we proposed that individuals with TRD might have a higher rate of nonverbal processing inefficiency compare to the normalization sample. Methods: A retrospective chart review was carried out of the medical records of all admissions during 2000-02 to a private behavioral health service at McLean Hospital, Belmont. We identified 81 TRD subjects (42 unipolar, 39 bipolar) who had undergone a full neuropsychological assessment (Weschler Abbreviated Scale of Intelligence – WASI; Trails A) and had complete clinical data sets. VIQ/PIQ split scores were converted into z-scores to be compared to the WASI standardization data. Calculated Z scores greater than 1.282 and 1.645 were considered statistically abnormal. Results: The subjects' corrected mean VIQ/PIQ split score (12.08) was significantly higher than standardization sample mean (0.35) at the group's ability level (t=6.71, d.f.=430, p<.001). The incidence of statistically abnormal VIQ/PIQ split scores was greater in the TRD group than in the normalization sample; 35% of the TRD group had a VIQ/PIQ split Z-score>1.28, representing a split that only occurs in 10% of the normalization sample (z=5.469, p<.001); 19% of TRD group had a VIQ/PIQ split Z-score>1.65, representing a split that occurs in 5% of the normalization sample (z=4.749, p<.001). There were no correlations between performances on Trails A and any other variables, suggesting that these differences are not attributable to slowed processing speed. Conclusions: The current study provides a first step in elucidating a relationship between nonverbal processing difficulties and TRD in both unipolar and bipolar subjects. This should be considered when weighing different treatment strategies.
**REFERENCES:**
1. Malhi GS, Ivanovski B, Szekeres V, Olley A. Bipolar disor der: it's all in your mind? The neuropsychological profile of a biological disorder. Can J Psychiatry. 2004 Dec;49(12):813-9.
2. Rourke BP, Young GC, Leenaars AA. A childhood learn ing disability that predisposes those afflicted to adolescent and adult depression and suicide risk. J Learn Disabil. 1989 Mar;22(3):169-75.

**NR3-031**

## EARLY PARTIAL RESPONSE TO ZIPRASIDONE PREDICTS LATER TREATMENT RESPONSE IN PATIENTS WITH BIPOLAR DISORDER

*Eduard Vieta, M.D. Hospital Clinic, University of Barcelona, Villarroel 170,, Barcelona, Spain 08036, Elizabeth Pappadopulos, Ph.D., Francine Mandel Ph.D.*
**EDUCATIONAL OBJECTIVE:**
At the conclusion of this presentation, the participant should be able to describe the value of a partial treatment response at day 2 in predicting a later full response with ziprasidone in patients with mania.
**SUMMARY:**
Introduction: The extent to which early treatment response can

predict subsequent treatment outcome in patients with acute mania is not defined for ziprasidone.
Methods: Data were pooled from 2 similarly designed 3-week, randomized, double-blind, placebo-controlled trials of ziprasidone for the treatment of mania in patients with bipolar disorder.1,2 Ziprasidone was initiated at 80 mg/d and titrated by 40 mg/d starting on day 2 to a dosage of 40 to 80 mg/d, dosed twice daily with food. Odds ratios of achieving partial response (a change from baseline in the Mania Rating Scale [MRS] of = 25%) on day 2 were calculated. The percentage of day 2 partial responders achieving a full response (a change from baseline in the MRS of = 50%) at the last observation carried forward (LOCF) end point was determined. Analysis of covariance models compared least squares (LS) mean change from baseline to LOCF end point.
Results: On day 2, 70 of 254 (27.6%) ziprasidone-treated patients and 18 of 122 (14.8%) placebo-treated patients were partial responders. The odds ratio of achieving a partial response on day 2 was 2.20 for ziprasidone vs placebo. A partial response at day 2 correctly predicted a full response at the LOCF end point in 47 of 70 (67.1%) ziprasidone-treated patients and 10 of 18 (55.6%) of placebo-treated patients. At the LOCF end point, the LS mean change from baseline MRS score was greater in ziprasidone-treated (–12.7 ± 0.77) than in placebo-treated patients (–8.7 ± 1.41; p = 0.01). A significant difference in LS mean change from baseline MRS score was also observed between patients with a partial response at day 2 (–13.2 ± 1.46) and those without a partial response (–8.2 ± 0.65; p = 0.002). Conclusion: Partial response to treatment as at day 2 is predictive of a later full response. Early response to ziprasidone may allow clinicians to predict which patients with mania will benefit from extended treatment with ziprasidone. This study was supported by Pfizer Inc.

**REFERENCES:**


1. Keck PE Jr, Versiani M, Potkin S, West SA, Giller E, Ice K; Ziprasidone in Mania Study Group: Ziprasidone in the treat ment of acute bipolar mania: a three-week, placebo-con trolled, double-blind, randomized trial. Am J Psychiatry 2003; 160:741–748.
2. Potkin SG, Keck PE Jr, Segal S, Ice K, English P: Zipra sidone in acute bipolar mania: a 21-day randomized, double-blind, placebo-controlled replication trial. J Clin Psychophar macol 2005; 25:301–310.


**NR3-032**

## PREVALENCE OF SUBCLINICAL DEPRESSIVE SYMPTOMS IN CLINICALLY STABLE BIPOLAR PATIENTS


*Eduard Vieta, M.D. Hospital Clinic, University of Barcelona, Villarroel 170,, Barcelona, Spain 08036, Rosario Arce, M.D., Miguel Ángel Jiménez-Arriero, M.D., Silvia Cobaleda, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to know what is the prevalence of subclinical depressive symptoms in clinically stable Bipolar Patients.

**SUMMARY:**


Introduction: Bipolar Disorder (BD) is a serious mental condition with prevalence rates around 1.6%. Depressive symptoms have been described during clinical stability in BD. The goal of this study was to describe the prevalence of subclinical depressive symptoms in BD stable outpatients. Methods: Cross-sectional, prospective, 16-week study of a cohort of 761 stable BD patients under treatment, included by 94 investigators. Clinical stability was assessed with Clinical Global Impression Scale for BD (CGI-BP-M), depressive symptoms at baseline with Hamilton Depression Rate Scale (HAMD), and Montgomery-Asgberg Scale (MADRS) and Center for Epidemiologic Studies Depression Scale (CES-D), at baseline and at 16-week follow-up visit. Subclinical depressive symptoms (SDS) were identified by a HAMD cut off score of 7. Results: Subclinical depressive symptoms were detected in 17.4% patients (95% CI: 14.7-20.1). Similar prevalence was obtained when estimated by CES-D, 15.5% (95%CI: 12.8-18.2). The Kappa coefficient between both tests was 0.097, indicating an overall prevalence of 28% when both tools were considered. The SDS group scored in all HAMD items and was associated with shorter clinical stability periods, rapid cycling, worse treatment compliance and higher health services resources utilization and costs. Conclusion: The identification of subclinical symptoms is very important to improve the health condition, ensure treatment compliance, avoid disorder relapse and predict the medical requirements of bipolar patients. Better identification of subclinical depressive symptoms could be useful in implementing new therapeutic strategies. Moreover, the use of two types of evaluation tools (self and hetero-applied) to detect subclinical symptoms should be considered.



Acknoledgements: This study has been founded by GlaxoSmithKline, Spain.


**REFERENCES:**


1. Benazzi F: Prevalence and clinical correlates of residual de pressive symptoms in bipolar II disorder. Psychother Psycho som 2001; 70:232-8.
2. Fava, GA: Subclinical depressive symptoms in mood disor ders: pathophysiological and therapeutic implications. Psy chol Med 1999;29:47-61


**NR3-033**

## FUNCTIONAL STATUS IN REMISSION, RESPONSE AND NON-RESPONSE IN MAJOR DEPRESSIVE DISORDER (CN138-139 AND CN138-163)


*Edward Kim, M.D. Bristol-Myers Squibb Company 777 Scudders Mill Road, Plainsboro, NJ 08536-1615, Madhukar H Trivedi, M.D., Andrei Pikalov, M.D., Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to understand the relationship between symptomatic response and functional improvement in depression.

**SUMMARY:**


Objective and purpose: This post-hoc analysis sought to assess the effects of response status on functional status in patients treated for MDD. Methods: Data were pooled from two identical randomized controlled trials (CN138-139 and CN138-163). Patients experiencing a major depressive episode received open-label escitalopram, fluoxetine, paroxetine CR, sertraline or venlafaxine XR plus single-blind adjunctive placebo. Patients with an inadequate response after 8 weeks were randomized to a 6-week double-blind phase of either: adjunctive placebo or adjunctive aripiprazole (2–20 mg/d). The primary efficacy

endpoint, the Montgomery–Åsberg Depression Rating Scale, was used to define response status: partial response (=>50% reduction from baseline), remission (partial response plus total score <=10) or suboptimal response (all others). The Sheehan Disability Scale (SDS) was used to assess functional status in work/school, social life and family life/home responsibilities. The analysis pooled patients by response status regardless of treatment arm. Results: Patients randomized to adjunctive aripiprazole (n=350) had higher rates of remission ($p<0.001$) and response ($p<0.001$) than those receiving monotherapy (n=338). Regardless of treatment arm, remission was associated with a significantly greater SDS improvement than partial response ($p<0.001$), and response was associated with a significantly greater SDS improvement than suboptimal response ($p<0.001$). The same relationship was observed in each item of the SDS ($p<0.01$). Conclusion: Patients achieving full symptomatic remission experience greater functional improvements than those achieving only a partial response. Treatments with higher remission rates may therefore improve functional status in patients with depression.

**REFERENCES:**


1. Berman RM, Marcus RN, Swanink R et al: The efficacy and safety of aripiprazole as adjunctive therapy in major depres sive disorder: a multicenter, randomized, double-blind, place bo-controlled study. J Clin Psychiatry 2007;68:843-853.
2. Hirschfeld RM, Dunner DL, Keitner G et al: Does psychoso cial functioning improve independent of depressive symp toms? A comparison of nefazodone, psychotherapy, and their combination. Biol Psychiatry 2002;51:123-133.


**NR3-034**

## ACTH AND CORTISOL IN ANTIDEPRESSANT RESPONDERS AND NON-RESPONDERS WITH MAJOR DEPRESSIVE DISORDER


*E-Jin Park, M.D. #665, Bupyoungdong, Bupyounggu, Inchon-South Korea 403-720, Sang-Ick Han, M.D., Ph.D. (presenting), Yang-Whan Jeon, M.D.,Ph.D., E-Jin Park, M.D., Su-Jin Kim, M.D.*


**EDUCATIONAL OBJECTIVE:**

Depressed mood has been associated with increased hypothalamic-pituitary-adrenal (HPA) axis function. The present study assessed plasma ACTH and cortisol in antidepressant responders and non-responders with major depressive disorder (MDD) at baseline and 4 week follow up. We identified the relation between HPA axis and antidepressant response in patients with MDD.

**SUMMARY:**


16 patients with MDD (M=3, F=13) from outpatient clinic were recruited. To investigate depressive symptom, we administered Hamilton Depression Rating Scale (HDRS) and Montgomery Åsberg Depression Rating Scale (MADRS) for the subjects and plasma ACTH, cortisol were obtained before and after 4-week treatment with antidepressants. After 4-week treatment with antidepressant, responders who were decreased over 50% of HDRS total scores at baseline or < 10 of HDRS total scores at 4-week (8) and non-responders who were decrease under 50% of HDRS total scores at baseline or >= 10 of HDRS total scores at 4-week (8) were categorized. We calculated repeated measures ANOVA and used the "STATISTICA" program for statistical analyses. There was a significant effect of antidepressant treatment on the cortisol and ACTH levels ($F(1,13)=10.87$, $p<0.01$; $F(1,12)=13.10$, $p<0.05$). Cortisol and ACTH levels were decreased compared to pretreatment in antidepressant responder after 4-week treatment, but increased compared to pretreatment in non-responders. After treatment with antidepressant in patients with MDD, cortisol and ACTH levels were decreased only in responders. In this study, changes of HPA axis after antidepressant treatment in patients with MDD may be different according to the treatment response.


**REFERENCES:**


1. Deuschle M, Schweiger U, Weber B, Gotthardt U, Korner A, Schmider J, et al: Diurnal activity and pulsatility of the hy pothalamus-pituitary-adrenal system in male depressed patients and healthy controls. J Clin Endocrinol Metab 1997;82:234-238
2. Holsboer F:Neuroendocrinology of mood disorders. In Psy chopharmacology: The Fourth Generation of Progress, edited by Bloom FE, Kupfer DJ, New York, Raven Press, 1995, pp. 957-970


**NR3-035**

## EFFECT OF PRAMIPEXOLE ON QUALITY OF LIFE AND SYMPTOMS OF DEPRESSION IN PATIENTS WITH RESTLESS LEGS SYNDROME AND MOOD DISTURBANCE


*Eric Lainey, M.D. Medical Affairs Department CNS Therapeutic Area, 900 Ridgebury Road, Ridgefield, CT 06877, P. Montagna, M.D., M. Hornyak, M.D., J. Koester, Ph.D., E. Lainey, M.D., S. Albrecht, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to recognize some of the psychological effects associated with RLS and describe potential benefits of pramipexole for treating patients with RLS and mood disturbance.

**SUMMARY:**


Introduction: Although the essential diagnostic features of restless legs syndrome (RLS) include only the physical (sensorimotor) symptoms, the psychological difficulties associated with RLS are often as disabling. Mood disturbance is a common comorbidity in patients with RLS and may require treatment. We hypothesized that mood disturbance and RLS may be linked. Our goal was to test the ability of pramipexole, approved for RLS, to improve mood and quality of life (QOL) in patients with RLS-related mood disturbance.

Methods: Patients with moderate or severe RLS (score >15 on the International RLS study group scale [IRLS] and symptoms at least 2-3 times/week) and moderate to very severe mood disturbance (score of 2-4 on item 10 of the IRLS) at baseline were enrolled into a 12-week, double-blind study comparing pramipexole (flexibly dosed at 0.125-0.75 mg once daily) with placebo. Evaluations included the Beck Depression Inventory version II (BDI-II; score range: 0 – 63, lower = less depressed) and the Johns Hopkins RLS-QOL survey (score range: 0 – 100, higher = better QOL). Results: The intent-to-treat population included 203 patients on pramipexole and 199 patients on placebo. Baseline scores were similar for the pramipexole and placebo groups (BDI-II [mean±SD]: 14.3 ± 8.9 vs 13.6 ± 8.0; RLS-QOL [median]: 65.0 vs 65.0, respectively). At 12 weeks,

adjusted mean (±SE) BDI-II score was significantly improved from baseline for pramipexole versus placebo (-7.3 ± 0.4 vs -5.8 ± 0.5, P = .0199) as was median RLS-QOL score (20.0 vs 10.0, P < .0001). Improvements in BDI-II and RLS-QOL were significantly correlated (Spearman's r = -0.4573, P < .0001). Conclusion: Pramipexole improved self-assessed mood in RLS patients with mood disturbance and this improvement was correlated with improvement in QOL. Use of pramipexole for RLS may diminish the need for concomitant antidepressants in RLS patients with mild to moderate mood disturbance. Supported by Boehringer Ingelheim GmbH.

**REFERENCES:**

1. Winkelmann J, Prager M, Lieb R, et al. "Anxietas Tibiarum" Depression and anxiety disorders in patients with restless legs syndrome. J Neurol. 2005;252:67-71.
2. Aiken CB. Pramipexole in psychiatry: a systematic review of the literature. J Clin Psychiatry. 2007;68:1230-1236.

**NR3-036**

**ADRENAL AND THYROID AXIS ACTIVITY AND FT4/FT3 RATIO IN DEPRESSION**

*Fabrice Duval, M.D. Centre Hospitalier BP29, Rouffach, France 68250, Marie-Claude Mokrani, Ph.D., Fabrice Duval, M.D. (presenting), Felix Gonzalez Lopera, M.D., Than Son Diep, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand that thyroid axis abnormalities observed in depression might reflect a compensatory mechanism in order to counteract adrenal axis hyperactivity.

**SUMMARY:**

Background: The aim of this study was to investigate the relationships between chronobiological hypothalamic-pituitary-adrenal (HPA) and thyroid (HTP) axis activity and the (FT4)/triiodothyronine (FT3) ratio in depression. Methods: Circadian rhythm of cortisol and TSH and 8 AM FT4/FT3 were determined in 78 drug-free DSM-IV major depressed inpatients, and 25 healthy hospitalized controls. Results: Compared to controls, patients showed higher mesor and amplitude of cortisol ($p<0.001$ and $p<0.01$ respectively) and lower mesor and amplitude of TSH ($p<0.001$ and $p<0.01$ respectively). In patients, 8 AM FT4/FT3 ratios were negatively correlated with mesor ($r=-0.39$; $p<0.001$) and amplitude of TSH ($r=-0.30$; $p<0.01$), and positively correlated with mesor ($r=0.34$; $p<0.001$) and amplitude ($r=0.22$; $p<0.05$) of cortisol. Conclusions: Our results suggest that an increased HPA axis activity and a decreased TSH secretion characterize depression. Given the inhibitory effects of thyroid hormones on cortisol secretion, the positive relationship found between cortisol and FT4/FT3 ratio might reflect a compensatory mechanism in order to counteract HPA hyperactivity.

**REFERENCES:**

1. Duval F, Mokrani MC, Crocq MA, Jautz M, Bailey PE, Diep TS & Macher JP. Effect of antidepressant medication on morning and evening thyroid function tests during a major depressive episode. Arch Gen Psychiatry 1996;53:833-840.
2. Gary KA, Sevarino KA, Yarbrough GG, Prange AJ Jr, Win okur A. The thyrotropin-releasing hormone (TRH) hypothesis of homeostatic regulation: implications for TRH-based thera peutics. J Pharmacol Exp Ther. 2003;305:410-416.

**NR3-037**

**ANHEDONIA AND DOPAMINE FUNCTION IN DEPRESSION**

*Fabrice Duval, M.D. Centre Hospitalier BP29, Rouffach, France 68250, Marie-Claude Mokrani, Ph.D., Felix Gonzalez Lopera, M.D., Than Son Diep, M.D., Pedro Braccini Pereira, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand that anhedonia in depression might involve altered dopamine function.

**SUMMARY:**

Background: Anhedonia, or loss of pleasure, is widely recognized to occur in depression. Indirect observations suggest that anhedonia may be associated with altered dopamine (DA) function. The purpose of this study was to investigate the relationships between anhedonia and the DA activity at the hypothalamic-pituitary level in depressed patients. Method: 24-hour plasma PRL variation and PRL response to the DA agonist apomorphine (APO, 0.75 mg SC) were determined in 96 drug-free DSM-IV major depressed inpatients and 22 healthy hospitalized controls. Anhedonia was assessed with the Anhedonia-Asociality subscale of the Scale for the Assessment of Negative Symptoms (SANS-AA). Results: Both 24-hour PRL levels and APO-induced PRL suppression (expressed as percentage of change from baseline) in depressed patients did not differ from controls. However, SANS-AA scores were negatively correlated with 24-hour PRL secretion (mesor: $r=-0.32;n=96;p<0.002$, and amplitude: $r=-0.27;n=96;p<0.009$) and APO-induced PRL suppression ($r=-0.39;n=96;p=0.0001$). Conclusions: Our results suggest a link between anhedonia and DA activity in depression since 1) 24-hour PRL secretion may reflect the tuberoinfundibular DA (TIDA) tone (TIDA neurons inhibit the release of PRL via D2 receptors), and 2) APO-induced PRL suppression may reflect D2 receptor sensitivity of the lactotrophs.

**REFERENCES:**

1. Schmidt K, Nolte-Zenker B, Patzer J, Bauer M, Schmidt LG, Heinz A. Psychopathological correlates of reduced dopamine receptor sensitivity in depression, schizophrenia, and opiate and alcohol dependence. Pharmacopsychiatry. 2001;34:66-72.
2. Sarchiapone M, Carli V, Camardese G, Cuomo C, Di Giuda D, Calcagni ML, Focacci C, De Risio S. Dopamine trans porter binding in depressed patients with anhedonia. Psychia try Res. 2006;147:243-248.

**NR3-038**

**ASSOCIATION BETWEEN ANTIPSYCHOTIC COMBINATION THERAPY AND TREATMENT ADHERENCE AMONG INDIVIDUALS WITH BIPOLAR DISORDER**

*Frank D Gianfrancesco, Ph.D. 9833 Whetstone Drive, Montgomery Village, MD 20886, Martha Sajatovic, M.D., Eskinder Tafesse, Ph.D., Ruey-Hua Wang, M.S.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand the association between antipsychotic combination strategies and antipsychotic treatment adherence in patients with bipolar disorder experiencing predominantly

manic/mixed or depressive symptoms. Participants may choose to apply these findings to medication selection when treating patients with bipolar illness.

**SUMMARY:**
Introduction: Medication nonadherence in bipolar disorder is a major problem (1). Recent years have seen expanded use of atypical antipsychotics and an increasing tendency toward combination therapy (2). Objective: Investigate the effect on antipsychotic treatment adherence of combining quetiapine or risperidone with lithium, anticonvulsants, and/or antidepressants among individuals with predominantly manic/mixed or depressed symptoms of bipolar disorder. Methods: Claims data were used to identify individuals with bipolar disorder with predominantly manic/mixed or depressed symptoms. Treatment episodes with quetiapine or risperidone were identified. Multiple regression analysis was used to assess the impact of antipsychotic combination therapies on treatment adherence (intensity [MPR] and treatment duration). Results: 2,666 treatment episodes with quetiapine and 2,865 with risperidone were included. For manic/mixed individuals, combination therapies were associated with lower antipsychotic MPRs than the antipsychotic alone (P<0.05), MPR decreasing with the number of medications. Quetiapine showed a similar pattern among depressed individuals, while risperidone showed a weaker association. For both subgroups, antipsychotic combinations with anticonvulsants were associated with lower MPRs than combinations with lithium. Among manic/mixed individuals, combining quetiapine with an anticonvulsant and lithium was associated with shorter quetiapine treatment durations than quetiapine alone (P=0.05), whereas treatment duration was not significantly affected by combination therapy among patients taking risperidone. In the depressed subgroup, antipsychotic treatment durations were unrelated to combination therapy. Conclusions: Treatment adherence to quetiapine and risperidone may depend on whether these are prescribed as part of a combination strategy, the nature of the strategy, and the symptomatology of the patient. Supported by funding from AstraZeneca Pharmaceuticals LP.

**REFERENCES:**

1. Sajatovic M, Valenstein M, Blow FC, Ganoczy D, Ignacio RV: Treatment adherence with antipsychotic medications in bipolar disorder. Bipolar Disord 2006; 8(3):232-41.
2. Bowden CL: Making optimal use of combination pharma cotherapy in bipolar disorder. J Clin Psychiatry 2004; 65 Suppl 15:21-4.

**NR3-039**

## ADJUNCTIVE ARIPIPRAZOLE IMPROVES CORE DEPRESSIVE SYMPTOMS: A POOLED ANALYSIS OF MONTGOMERY ASBERG DEPRESSION RATING SCALE ITEMS (CN138-139/-163)

*Frederick W Reimherr, M.D. University of Utah, 50 North Medical Drive, Salt Lake City, UT 84132, Michael L Martin, M.D., Ying Qi, Ph.D., Quynh-Van Tran, Pharm.D., Andrei Pikalov, M.D., Ronald N Marcus, M.D., Berit X Carlson, Ph.D., Robert M Berman, M.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this presentation, the participant should be able to identify the depressive symptoms that improved as measured by the Montgomery Asberg Depression Rating Scale in patients with major depressive disorder with an inadequate response to standard antidepressant therapy.

**SUMMARY:**
Objective: To evaluate the efficacy of adjunctive aripiprazole to standard antidepressant therapy (ADT) in patients with major depression using the Montgomery Asberg Depression Rating Scale (MADRS) items. Methods: Data from two identical studies of aripiprazole augmentation, consisting of an 8-week prospective ADT treatment phase and a 6-week randomized controlled trial phase were pooled to evaluate efficacy (n=722). During the prospective phase, patients with major depression (HAM-D17 Total score =>18) received 8 weeks of therapy with escitalopram, fluoxetine, paroxetine CR, sertraline or venlafaxine XR, per investigator's choice and standard dosing guidelines plus single-blind, adjunctive placebo. Patients with an inadequate response (<50% reduction HAM-D17 Total, HAM-D17 =>14 and CGI-I =>3 at the end of the ADT phase) were randomized to adjunctive placebo or adjunctive aripiprazole (2-20 mg/day) for 6 weeks. Primary efficacy endpoint was mean change in MADRS Total score from end of the ADT phase to end of randomization. Pooled MADRS line item analysis was assessed by ANCOVA, with the end of prospective treatment as a covariate and double-blind treatment and study as main effects. Results: Adjunctive aripiprazole showed significant improvements versus adjunctive placebo in 8 of 10 items at endpoint (p<0.001). This improvement was observed from Week 1 (p<0.05) to endpoint for apparent sadness, reported sadness, lassitude, and inability to feel and from Week 2 (p<0.001) to endpoint for pessimistic thoughts and suicidal thoughts. The vegetative symptoms of reduced sleep and reduced appetite improved gradually over the six-week study and reached statistical significance at the end of the study (p<0.001). Conclusion: In patients with an inadequate response to standard ADTs, adjunctive aripiprazole improved core depressive symptoms early and maintained this improvement to endpoint. Supported by Bristol-Myers Squibb and Otsuka.

**REFERENCES:**

1. Berman RM, Marcus RN, Swanink R, et al: The Efficacy and Safety of Aripiprazole as Adjunctive Therapy in Major Depressive Disorder: A Multicenter, Randomized, Double-blind, Placebo-controlled Study. J Clin Psych 2007;68:843-885.
2. Pae C-U, Patkar AA, Jun T-Y, et al: Aripiprazole Augmenta tion for Treatment of Patients With Inadequate Antidepres sants Response. Depress Anxiety 2007;24(7):522-526.

**NR3-040**

## EFFECTS OF A DEPRESSION MGT PROGRAM ON PSYCHOSOCIAL AND FAMILY FUNCTIONING FOR PATIENTS WITH DIFFICULT-TO-TREAT DEPRESSION AND FAMILY MEMBER

*Gabor I Keitner, M.D. Rhode Island Hospital/Warren Alpert Medical School of Brown University, 593 Eddy Street Providence, RI 02903, Providence, RI 02903, Christine E. Ryan, Ph.D, Stephen Bishop, Ph.D, Anna Eng, Michaela Jamiel, Joan Kelley*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation the participant will understand how a disease management program including both patient and family members can be effective in helping them learn to manage difficult-to-treat depression.

**SUMMARY:**
Introduction: Disease management programs for depression focus on treatment compliance and symptom reduction. The goal of this pilot study was to test a short-term, low-cost, adjunctive intervention, the Management of Depression (MoD) Program, to see if patients with difficult-to-treat depression and their family members could learn to cope better with their illness and improve psychosocial functioning despite persisting symptoms of depression. Methods: Patients meeting *DSM-IV* criteria for major depressive disorder, dysthymia, or chronic depression and their family members participated in an open-label pilot study to test the efficacy of the MoD Program. The intervention lasted 16 weeks, followed by an 8-month maintenance phase. Pre- and post-intervention scores of quality of life, psychological well-being, family functioning, and severity of depression were used to gauge the effectiveness of the intervention. Results: 19 patients and their family members enrolled in the study and 14 completed the program. Patients reported significant improvement in psychological well-being, family functioning, and severity of depression (all p-values<.05) from baseline to week 8 and significant improvement from baseline to week 16 in quality of life, psychological well-being, family functioning, and depression scores (all p-values<.05). While patients' perception of their family's functioning remained in the unhealthy range, family members reported significant improvement in their family functioning with ratings falling into the nonclinical range by week 16. Conclusion: This depression management program was a useful adjunctive intervention to help depressed patients and their family members deal with the patient's persisting illness. Adding specific skills to manage the depression to both patients and families improved several areas of psychosocial/family functioning.

**REFERENCES:**

1. Mueser KT, Meyer PS, Penn DL, Clancy R, Clancy DM, Salyers MP: The illness management and recovery program: Rationale, development, and preliminary findings. Schizo phrenia Bulletin, 2006, 32 (S1):S32-S43.
2. Keitner GI, Ryan CE, Solomon DA: Realistic expectations and a disease management model doe depressed patients with persistent symptoms. J Clin Psychiatry, 2006, 67:1412-1421.

**NR3-041**

## PREVALENCE AND CORRELATES OF SUBSTANCE USE DISORDERS AMONG PARENTS WITH AND WITHOUT BIPOLAR DISORDER

*Benjamin I Goldstein, M.D. 3811 O'Hara Street, Pittsburgh, PA 15213, David A. Axelson, M.D., Mary Ehmann, M.A., Catherine Kalas, R.N, Kelly Monk, R.N., Boris Birmaher, M.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to: 1) recognize that children of parents with bipolar disorder may be at elevated genetic and environmental risk related to substance use disorders; and 2) identify that among parents with substance use disorders, those suffering from bipolar disorder may be at particularly high risk of dependence on alcohol and "hard" drugs.

**SUMMARY:**
Objective: Substance use disorders (SUD) are highly prevalent among adults with bipolar disorder (BP). Parental SUD may comprise a risk factor for adverse outcomes among their offspring. However, little is known specifically regarding SUD among adults with BP who are the primary caregivers for their children. We hypothesized that the prevalence of SUD would be increased among parents with versus without BP. Methods: Subjects were 448 adult parents (79% females; children =18 years old): 62 healthy controls (HC), 112 with non-BP psychiatric disorders (CC), and 274 who fulfilled lifetime criteria for BP-I (n = 174), BP-II (n = 84), or BP-NOS (n = 15) via the SCID-IV. Demographic and clinical variables were measured via intake clinical interview with the parent. Demographic variables significantly associated with lifetime SUD in univariate analyses were included in regression analyses. Results: SUD was significantly more prevalent among parents with BP (64%) versus CC parents (40%) and HC parents (21%)($p<0.001$). After controlling for between-group differences in race, marital status, and socio-economic status, parental BP was associated with markedly increased risk of SUD compared to CC (OR=2.5, 95% CI = 1.4-4.4) and HC parents (OR 6.3, 95% CI 3.6-11.0). BP parents with any SUD showed significantly ($p<0.05$) greater prevalence of alcohol dependence (59% vs. 31%), cocaine dependence (22% vs. 8%), polysubstance dependence (15% vs. 4%), and opioid dependence (7% vs 0%) versus non-BP parents with any SUD. Data regarding SUD among the second parent will also be presented. Conclusions: Two-thirds of parents with BP had comorbid SUD, and BP parents were more likely to have lifetime dependence on alcohol and "hard" drugs. Present findings extend previous findings to a sample composed entirely of parents who are primary caregivers for their children. Offspring of parents with BP may be exposed to elevated genetic and environmental risks related to parental SUD.

**REFERENCES:**

1. DelBello MP, Geller B. Review of studies of child and adolescent offspring of bipolar parents. Bipolar Disorders 2001; 3:325-334.
2. Wilens TE, Biederman J, Adamson J, Monuteaux M, Henin A, Sgambati S, Santry A, Faraone SV. Association of bipolar and substance use disorders in parents of adolescents with bipolar disorder. Biol Psychiatry 2007; 62:129-134.

**NR3-042**

## THE EFFECTS OF POSTTRAUMATIC STRESS DISORDER IN BIPOLAR DISORDER

*Gozde Yapici, M.D. Huzurevler Avenue 116 Street no:2 Isik Yapici Flor:6 number:11 Seyhan-Adana/ Turkey, 01234, Ahmet Kocabiyik, M.D., Nesrin Karamustafalioglu, M.D., Nesrin Tomruk, M.D., Nihat Alpay, M.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to demonstrate the prevalence of posttraumatic stress disorder in bipolar disorder and the effects of posttraumatic stress disorder in bipolar disorder.

**SUMMARY:**

Although there is growing awareness of the association between bipolar disorder and posttraumatic stress disorder (PTSD), not so much has been known about the prevalence of comorbidity of PTSD in bipolar disorder and the long-term effects of PTSD in bipolar disorder. 70 male and 70 female bipolar I or bipolar II disorder outpatients who were in remission at least 2 months (total score in Young Mania Rating Scale<7 and total score in Hamilton Depression Scale<9) were evaluated. Current PTSD was reported in %4.3 of bipolar patients. Life-time PTSD was reported in %20.7 of the bipolar patients in this study. The comorbidity rate of PTSD was more in bipolar II patients. In bipolar II patients who have comorbidity of PTSD, the first episode was generally hipomanic. There were no significant differences in gender, age of onset in bipolar disorder, prior suicide attempts, alcohol and drug abuse between patients with PTSD comorbidity and without PTSD comorbidity. The prevalence of PTSD in bipolar disorder was significantly more than the prevalence of PTSD in general population. Besides, bipolar patients with comorbidity of life-time PTSD have less pyschical functioning than patients without comorbidity. The poster and the author's travel expenses were totally funded by Bristol-Myers Squib.

**REFERENCES:**


1. Goldberg JF, Garno JL: Development of posttraumatic stress disorder in adult bipolar patients with histories of severe childhood abuse. Journal of Psychiatric Research 2005; 39:595-601.
2. Simon NM, Otto MW, Wisniewski SR, et al: Anxiety disorder comorbidity in bipolar disorder patients: Data from the first 500 participants in the Systematic Treatment Enhancement Program for Bipolar Disorder (STEP-BD). The American Journal of Psychiatry Washington 2004; vol. 161, iss. 12:2222-2230.


**NR3-043**

## RESPONSE AND REMISSION CHARACTERISTICS OF QUETIAPINE IN BIPOLAR DEPRESSION


*Guy Goodwin, D.Phil. 1800 Concrod Pike, Wilmington, DE 19850, Joseph R. Calabrese, M.D., Eduard Vieta, M.D., Ph.D., Hans Eriksson, Shane Raines*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, participants should be aware that quetiapine provides a rapid onset of clinically relevant improvement in patients experiencing depressive episodes of bipolar disorder.

**SUMMARY:**


Introduction: To explore the times of onset of response and remission in patients with bipolar depression who are taking quetiapine, with the aim of devising a guide for physicians on the likely course of clinically relevant improvements in depressive symptoms. Methods: Kaplan-Meier survival analyses were performed to characterize the times of onset of sustained response and remission, defined with Montgomery-Åsberg Depression Rating Scale (MADRS)-based criteria, in the BOLDER I and II trials (1,2). The combined BOLDER dataset included 1045 patients with bipolar depression treated with quetiapine 300 or 600 mg/d or placebo. Efficacy assessments were performed at baseline and weekly to study endpoint (Week 8). Results: Based on conventional measures of response and remission (MADRS total score reduction >/=50% and score </=12, respectively) and alternative criteria, quetiapine diverged from placebo at the first week and maintained divergence to endpoint. Rates of onset of response and remission were similar for both quetiapine doses. Estimated response rates at Day 15 (ie, MADRS score reduction >/=50%) were 23.6% with both quetiapine doses versus 9.3% with placebo, while remission rates (ie, MADRS score </=12) were 16.9% with both quetiapine doses versus 7.1% with placebo. In patients not experiencing an improvement (ie, MADRS score reduction >20%) in the first 2 weeks, subsequent rates of response were greater with quetiapine than placebo. Rates of onset of quetiapine-related improvement were similar in patients with high and low baseline depression severity, based on a MADRS cutoff score of 28. Conclusions: Quetiapine at 300 and 600 mg/d provides rapid onset of clinically relevant improvements in bipolar depression. The treatment-related divergence from placebo in response and remission rates is sustained throughout acute therapy. Quetiapine may be prescribed with benefit in the absence of early improvement. Supported by AstraZeneca Pharmaceuticals.


**REFERENCES:**


1. Calabrese JR, Keck PE, Jr., Macfadden W, et al. A random ized, double-blind, placebo-controlled trial of quetiapine in the treatment of bipolar I or II depression. Am J Psychia try. 2005;162:1351-1360.
2. Thase M, Macfadden W, Weisler RH, et al. Efficacy of que tiapine monotherapy in bipolar I and II depression: a double-blind, placebo-controlled study (the BOLDER II study). J Clin Psychopharmacol. 2006;26:600-609.


**NR3-044**

## LEVETIRACETAM VS. OTHER PSYCHOTROPICS: ASSOCIATION WITH CHANGE IN MANIC BEHAVIORS IN ELDERLY PATIENTS


*Helen H. Kyomen, M.D. 115 Mill Street, Belmont, MA 02478-9106,*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to Evaluate the usefulness of levetiracetam vs. other psychotropic agents (antipsychotics and anticonvulsants) to manage manic behaviors in elderly patients Assess the utility of levetiracetam in treating manic behaviors in elderly patients with bipolar illness or dementia of the Alzheimer's type

**SUMMARY:**


Objective: The objective of this preliminary study was to determine whether treatment of elderly patients with bipolar disorder or manic behaviors with levetiracetam was associated with a change in mania, compared to treatment with other psychotropics (primarily antipsychotics and anticonvulsants). Method: Retrospective chart review study of 104 patients with bipolar disorder or manic behaviors who presented for admission to a geropsychiatric acute care hospital unit between 1998-2000 and 2004-2006.

Results: In this study cohort of 104 subjects, 71 (68.3%) were women. The average age was 71.9 +/- 10.4 years old. Thirty-one (29.8%) were married and 73 (70.2%) were widowed, divorced, single or separated. One-hundred two (98.1%) were Americans of northern European ancestry. The average number of years

of schooling was 13.1 +/- 3.2 years. Fifty-one (49%) were on anticonvulsants at discharge, with 27 (26%) on levetiracetam. Sixty-seven (64.4%) were on antipsychotics, and two (1.9%) were on lithium.
Using Fisher's exact test to test for an association between the use of levetiracetam and presence of change in mania, a p-value < 0.001 was obtained, suggesting a statistically significant association between the use of levetiracetam and presence of change (decrease) in mania. There was not a statistically significant association between the use of "any anticonvulsants" (includes divalproex, carbamazepine, phenytoin, gabapentin, and lamotrigine) or "any antipsychotics" (includes 12 different typical and atypical antipsychotics), and change (decrease) in mania.
Conclusions: Preliminary findings suggest that levetiracetam treatment of patients diagnosed with bipolar illness or who have manic behaviors is statistically significantly associated with change in mania. In this cohort, the use of "any anticonvulsants" or "any antipsychotics" was not statistically significantly associated with change in mania.

**REFERENCES:**


1. Kyomen HH. The use of levetiracetam to decrease mania in elderly bipolar patients. American Journal of Geriatric Psy chiatry. 2006;14:11:985.
2. Kyomen HH, Whitfield TH, Baldessarini RJ. Levetiracetam for manic behavior in hospitalized geriatric patients with de mentia of the Alzheimer's type. The Journal of Clinical Psy chopharmacology. 2007; 27:408-410.


**NR3-045**

## ADJUNCTIVE ARIPIPRAZOLE IN BIPOLAR MANIA PARTIALLY NON-RESPONSIVE TO VALPROATE/ LITHIUM (CN138-134)


*Helene Peyro-Saint-Paul, M.D. Bristol-Myers Squibb Company3 rue Joseph Monier BP - 325, Rueil-Malmaison, France 92506, Caroline T'joen, M.S., Robert D. McQuade, Ph.D., Ronald N. Marcus, M.D., Randall Owen, M.D., Raymond Sanchez, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to understand the efficacy and safety of adjunctive aripiprazole in the treatment of patients with bipolar I mania partially non-responsive to lithium or valproate monotherapy.

**SUMMARY:**


Introduction: To evaluate the efficacy, safety and tolerability of adjunctive aripiprazole in bipolar I mania partially non-responsive to lithium/valproate monotherapy. Methods: This multicentre, randomized study included patients with bipolar I disorder (manic/mixed episode, with/without psychotic features). Partial non-responders with therapeutic lithium (0.6–1.0 mmol/l) or valproate (50–125 µg/ml) levels were randomized (2:1) to double-blind adjunctive aripiprazole (starting dose 15 mg/day, 15 or 30 mg/day after Day 7; n=253) or adjunctive placebo (n=131), with continued lithium/valproate therapy. Primary endpoint was mean change from baseline in YMRS Total Score at Week 6 (LOCF). Results: Adjunctive aripiprazole showed significant improvement from baseline in the YMRS Total score versus adjunctive placebo at Week 1 and all subsequent visits (all p<0.05) up to Week 6 (–13.3 vs. –10.7, p=0.002; LOCF). Significant improvements from baseline to Week 6 were observed with adjunctive aripiprazole vs. adjunctive placebo in CGI-BP-S (mania) score (–1.9 vs. –1.6; p=0.014; LOCF). At endpoint, adjunctive aripiprazole was associated with significantly greater remission and response rates than placebo. The proportion of patients with emergent depression was significantly lower with adjunctive aripiprazole than placebo (7.7% vs. 16.9%; p<0.01). Discontinuations due to AEs were higher with aripiprazole than placebo (9% vs. 5%). Akathisia was the most frequently reported EPS-related AE (aripiprazole 18.6%; placebo 5.4%). Similar percentages of patients had clinically relevant weight gain (aripiprazole vs. placebo: 3.0% vs. 3.9%; p=0.718, Week 6, LOCF). Conclusions: In patients with bipolar I disorder, who were partially non-responsive to lithium/valproate monotherapy, aripiprazole (initiated at 15 mg/day) was an effective and generally well tolerated treatment in combination with mood stabilisers.


Supported by Bristol-Myers Squibb and Otsuka.


**REFERENCES:**


1. Bowden CL: Making optimal use of combination pharmaco therapy in bipolar disorder. J Clin Psychiatry 2004;65(Suppl 15):21-24.
2. Sachs G, Sanchez R, Marcus R, Stock E, McQuade R, Carson W, Abou-Gharbia N, Impellizzeri C, Kaplita S, Rollin L, Iwamoto T: Aripiprazole in the treatment of acute manic or mixed episodes in patients with bipolar I disorder: a 3-week placebo-controlled study. J Psychopharmacol 2006;20:536-546


**NR3-046**

## SAFETY AND TOLERABILITY OF THE MAO INHIBITOR MARPLAN


*Herbert W Harris, M.D. 205 Westbury Drive, Chapel Hill, NC 27516,*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to describe factors that influence tolerability of Marplan and treat refractory patients with agent.

**SUMMARY:**


Objective: MAOIs remain among the most effective treatments for depression. Recent data from STAR*D suggests that successful treatment with MAOIs requires careful attention to issues of dosing and tolerability. The purpose of the study was to evaluate the safety and tolerability of the MAOI Marplan. We undertook a detailed analysis of AEs as a function of dose and duration of exposure.
Methods: Data were pooled from three sites at which randomized placebo-controlled trials of Marplan were conducted. Each study employed the following design: depressed outpatients between ages 18 and 65 with a minimum HAMD 21 score of 18 and atypical features were enrolled. Assessments included the HAMD, Covi Anxiety Scale, and the PGI. Patients were assigned randomly to receive Marplan or placebo for up to 6 weeks. During treatment the dose was raised to the maximum tolerated limit in all patients regardless of clinical response, and was reduced if intolerable side-effects occurred. Relationships between AEs, treatment discontinuation, dose, and duration of exposure were analyzed and presented on 171 patients.
Results: Marplan showed robust efficacy with a mean response

rate of 71.4% (32.3% for Placebo). Average daily dose was 44.7 mg, and mean duration of treatment was 33.7 days.
The maximum tolerated dose ranged from 10 to 80 mg. The frequency of most adverse events in patients receiving less than 50 mg was comparable to that observed in patients receiving 50-60 mg. Patients receiving greater than 60 mg experienced significantly more adverse events. Trends relating severity and nature of adverse events to overall exposure were noted only at the higher dose range.
Conclusions: Marplan is well tolerated across a range of doses that shows robust clinical efficacy. The high degree of individual variation in maximal tolerated dose and the wide diversity of dose-limiting AEs observed in these studies shows that successful treatment requires individualized optimization of dose.

**REFERENCES:**


1. McGrath, P. J., Stewart, J. W., Fava, M., Trivedi, M. H., Wis niewski, S. R., Nierenberg, A. A., et al. (2006). Tranylcypro mine versus venlafaxine plus mirtazapine following three failed antidepressant medication trials for depression: a STAR*D report. Am J Psychiatry, 163(9), 1531-1541
2. Davidson, J., Miller, R., Turnbull, C. D., Belyea, M., & Strickland, R. (1984). An evaluation of two doses of isocar boxazid in depression. J Affect Disord, 6(2), 201-207.


**NR3-047**

## NEWER HYPNOTICS, AMNESIA AND BEHAVIORAL DISTURBANCES: SYSTEMATIC ANALYSES OF THE WHO VIGIBASE


*P. Murali Doraiswamy, M.D. DUMC-3018, Department of Psychiatry Duke University Medical Center, Durham, NC 27710, Anders Viklund MSc Pharm, Ronald H. B. Meyboom, MD, PhD*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to; 1)Understand the literature on the links between amnesia and benzodiazepines; 2) Understand the emerging links between amnesia and nonbenzodiazepine hypnotics; and 3) Know the strengths and limits of post-marketing databases to study adverse effects

**SUMMARY:**


Introduction: Newer hypnotics (such as zopiclone, zaleplon and zolpidem) have largely replaced benzodiazepines for treating insomnia. Recent case reports have renewed interest in the association between newer hypnotics and the occurrence of sudden abnormal behavioural adverse events together with amnesia for the event. Examples are of a patient who woke up with a paintbrush in her hand after painting the front-door while asleep, amnesic nightly emptying of the refrigerator, and even car driving while asleep.

Methods: Vigibase is the pharmacovigilance database maintained by the World Health Organisation in collaboration with 80 countries around the world and currently contains over 3.7 million reports. We systematically analyzed Vigibase through March 2007 to compute measures of disproportional reporting (termed the Information Component or IC) for 4 nonbenzodiazepine and 5 benzodiazepine hypnotics. The IC scores are computed relative to all other drug adverse event associations.

Results: Zolpidem (N=661, IC=4.4 with lower 95% confidence interval IC025=4.3) and triazolam (n=598, IC=4.8 and IC025=4.7) were comparable in terms of numbers of reports as well as their relatively higher reporting ratios for amnesia. Zopiclone (IC=3.1 and IC025=2.9) also had an elevated relative reporting ratio. In the majority of reports, the hypnotic was the sole suspected drug. 46% of zolpidem reports, 28% of zopiclone reports, 50% of zaleplon reports, and 43% of triazolam reports were accompanied by other behavioural problems.

Conclusions

Our findings suggest that amnesia reporting with newer nonbenzodizepine hypnotics appears similar to those previously reported for short-acting, rapid onset benzodiazepine hypnotics. However, case reports are heterogeneous, varying as to source, documentation quality and the relationship between the drug and event under review, and secondary review may be difficult. But the striking amnesia and other behavioral effects are difficult to explain, in most of the case reports, other than by a potential causal relationship.



Acknowledgement

Supported by the WHO Collaborating Center for International Drug Monitoring


**REFERENCES:**


1. Meyboom RHB. The triazolam experience in 1979 in the Netherlands. A problem of signal generation and verification. In: Strom BL, Velo G (Edss). Drug Epidemiology and Post-Marketing Surveillance. Plenum Press, New York, 1992.
2. ADRAC. Zolpidem and bizarre sleep related effects. Aust Adv Drug React Bull 2007;26(1).


**NR3-048**

## ATR-GUIDED ANTIDEPRESSANT SELECTION MAY IMPROVE RESPONSE AND REMISSION RATES: INSIGHTS FROM THE BRITE-MD TRIAL


*Ian A Cook, M.D. UCLA Depression Research Program, UCLA Semel Institute, Los Angeles, CA 90024-1759, Andrew F. Leuchter, M.D., Ian A. Cook, M.D., William S. Gilmer, M.D., Scott D. Greenwald, Ph.D., Robert H. Howland, M.D., Madhukar H. Trivedi, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant will recognize that: 1) the BRITE-MD study (www.BRITE-MD.com) assessed the accuracy of an frontal quantitative (fqEEG) biomarker (ATR) in predicting clinical response to escitalopram treatment; 2) EEG biomarkers may predict within the first week of treatment which patients will respond or remit with escitalopram and which may benefit from alternate regimens.

**SUMMARY:**


OBJECTIVE: The BRITE-MD study assessed the accuracy of a frontal quantitative EEG (fqEEG) biomarker in predicting treatment outcome with escitalopram (ESC). This analysis compares response and remission rates between subjects receiving treatment consistent with the biomarker prediction vs. other subjects.

METHOD: Adults with DSM-IV-defined MDD began treatment with ESC (10 mg/day) and after 1 week were randomized either to: 1) continue ESC (10 mg/d; n=73) for 7 more weeks; 2) switch to bupropion XL (BUP; 300 mg/d; n=73) for 7 weeks; or, 3) augment with bupropion XL (AUG; 300 mg/d;

n=74). Symptom severity was assessed with the Hamilton Depression Rating Scale (HAM-D-17) and 4-channel fqEEG was recorded. Outcomes were response (>=50% decrease in HAM-D) and remission (final HAM-D<=7). A composite EEG index (Antidepressant Treatment Response , ATR rev 4.1) was developed to predict clinical response using fqEEG from baseline to week 1.
RESULTS: 220 subjects (age 43 ± 13; 62% female) were evaluated after excluding protocol violators and subjects with EEG artifact. For subjects remaining on ESC, the response rate was significantly higher in ATR-predicted responders than for ATR-predicted non-responders (67% vs. 28%, p=0.001). Similarly, for subjects remaining on ESC, the remission rate was significantly higher in the ATR-predicted remitters than the ATR-predicted non-remitters (50% vs. 21%, p=0.010.) ATR-predicted non-responders who were randomized to BUP had a significantly higher response rate compared to those remaining on ESC (53% vs. 28%, p=0.024). ATR-predicted non-responders who were augmented had a modestly higher response rate compared to those remaining on ESC treatment (33% vs. 28%, p=ns)
CONCLUSIONS: The use of a fqEEG biomarker at week 1 of ESC treatment may help guide antidepressant selection. Subjects whose ATR predicts response or remission do better when continued on ESC, while subjects whose ATR predicts poorer outcomes may benefit from alternate regimens.

**REFERENCES:**


1. Leuchter AF, Cook IA, Gilmer WS, Greenwald SD, Howland RH, Trivedi MH. Can EEG-guided Antidepressant Selec tion Improve Response Rates? Insights from the BRITE-MD Trial. Poster presented at the New Research session, Ameri can Psychiatric Association Annual Meeting. San Diego, CA. May 21, 2007
2. Cook IA, Leuchter AF, Morgan M, Witte E, Stubbeman WF, Abrams M, Rosenberg S, Uijtdehaage SH. Early changes in prefrontal activity characterize clinical responders to antide pressants. Neuropsychopharmacology 27:120-131, 2002


**NR3-049**

## CORRELATION BETWEEN LOUDNESS DEPENDENCE OF AUDITORY EVOKED POTENTIALS (LDAEP) AND THE SOMATIC DOMAIN OF HAMD IN MAJOR DEPRESSIVE DISORDERS


*I-Hui Lee, M.D. 615 N. Wolfe Street, Baltimore, MD 21205,, columbiaMD 21044, Li-Ching Lee, Ph.D., Yen Kuang Yang, M.D., Po See Chen, M.D., Tzung Lieh Yeh, M.D., Ru-Band Lu, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the relationship between somatic symptoms in MDD and central serotonin activity.

**SUMMARY:**


Introduction Major depressive disorders (MDD) are heterogeneous and involve multiple neurotransmitters. The Loudness Dependence of Auditory Evoked Potentials (LDAEP) is a non-invasive standardized EEG measure that assesses N1/P2 amplitude values evoked by increasing loudness levels. Challenge tests and neuroimaging studies suggest strong LDAEP implies low serotonin activity. In this study, we examined the association between LDAEP and depressive symptoms to identify clinical manifestations as an index of serotonin deficiency.
Methods: Thirty participants (male/female: 9/21, mean age: 40.69 years) with MDD were recruited. Tones of 5 intensities (60, 70, 80, 90, 100 dB) were presented while participants' neural responses were recorded by EEG with a 32 electrode cap. LDAEP data were collected before prescribing psychopharmacological treatment at their first psychiatric clinic visit at this hospital. The grand average amplitudes of the N1/P2 complex recorded at Cz and Pz sorting by intensity were obtained to calculate the slope of loudness dependence (LD) after epoch and artifact rejection. The slopes of loudness dependence at Cz and Pz were treated as continuous variables as well as dichotomous using the 3rd quartile of controls as the cut-point.
Results: The mean score of HAMD17 (Hamilton Depression rating scale, 17 items) was 19.4. Bivariate results indicated a positive association between HAMD total score and LD at Pz with p values all <.05. The association between HAMD-somatic and LD is much stronger (p=.003). Results from the multivariate linear regression analysis adjusting for age and sex suggest that high LD is associated with higher HAMD total score (p=.016), and the significance is even greater between LD and the HAMD-somatic domain (p=.001).
Conclusion: The findings imply that somatic symptoms in MDD have a biological basis that is possibly related to central serotonin activity. The clinical implications could be in medication choice and response assess


**REFERENCES:**


1. Hegerl U, Gallinat J, Juckel G: Event-related potentials. Do they reflect central serotonergic neurotransmission and do they predict clinical response to serotonin agonists? J. Affect Disorder. 2001; 62:93-100.
2. Mulert C, Jager L, Propp S, et al: Sound level dependence of the primary auditory cortex: simultaneous measurement with 61-channel EEG and fMRI. NeuroImage 2005; 28:49-58.


**NR3-050**

## VAGUS NERVE STIMULATION: TREATMENT-RESISTANT DEPRESSION REGISTRY


*Ingela Danielssson, M.D. 100 Cyberonics Blvd, Houston, TX 77058,*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to describe the baseline demographics, clinical characteristics, and outcomes of patients with treatment-resistant depression (TRD). Registry patients are enrolled from 42 centers across the United States; some are receiving vagus nerve stimulation and treatment as usual (TAU), and others are receiving only TAU.

**SUMMARY:**


Introduction: Although treatment-resistant depression (TRD) consumes a sizable portion of health-care resources,1 the clinical characteristics and long-term clinical course of patients with TRD is not well understood. Vagus nerve stimulation (VNS) has shown long-term effectiveness for TRD.2 The manufacturer of the VNS device has established a registry of TRD patients in a community setting with some patients receiving VNS and treatment as usual (TAU), and others receiving only TAU. Methods: Clinicians at the 42 centers

currently enrolled in the registry determine whether a patient with TRD will receive VNS and TAU or only TAU before the patient is enrolled in the registry. Patient demographics and clinical characteristics are collected at baseline and quarterly intervals. The patient completes the Quick Inventory of Depressive Symptomatology-Self Rated (QIDS-SR16), the treating clinician completes the Clinical Global Impressions Global Improvement (CGI-I), and a central rating group telephones the patient to complete the Montgomery-Åsberg Depression Rating Scale (MADRS). Results: Of the 489 patients currently enrolled, 344 are in the VNS group, and 145 are in the non-VNS group. From the December 30, 2007, data lock, patient demographics, clinical characteristics, and quarterly assessments (baseline, 3-month, 6-month, 9-month, and 12-month results) will be presented. Conclusion: The TRD Registry offers clinicians the opportunity to track the clinical course of patients with TRD and achieve a better understanding of this population. Funded with support from Cyberonics.

**REFERENCES:**

1. Russell JM, Hawkins K, Ozminkowski RJ, Orsini L, Crown WH, Kennedy S, Finkelstein S, Berndt E, Rush AJ. The cost consequences of treatment-resistant depression. J Clin Psy chiatry 2004; 65:341-347.
2. Sackeim HA, Brannan SK, Rush AJ, George MS, Marangell LB, Allen J. Durability of antidepressant response to vagus nerve stimulation (VNS). Int J Neuropsychopharmacol. 2007; 10:817-26.

**NR3-051**

## CONVERGENT VALIDITY OF THE BECK DEPRESSION INVENTORY, 2ND EDITION (BDI-II) AND THE NEUROLOGICAL DISORDERS DEPRESSION INVENTORY IN EPILEPSY (NDDI-E)

*James M Miller, Pharm.D. GlaxoSmithKline Research and Development5 Moore Drive, Research Triangle ParkNC 27709, Frank G. Gilliam, M.D., Bruce P. Hermann, Ph.D., Andres M. Kanner, M.D., Kimford J. Meador, M.D., Anne E. Hammer, B.S., John J. Barry, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the utility of the NDDI-E as a valid and reliable self-reported screening instrument to determine the level of depression in people with epilepsy.

**SUMMARY:**

Objective: To evaluate the convergent validity between the Beck Depression Inventory (BDI-II) and the Neurological Disorders Depression Inventory in Epilepsy (NDDI-E), an epilepsy-specific self-report depression screening questionnaire, following antiepileptic drug therapy.
Background: The BDI-II is a self-report measure of depression in which scores >/= 16 indicate mild to moderate severity. The 6-item NDDI-E has been validated against the Structured Clinical Interview for DSM-IV Axis I Disorders (SCID 1-research version) with scores of >/= 15 indicating a likely major depressive episode. It is expected that these psychometric tools measure comparable levels of depression and would respond to effective treatment in a similar fashion.
Methods: One hundred fifty-eight patients with epilepsy participated in a 36-week open-label trial evaluating mood changes after lamotrigine was added to a stable antiepileptic drug regimen. Mood changes were measured by self-report scores on the BDI-II and NDDI-E. Observed scores are reported.
Results: A total of 96 patients completed the 19 week adjunctive phase and 66 patients completed monotherapy. Mean BDI-II and NDDI-E scores were 17.4 and 13.5 respectively at baseline; 11.6 and 12.0 at Week 19; 7.7 and 10.5 at Week 36. The effect size for the BDI-II was 0.58 at Week 19 and 1.06 at Week 36. Effect sizes for the NDDI-E were 0.41 and 0.83 in the same period. Between baseline and Week 19, the mean decrease in BDI-II score was 7.3 ($p<0.0001$) and the mean decrease in NDDI-E score was 2.0 ($p<0.0001$); mean decreases between baseline and Week 36 for each instrument were 12.4 ($p<0.0001$) and 4.0 ($p<0.0001$). Spearman Correlation was 0.59 ($p<0.0001$) for the adjunctive treatment period and 0.66 ($p<0.0001$) for monotherapy.
Conclusions: This study provides evidence for convergent validity between the BDI-II and the NDDI-E.
Funded by a research grant from GlaxoSmithKline

**REFERENCES:**

1. Gilliam FG, Barry JJ, Hermann BP, et al. Rapid detection of major depression in epilepsy: a multicentre study. Lancet Neurology 2006;5:399-405
2. Fakhoury TA, Barry JJ, Miller JM, et al. Lamotrigine in patients with epilepsy and comorbid depressive symptoms. Epilepsy and Behavior 2007;10:155-62

**NR3-052**

## SURVEY OF 2007 APA ATTENDEES: TREATMENT OF DEPRESSION

*Jason Olin, Ph.D. Novartis Pharmaceuticals Corp.USCDMA Neuroscience One Health Plaza, Bldg 403 /316, East Hanover, NJ 07936, Ibrahim Gunay, M.D.; Anke Post, M.D., Ph.D.; Christian Honer, M.S.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should have an enhanced appreciation for the complexities involved in the diagnosis and treatment of patients suffering from major depressive disorder.

**SUMMARY:**

Background: Major Depressive Disorder (MDD) is a frequent, serious and disabling condition which is often under-recognized and under-treated. As a major cause of disability in the US, reducing the unmet needs for individuals with MDD is critical. A survey was administered at the 2007 American Psychiatric Association (APA) meeting to help identify healthcare professional (HCP) views of unmet needs in depression treatment. Methods: Six questions were administered via 2 touch-screen kiosks at the exhibit booth sponsored by Novartis Pharmaceuticals Corporation. The questions assessed views about depression treatment, focusing on the limitations of current medications to meet treatment goals. Respondents were registered APA attendees; badges were scanned to provide geographic data. Results: Of the 13,208 attendees, 1066, from 60 different countries, completed the survey; 51% were from the US. The key symptoms triggering a depression diagnosis were depressed mood, diminished interest, feelings of worthlessness, fatigue and insomnia. Long-term prevention of relapse was cited

as the primary treatment goal by 78% of US respondents. About one third of US respondents reported that current treatments were somewhat effective in meeting their primary treatment goal. Sexual dysfunction, weight gain and inadequate efficacy were cited as the top three reasons preventing achievement of treatment goals. Over 40% of respondents reported that switching due to tolerability and efficacy affected 20% or more of their patients. Conclusions: Respondents identified the key symptoms of depression. This survey clearly indicated that long-term relapse was a greater focus of treatment than acute efficacy. Yet, a substantial number of patients failed to achieve the primary treatment goal, with sexual dysfunction, weight gain and inadequate efficacy being top obstacles. Switching is frequent and widespread. This study was funded by Novartis.

**REFERENCES:**


1. The Neurology of Depression: Unmet Needs (CME) - No vember 21, 2002; David Gutman BS and Charles Nemeroff MD, PhD - www.medscape.com/viewprogram/2123_pnt.
2. Pharmacology and Therapeutics 2007 Jan; 113 (1): 134-53. Epub 2006, Sept 27 - Rosenweig-Lipson S, et al.


**NR3-053**

## OLANZAPINE MAINTENANCE TREATMENT FOR BIPOLAR I DISORDER: NUMBERS NEEDED TO TREAT OR HARM


*Jennie Jacobson, Ph.D. Lilly Corporate Center, Indianapolis IN 46285, Doron Sagman, M.D., Virginia Sutton, Ph.D., Jamie Karagianis, M.D., Elisabeth Degenhardt, R.N., Jennifer Sniadecki, M.S., Mauricio Tohen, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to have a conceptual understanding of NNT and NNH analysis, and be able to discuss results associated with olanzapine in maintenance treatment for bipolar disorder.

**SUMMARY:**


Objective: Determine the number needed to treat (NNT) and number needed to harm (NNH) during treatment with olanzapine (OLZ) in maintenance treatment for bipolar disorder. Method: NNT and NNH for OLZ were assessed using data from 3 double-blind maintenance trials for bipolar I disorder. NNT/NNH indicates how many patients must be treated, on average, for 1 additional patient to achieve a defined beneficial/adverse outcome. NNT was determined for prevention of relapse to any mood episode, and for prevention of all cause treatment discontinuation. NNH was determined for gain of at least 7% of baseline weight. Patients received maintenance therapy with OLZ (N=225) or placebo (PLC) (N=136) for up to one year (Study 1) or with OLZ (N=217) or lithium (LI) (N=214) for up to one year (Study 2) or with OLZ plus mood stabilizers (MS: LI or valproate) (N=171) or PLC plus MS (N=64) for up to 18 months (Study 3). Results: In Studies 1, 2, and 3 respectively, NNT (95% confidence interval) for prevention of relapse to any mood episode was 4 (3, 5), 9 (5, 51) and 5 (3, 13). Prevention of all cause study discontinuation should reflect a treatment's combined efficacy and tolerability. In Studies 1, 2, and 3 respectively, NNT for prevention of all cause treatment discontinuation was 8 (5, 16), 8 (5, 22) and 7 (4, 27). In Studies 1, 2, and 3 respectively, NNH (95% confidence interval) for gaining 7% or more of baseline weight was -8 (-12, -6), -6 (-8, -4) and -4 (-7, -3). Conclusion: In maintenance trials of 12 to 18 months, OLZ demonstrates a favorable NNT of 4 to 9 for prevention of relapse to any mood episode and NNT of 7 to 8 for prevention of all cause treatment discontinuation; however less favorable NNHs of -4 to -8 were demonstrated for treatment emergent clinically significant weight gain. Clinicians should consider these measures and other potential risks and benefits in choosing treatments for patients with bipolar disorder. Funded by Eli Lilly and Company.


**REFERENCES:**


1. Halvorsen PA, Selmer R, Kristiansen IS. Different ways to describe the benefits of risk-reducing treatments: a random ized trial. Ann Intern Med 2007 Jun 19;146(12):848-56.
2. Laupacis A, Sackett DL, Roberts RS. An assessment of clini cally useful measures of the consequences of treatment. N.Engl.J Med 1988 Jun 30;318(26):1728-33.


**NR3-054**

## SWITCHING OF ANTIDEPRESSANT MEDICATIONS IN THE COMMUNITY MANAGEMENT OF DEPRESSIVE DISORDERS


*Jennifer Kim, Pharm.D. 1800 Concord Pike, Wilmington, DE 19850, Mark Olfson, M.D., MPH, Steven Marcuss, Ph.D., Mariam Hassan, Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to identify basic patient and clinical characteristics associated with antidepressant switching in the community treatment of depressed adults.

**SUMMARY:**


Introduction: Switching antidepressants is widely recommended after failure of an initial antidepressant treatment. Little is known, however, about the frequency of switching, patterns of switching within and between antidepressant classes, and clinical/demographic risk factors of antidepressant switching in the community treatment of depression. Methods: Service and pharmacy claims data from Pharmetrics (2000-2006) were analyzed for privately insured adults (18 to 75 y) during the 90 days following initiation of an antidepressant for an episode of depression. Selected patients had been started on one antidepressant and received continuous treatment with one or more different antidepressants for at least 72 of the first 90 days following the initial prescription. Results: Approximately 12.4% (n=6183) of selected patients (n=50,001) switched antidepressants during the first 90 days of treatment. The most common switch (60.6%) was from one SSRI to another. The rate of antidepressant switching was slightly higher among younger (18-35 y;13.2%) than older (56-75 y;11.2%) patients (P<0.0001), males (13.0%) than females (12.1%;P<0.006), and patients with major depressive disorder (14.4%) than with dysthymia or depression, NOS (11.3%;P<0.0001). Switching was also more common in patients who had recently received psychiatric emergency services (18.2%) than in those who had not (12.3%) (P<0.0001), patients initiating a TCA (35.8%) than an SSRI (12.1%) or an SNRI (11.1%;P<0.0001), and patients treated by a psychiatrist (13.5%) than patients treated by a primary care physician (11.8%;P<0.0001). Conclusions: Approximately 1 in 8 adult outpatients with depression who initiate antidepressant therapy and continue treatment for at

least 3 months, switch antidepressants during this period. The likelihood of switching appears to be a function of initial antidepressant selection, patient clinical characteristics, and demographic factors. Supported by AstraZeneca Pharmaceuticals.

**REFERENCES:**


1. Ruhe HG, Huyser J, Swinkels JA, Schene AH. Switching an tidepressants after a first selective serotonin reuptake inhibitor in major depressive disorder: a systematic review. J Clin Psychiatry. 2006;67:1836-1855.
2. Friedman SJ, Fava M, Kienke AS, et al. Partial response, nonresponse, and relapse with selective serotonin reuptake inhibitors in major depression; a survey of current "next-step" practices. J Clin Psychiatry. 2000;61:403-408.


**NR3-055**

## AMYGDALA FUNCTION IN MAJOR DEPRESSIVE DISORDER: AN FMRI STUDY


*Jennifer D Townsend, B.A. UCLA Brain Mapping Center660 Charles Young Dr, Los Angeles, CA 90095, Lori Altshuler, M.D., Mark Cohen, Ph.D, Susan Bookheimer, Ph.D*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand some of the neurofunctional differences between unipolar depressed and control subjects during an emotion regulation task, as well as identify differences between anxious and non-anxious depressed sujects.

**SUMMARY:**


Studies have demonstrated amygdala dysfunction in subjects with MDD. We sought to evaluate amygdala reactivity using fMRI in a paradigm that selectively activates limbic structures. 15 unmedicated depressed men and women (Hamilton Depression > 18) and 15 age and gender matched control subjects participated. Subjects underwent fMRI scanning on a Siemens Allegra 3T scanner. BOLD functional images were acquired while subjects performed a task shown to activate the amygdala in normal subjects. The tasks consisted of two conditions—requiring either the matching (MvR) or identification (IdvR) of emotional faces. We analyzed the results of activation patterns between groups. Signal changes were specifically evaluated in our region of interest (ROI), the amygdala. Results revealed activation in the amygdala and BA47, a frontal region involved in emotion regulation, within depressed and control groups. There were no significant between-group differences in MvR. Results from amygdala ROI analysis showed no differences in percent activation during MvR, but significant differences (Control > Depressed) were found in IdvR. Comparing anxious (n=6) and nonanxious (n=9) depressed subjects in MvR, we found no differences in amygdala activation, however, in MvR, regions like the insula and BA47 were differentially activated in anxious vs. non-anxious depressed subjects. Our data support more subtle differences in amygdala functioning in depressed subjects than previous reported. Most prior studies involved medicated patients, which may explain such differences. Anxiety symptoms produced differences suggesting a decrease in regulatory control over somatic symptoms in these patients.


**REFERENCES:**


1. Sheline, Y.I., Barch, D.M., Donnelly, J.M., Ollinger, J.M., Synder A.Z., Mintun, M.A. (2001). Increased amygdala response to masked emotional faces in depressed subjects resolves with antidepressant treatment: an fMRI study. Bio logical Psychiatry, 50, 651-8.
2. Hariri, A.R., Bookheimer, S.Y., Mazziotat, J.C. (2000). Mod ulating emotional responses: effects of a neocortical network on the limbic system. Neuroreport, 11, 43-8.


**NR3-056**

## SOCIAL FUNCTIONING CHANGES IN A RANDOMIZED, PLACEBO-CONTROLLED TRIAL OF MDD TREATMENT WITH HYPERICUM PERFORATUM AND SERTRALINE


*John W Denninger, M.D. Depression Clinical and Research Program Massachusetts General Hospital, 50 Staniford St., Suite 401, Boston, MA 02114-2541, Adrienne O. van Nieuwenhuizen, B.A., David Mischoulon, M.D., Ph.D., Christine M. Crawford, B.A., Alisabet Clain, M.S., Lee Baer, Ph.D., Maurizio Fava, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to describe; 1) measures used to assess social functioning in major depressive disorder and 2) the relationship of social functioning and depression symptoms.

**SUMMARY:**


Objective: Major depressive disorder (MDD) profoundly affects social functioning—the ability to effectively fill work, social and family roles. We sought to compare changes in social functioning and depression symptoms in a double-blind, randomized, placebo-controlled trial comparing a standardized extract of Hypericum perforatum to sertraline.
Method: The methods for the trial have been previously described (JAMA 2002; 287:1807); our analysis focused on Sheehan Disability Scale (SDS) scores as a measure of social functioning. Adult outpatients (n=340) diagnosed with MDD and with total baseline scores on the 17-item Hamilton Depression Scale (HAM-D) of 20 or greater were randomized to receive either hypericum, sertraline, or placebo for 8 weeks. Responders (50% or greater decrease in HAM-D score) at week 8 could continue blinded treatment for another 18 weeks. The SDS was administered at baseline, week 8 and week 26 (or continuation phase exit). Results: At baseline, HAM-D and SDS scores across the three treatment conditions were modestly correlated, r=.32, n=336, p<.001. In the acute phase, the correlation between the change in HAM-D and SDS scores was similarly strong for the three treatment conditions combined (r=.50, n=240, p<.001) as it was for each condition individually (hypericum, r=.55, n=80, p<.001; sertraline, r=.47, n=79, p<.001; placebo, r=.50, n=81, p<.001). Responders across all treatment conditions in the acute phase had significantly greater mean change in SDS score than non-responders (responders: 7.9±7.8, non-responders: 0.8±6.8, t=7.4, df=237, p<.001). Among subjects who entered the continuation phase and completed the SDS at continuation phase exit (n=103), total SDS score was 15.3±7.6 at baseline, 7.2±6.5 at week 8, and 6.8±7.0 at continuation phase exit (week 10-26). Conclusions: As expected, responders had significantly greater improvements in social functioning than non-responders.


**REFERENCES:**


1. Hypericum Depression Trial Study Group: Effect of Hyperi

cum perforatum (St John's wort) in major depressive disor der: a randomized controlled trial. JAMA 2002; 287:1807-1814.
2. Weissman MM: Social functioning and the treatment of de pression. J Clin Psychiatry 2000; 61 Suppl 1:33-38.

**NR3-057**

## COMT VARIANTS ASSOCIATED WITH DULOXETINE RESPONSE: A CANDIDATE GENE ASSOCIATION ANALYSIS OF A RANDOMIZED CLINICAL TREATMENT TRIAL FOR MAJOR DEPRESSION

*John P. Houston, M.D. Lilly Corporate Center, Indianapolis IN 46285, Bonnie Fijal, Ph.D., Roy H. Perlis, M.D., Virginia K. Sutton, Ph.D., David H. Adams, Ph.D., Madhukar H. Trivedi, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to have a better understanding of possible associations of genetic variants in COMT with duloxetine response in the treatment of MDD.

**SUMMARY:**

Objective: To evaluate variations in genes implicated in antidepressant mechanism of action for association with response to duloxetine treatment in major depressive disorder (MDD). Methods: We assessed response over 6 weeks in 250 duloxetine-treated Caucasian patients in a randomized, double-blind study of patients with MDD. Single nucleotide polymorphisms (SNPs) were genotyped in a set of 19 candidate genes selected based on evidence for involvement in antidepressant mechanism of action. Primary analysis examined baseline-to-endpoint reduction in the 17-item Hamilton Depression Rating Scale (HAM-D) total score, using a set-based test for association for each gene. Planned follow-up analyses examined individual SNPs within any significant gene from the set-based test for association with reduction in HAM-D and Inventory of Depressive Symptomatology-Clinician Rated (IDS-C-30. Results: In a set-based test, after correction for multiple comparisons using permutation, only COMT was associated with differential change in HAM-D (p=.018). Peak association was detected with rs165599 (p=.006), which accounted for approximately 3% of variance in HAM-D change and >4% of variance in IDS-C-30 change (p=.001). Remission (HAM-D score </= 7) rates by rs165599 genotype (AA, AG, GG) were 11/18 (61.1%), 48/105 (45.7%), and 41/107 (38.3%). For SNPs in HTR2A previously associated with citalopram response, including rs7997012, no evidence of association with duloxetine response was identified. Conclusions: SNPs in COMT but not HTR2A were associated with response to duloxetine treatment of patients with MDD. Supported by Eli Lilly and Company.

**REFERENCES:**

1. Whitmyer VG, Dunner DL, Kornstein SG. A comparison of initial duloxetine dosing strategies in patients with major depressive disorder. J Clin Psychiatry, in press.
2. McMahon FJ, Buervenich S, Charney D, et al. Variation in the gene encoding the serotonin 2A receptor is associated with outcome of antidepressant treatment. Am J Hum Genet 2006; 78:804-14.

**NR3-058**

## MEMANTINE EFFICACY AND SAFETY IN PATIENTS WITH ACUTE MANIA ASSOCIATED WITH BIPOLAR I DISORDER: A PILOT EVALUATION

*John Russo, Pharm.D. 88 Pinehurst Circle, Monroe, NY 10950, Paul E. Keck, Jr., M.D., Hai-An Hsu, Ph.D., Kelly Papadakis, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to evaluate the efficacy and tolerability of memantine (20, 30, and 40 mg/d) in the acute treatment of adults with bipolar I disorder hospitalized for mania.

**SUMMARY:**

Introduction/Hypothesis: Research supports a possible connection between N-methyl-D-aspartic acid (NMDA) receptors and bipolar disorder. This study evaluated memantine (a moderate affinity uncompetitive NMDA receptor antagonist) for acute treatment of hospitalized patients with bipolar I disorder experiencing a manic or mixed episode.
Methods: This multicenter, open-label, pilot trial included adults with bipolar I disorder (manic or mixed episode, with and without psychotic features; YMRS score = 20 at Screening). Patients were assigned to 21-days of treatment: Cohort 1, 20 mg/d (range 20-30 mg/d); Cohort 2, 30 mg/d (range 20-40 mg/d); Cohort 3, 40 mg/d (range 30-50 mg/d). Efficacy measures included the Young Mania Rating Scale (YMRS) and the Mania Rating Scale (MRS) (= 50% reduction in total score from baseline) at days 4, 7, 11, 14, and Day 21 of treatment. The change from baseline was also assessed using the Positive and Negative Syndrome Scale in patients with psychiatric symptoms, Positive and Negative Syndrome Scale-Excited Component, Clinical Global Impression Severity and Improvement scores, and Montgomery Asberg Depression Rating Scale. Results: A total of 35 patients were enrolled (n=12, Cohorts 1 and 2; n=11, Cohort 3); 33 received at least one dose of memantine and had at least one post baseline assessment using YMRS. Greatest improvement occurred in Cohort 1 where half of the patients responded to memantine based on YMRS and MRS. At Day 21 a response was observed in all cohorts. Treatment-emergent adverse events were reported in 19 (54.3%) patients. The most frequently reported adverse events occurring in at least 4 patients included constipation, nausea, and headache. Conclusion/Discussion: The response to memantine combined with its tolerability, support conducting large-sized randomized controlled trials to further investigate the use of memantine monotherapy in the treatment of mania.

**REFERENCES:**

1. Schiffer HH: Glutamate receptor genes: susceptibility factors in schizophrenia and depressive disorders? Mol Neurobiol 2002 Apr; 25(2):191-212.
2. Keck PE Jr: The management of acute mania: encouraging results from clinical trials need to be replicated in practice. Br Med J 2003; 327:1001-1003.

**NR3-059**

## CHILE VALIDATION STUDY OF THE MOOD DISORDER QUESTIONNAIRE (MDQ)

*Jorge F Cabrera, M.D. Clinica de Trastornos del AnimoInstituto*

*Psiquiatrico de Santiago Avenida La Paz 841Santiago de Chile, 5122346, Paul Vohringer, M.D., Sonia Medina M.D., Katia Alvear P.h., Paula Riumallo Ph.D., Carola Espinosa M.D., Fabiola Leiva M.D., María E. Hurtado M.D., Karen Alexandrovic M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the utility of the using of MDQ as a screening tool in the diagnosis of bipolarity in Chilean population.

**SUMMARY:**

Summary: Objective: To validate the MDQ in the Chilean patients evaluated at the Mood Disorder Clinic (MDC)of the Instituto Psiquiátrico, Santiago, Chile. Methods:202 patients referred to the MDC between April 2006 and September 2007 were screened with MDQ while in the waiting room. The patients were interviewed afterwards by an experienced psychiatrist using the SCID I-*DSM-IV* for the diagnosis of bipolar disorder (BD). The interviewer was blind to the MDQ result. Results: The group of eligible patients were 66 male (32.7%) and 136 female (68.3%). The mean age 42.3 years sd 41.5.From the total of 202 patients,86 (42.6 were screened positive, and 116 (57.4%) were negative for BD. In the SCID interview 105 patients were found to suffer from BD, of whom 69 had been previously correctly screened by MDQ. Therefore the MDQ shows a sensitivity of 0.66 and a specificity of 0.82. The spanish translated MDQ version was found internally consistent(Cronbach´s alpha 0.73). Conclusions: These findings indicate that the MDQ is a feasible instrument in its spanish translation, making it possible an improved recognition of bipolarity in Chilean population, comparable with English-speaking patient. The instrument presents a concurrent validity as it relates significantly with the presence or absence of BD diagnosis.

**REFERENCES:**

1. Hirschfeld RMA, Williams JBW,Calabrese JR et al: Devel opment and validation of a screening instrument for bipolar spectrum disorders:the Mood Disorder Questionnaire. Am J Psychiatry 2000;157:1873-1875.
2. Hirschfeld RMA,Holzer C,Calabrese JR, Weisman M, Reed M, Davies M, Frye MA, Keck P, McElroy S, Lewis L, Tierce J, Wagner KD, et al.:Validity of the Mood disorder Questionnaire: a general population study. Am J Psychiatry 2003;160:178-180.

**NR3-060**

## POSTTRAUMATIC MANIA

*José J De Santiago, M.Psy. C/ Ejercito del Aire, 3224008 León. Spain, 24008, Maria A. Sánchez Peña*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to analyzed de controversy about if precipitant cause trigger in this patient an underlying bipolar disorder or is a pure organic disorder.

**SUMMARY:**

It is revised de concept of Posttraumatic Mania and it's analyzed de controversy about if precipitant cause trigger an underlying bipolar disorder or is a pure organic disorder. Methodology It's presented one case of posttraumatic mania in a 66 years old man with neither personal psychiatric history nor familiar genetic predisposition. It is revised bibliographic documentation. Conclusions: it is estimated that about 7% of patients who suffer from a craniocerebral trauma present affective disorder, being less frequent the mania cases which are 10% of the posttraumatic affective disorder. There is little bibliography about this theme and it is based on the description of patients and in small samples. The authors taking into account the current diagnostic manuals DSM IV-R y CIE 10 argue that the evaluated patient observed the criteria of a maniac episode of traumatic etiology.

**REFERENCES:**

1. Masand P; Christopher E.J; Colary GL; Rajnish M; "Manía, catatonia y psicosis"" en Tratado de Medicina Psicosomática. Levenson James L. Ars Medica 2005.
2. Jorge RE, Robinson RG, Starnstein SE et al: Secondary mania following traumatic brain injury. Am J Psychiatry 150: 916-921, 1993.

**NR3-061**

## EFFICACY AND SAFETY OF ASENAPINE AS ADJUNCTIVE TREATMENT FOR ACUTE MANIA ASSOCIATED WITH BIPOLAR DISORDER

*Joseph R Calabrese, 11400 Euclid Avenue, Suite 200, Cleveland-OH 44106, Miriam Cohen, Jun Zhao, John Panagides*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) discuss how asenapine compared with placebo as an adjunct to mood stabilizer treatment in patients with acute bipolar mania; and 2) describe the safety profile of asenapine when combined with a mood stabilizer.

**SUMMARY:**

Objective: Asenapine is a novel psychopharmacologic agent being developed for the treatment of schizophrenia and bipolar disorder. We evaluated the efficacy and safety of adjunctive asenapine treatment in patients with bipolar disorder and acute mania or mixed episodes who had not completely responded to lithium or valproic acid. Methods: In this double-blind trial, patients with a Young Mania Rating Scale (YMRS) score >=20 at screening and baseline who had been continuously treated with lithium or valproic acid for >=2 weeks immediately before screening were randomized to 12 weeks of adjunctive, flexible-dose asenapine (5 mg BID on day 1, with the option to remain at 5 mg or titrate to 10 mg BID starting on day 2) or placebo. Primary efficacy, the change from baseline to day 21 on YMRS total score, was assessed using last observations carried forward. Secondary outcomes included change from baseline to day 84 on YMRS total score, percentages of YMRS responders (>=50% decrease in YMRS score), and remitters (YMRS score <=12), and changes in Clinical Global Impression for Bipolar Disorder (CGI-BP) severity scores. Results: The intent-to-treat population included 318 patients (155 asenapine, 163 placebo). At day 21, least squares (LS) mean ± SE change in YMRS total score was –10.3±0.79 with asenapine versus –7.9±0.76 with placebo (P=0.026). Secondary outcomes at day 84 with asenapine versus placebo included LS mean ± SE change in YMRS total score (–12.7±0.92 vs –9.3±0.89; P=0.007); rates of YMRS response (48% vs 34%; P=0.015) and remission (43% vs 30%; P=0.015); and LS mean ± SE change on CGI-BP (–1.5±0.12 vs –1.0±0.11; P=0.0006). Incidence of treatment-related adverse events,

mostly mild to moderate, was 50% with asenapine and 37% with placebo.
Conclusions: Asenapine (5 mg BID) was safe and effective as adjunctive treatment with a mood stabilizer in patients with bipolar mania. This research was supported by Organon, a part of Schering-Plough Corporation.

**REFERENCES:**

1. Shahid M, Walker GB, Zorn SH, Wong EHF: Asenapine: a novel psychopharmacologic agent with a unique human receptor signature. J Psychopharmacol 2007; in press.
2. Smith LA, Cornelius V, Warnock A, Tacchi MJ, Taylor D: Acute bipolar mania: a systematic review and meta-analysis of co-therapy vs. monotherapy. Acta Psychiatr Scand 2007; 115:12-20.

**NR3-062**

## LOW-DOSE COMBINATION OF ESCITALOPRAM AND BUPROPION IS AN EFFECTIVE TREATMENT FOR DEPRESSION IN ADULT OUTPATIENTS

*Joyce Tsai, Ph.D. Forest Research Institute Harborside Financial Center, Plaza V, Jersey City, NJ 07311, Stavros Tourkodimitris, Ph.D., Anjana Bose, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to evaluate the efficacy and safety of a fixed-dose escitalopram and bupropion combination relative to the monotherapies and to placebo in patients with major depressive disorder.

**SUMMARY:**

Background: Escitalopram and bupropion are antidepressants with different mechanisms of action. The former is the most highly selective serotonin reuptake inhibitor; the latter is an antidepressant that inhibits reuptake of both norepinephrine and dopamine. In this study, escitalopram and bupropion XL were co-administered at sub-therapeutic doses to evaluate the effectiveness relative to monotherapy with either escitalopram or bupropion XR. Methods: 558 adult outpatients (18-80 years) with DSM-IV-defined major depressive disorder were randomized to 1 of 4 groups: escitalopram 4 mg/day + bupropion XL 150 mg/day, escitalopram 4 mg/day, bupropion XL 150 mg/day, or placebo. The primary efficacy parameter was change from baseline to Week 8 in MADRS total score. Results: Escitalopram + bupropion therapy was significantly superior to placebo using either LOCF (P=0.017) or OC (P=0.007) ANCOVA analyses at endpoint. However, the combination regimen was not found to be superior to either monotherapy at endpoint. Similar results were seen using the HAMD-24 and other efficacy parameters. All three active treatments were well tolerated. The highest rate of discontinuations due to adverse events occurred in the bupropion monotherapy group (8.2%). Discontinuations due to adverse events occurred in 3% of placebo patients, 4.6% of escitalopram monotherapy patients, and 4.3% of the patients receiving escitalopram + bupropion combination therapy. Conclusion: The combination of sub-therapeutic doses of escitalopram and bupropion was effective in treating depression. This study and its presentation were supported by Forest Laboratories, Inc.

**REFERENCES:**

1. Gorman JM, Korotzer A, Su G. Efficacy comparison of escitalopram and citalopram in the treatment of major depres sive disorder: pooled analysis of placebo-controlled trials. CNS Spectr. 2002 Apr;7(4 Suppl 1):40-4.
2. Clayton AH, Croft HA, Horrigan JP, Wightman DS, Kr ishen A, Richard NE, Modell JG. Bupropion extended release compared with escitalopram: effects on sexual functioning and antidepressant efficacy in 2 randomized, double-blind, placebo-controlled studies. J Clin Psychiatry. 2006 May;67(5):736-46.

**NR3-063**

## PREVALENCE AND CORRELATES OF DEPRESSION IN PATIENTS WITH UNEXPLAINED PAIN IN PRIMARY CARE: THE DEDO-PRIMARY CARE STUDY

*Juan A Mico, M.D. Facultad de Medicina Departamento de Farmacología Universidad de Cadiz Plaza Fragela n.9 Cádiz, 11003, Spain, Luis Aguera-Ortiz, M.D., Ph.D., Inmaculada Failde, M.D., PhD, Jorge Cervilla, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the prevalence of depression in patients consulting for pain of uncertain aetiology in the Primary Care setting and the negative influence of depression on pain itself, quality of life and health-related economic costs.

**SUMMARY:**

Introduction: The links between pain and depression have already been described. Many patients consult their Primary Care physician with pain of obscure aetiology or excessive intensity that might hide a depressive disorder. Objective: To identify the prevalence of undiagnosed depression in a wide sample of patients with pain of unknown aetiology or disproportionate intensity that consult their primary care doctor, and to evaluate possible differences in subgroups defined by age, gender, type of pain, drug consumption and type of depression. Methods: The study included 3189 patients over 18 years of age, not presently diagnosed of depression, who visited their primary care physicians with pain of unknown aetiology or disproportionate intensity lasting over 6 weeks,. Depression was diagnosed using the PRIME-MD Scale. Type, duration and intensity of pain were evaluated using Visual-Analogic Scales. Pharmacological treatments with analgesic and psychoactive drugs and the use of healthcare resources were also recorded. Results: Mean age: 53.9 years (SD: 13,3). Gender: 73% female. The prevalence of depression in patients with unexplained pain was 80.4% and did not vary significantly according to age; it was clearly greater in women, both in the general (82% vs 75%) and elderly population (84% vs 72%). Most frequent types of depression were: Major depression: 58%, Dysthimia: 19%, Minor Depression: 16%. All intensity and duration of pain measurements in all locations were significantly greater in patients with depression, with clear interference with daily activities. Patients with depression made more visits to the primary care physician. Conclusions: Our results show a very high prevalence of unknown depression in patients with pain of uncertain aetiology in the Primary care setting and its negative influence on quality of care and health-related economic costs.
Research was partially funded by a grant from Boehringer-Ingelheim.

**REFERENCES:**

1. Bair,M.J.; Robinson,R.L.; Katon,W.; Kroenke,K.. Depres sion and Pain Comorbidity: A Literature Review. Archives of Internal Medicine 2003; 163, No. 20: 2433–45.
2. Wise TN, Fishbain DA, Holder-Perkins V. Painful physical symptoms in depression: a clinical challenge. Pain Med. 2007 Sep;8 Suppl 2:S75-82.

**NR3-064**

## MAJOR DEPRESSIVE DISORDER: BURDEN OF ILLNESS ACROSS US AND EU

*Julie Locklear, Pharm.D. Health Economics & Outcomes Research Astra Zeneca Pharmaceuticals LP 1800 Concord Pike Wilmington DE, 1800, M Palm, B.Sc., MSc., J Piercy, B.Sc., M.Sc.,*

**EDUCATIONAL OBJECTIVE:**

At the end of this poster presentation, the participant should be able to understand the relative burden of illness of major depressive disorder across the US and EU, including the impact on functionality and areas of unmet need.

**SUMMARY:**

Purpose: To evaluate real-world prescribing patterns, burden of disease and unmet needs in the treatment of major depressive disorder (MDD). Methods: Adelphis Neuroses Disease Specific Program is a point in time study of 474 physicians recording information from 1582 patients who are currently receiving therapy for the treatment of MDD in five European countries (UK, France, Germany, Spain and Italy) and the US in 2005. Results: Patient characteristics for the EU and US respectively were: mean age 47 (±16) and 46 (±15) and proportion female 64% and 66%. The average number of depressive symptoms reported by MDD patients was 17.7 (±8.9) in the EU and 15.9 (±7.7) in the US. When asked to rate how much their lifestyle is affected by current symptoms on a scale of 1 (not affected) to 10 (not able to continue with normal activities at all), patients average score for both EU and US was 6.3 (±2.1 and ±2.3 respectively). The average number of days work/school/study missed in the previous 3 months due to symptoms was 10.9 (±19.2) and 7.2 (±18.0) in EU and US, respectively. The majority of patients (58% EU, 71% US) report receiving 1 or more medications prior to their current treatment. Lack of efficacy and sedation were the two most popular reasons for medication change. In terms of treatment satisfaction, patients reported least satisfaction with speed of medication effect. Conclusions: Data from this large European and US survey suggests that MDD significantly impacts patients functionality and ability to work/perform daily activities. The number of medications that patients have taken prior to their current treatment suggests that first line treatment of MDD may not always be effective or that there is dissatisfaction with medication. Evidence from patients indicates that there are unmet needs related to onset of action for medications to treat symptoms of major depressive disorder. Support for this research was provided by AstraZeneca Pharmaceuticals LP.

**REFERENCES:**

1. Rush JA, et al. Acute and longer-term outcomes in depressed outpatients requiring one or several treatment steps: A STAR-D report. Am J Psych 2006;163:1905-1917.
2. Lepine, J.-P; Gastpar, M; Mendlewicz, J; Tylee, A. Depression in the community: The first pan-European study DEPRES (Depression Research in European Society). International Clinical Psychopharmacology. Vol 12(1) Jan 1997, 19-29.

**NR3-065**

## A REVIEW OF THE HUMANISTIC AND ECONOMIC OUTCOMES IN EUROPEAN PATIENTS DIAGNOSED WITH GENERALIZED ANXIETY DISORDER

*Kathleen Wyrwich, Ph.D. United BioSource Corporation7101 Wisconsin Avenue, Suite 600, Bethesda, MD 20814 USA, BethesdaMD 20814, Maria Stoeckl Mattera, M.P.H., Henrik Svedsäter, Ph.D., Julie Locklear, PharmD., M.B.A, Dennis A. Revicki, Ph.D., Stuart Montgomery, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) identify the health-related quality of life outcomes of patients with generalized anxiety disorder (GAD) in Spain, Italy, France, Germany, Belgium, Switzerland, the Netherlands, Norway, Sweden, Finland, Denmark and the United Kingdom as reported in the literature over the past 20 years; 2) recognize relevant economic outcomes of GAD; and 3) differentiate past and current treatment options and their efficacies for GAD.

**SUMMARY:**

Objective: The burden and cost of illness for patients diagnosed with generalized anxiety disorder (GAD) is considerable. Worldwide, GAD is the second most common psychiatric disorder in primary care settings. Our goal was to provide an overview of the impact of GAD on humanistic outcomes, like health-related quality of life (HRQOL), work impact, and economic burden of GAD among patients in Europe, as well as reviewing GAD treatment guidelines. Methods: We conducted a systematic literature review of 4 databases, including MEDLINE and EMBASE, to identify articles published between 1987 and 2007 that reported humanistic or economic outcomes of GAD in studies conducted in Europe. Results: After reviewing more than 1999 abstracts, we retrieved 157 full-text articles from the worldwide literature, of which 33 articles on humanistic outcomes, 6 papers on economic outcomes, and 8 treatment guideline reports met the inclusion criteria. Data from these studies report an estimated 3% prevalence rate for GAD during the lifetime1, as well as the association between GAD and impaired HRQOL and functional status. Patients with GAD demonstrate a reduction in work productivity and are frequent users of primary care medical services, where they are often misdiagnosed or under-treated. Patients with GAD had nearly twice the number of primary care visits compared with other patients without the disorder2. Current treatment guidelines recommend antidepressants as the first-line pharmacotherapy. Conclusion: Significant severities for humanistic and economic outcomes of European patients with GAD exist, and despite frequent presentation for treatment in primary care settings, misdiagnosis and under treatment persists. The limited data suggest the need for increased awareness of GAD among primary care practitioners, and improved clinical trial data on appropriate treatment care. Support for this research was provided by AstraZeneca Pharmaceuticals LP.

**REFERENCES:**

1. ESEMeD/MHEDEA 2000 Investigators, 2004. Prevalence of

mental disorders in Europe: results from the European Study of the Epidemiology of Mental Disorders (ESEMeD) project. Acta Psychiatr. Scand. 109 (Suppl. 1), 21– 27.
2. Wittchen, H.-U., Kessler, R.C., Beesdo, K., Krause, P., Ho¨ fler, M., Hoyer, J., 2002. Generalized anxiety and depression in primary care: prevalence, recognition, and management. J. Clin. Psychiatry 63, 24– 34.

**NR3-066**

## FREQUENTLY RELAPSING BIPOLAR DISORDER: EVIDENCE FOR AN EFFECTIVE TREATMENT USING ADJUNCTIVE RISPERIDONE LONG-ACTING INJECTABLE

*Larry Alphs, M.D. 1125 Trenton-Harbourton Road, Titusville, NJ 08560, Mary Kujawa, M.D., Wayne Macfadden, M.D., Norris Turner, Pharm.D., Ph.D., Ibrahim Turkoz, MS, Cynthia Bossie, Ph.D., Ramy Mahmoud, M.D., Tom Haskins, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant will be able to define frequently-relapsing bipolar disorder, and to recognize the role of risperidone long-acting injectable as adjunctive treatment to treatment as usual in delaying recurrence of mood episodes in this difficult-to-treat subset of patients.

**SUMMARY:**

Introduction: Bipolar patients with at least four mood episodes due to any cause in the past 12 months and requiring psychiatric intervention can be defined as having frequently-relapsing bipolar disorder (FRBD). We test the hypothesis that risperidone long-acting injectable (RLAI) given adjunctively to treatment as usual (TAU) may delay relapse to a mood episode in patients with FRBD. Methods: A randomized, double-blind, placebo-controlled study assessed TAU (mood stabilizers, antidepressants and anxiolytics), with and without adjunctive RLAI in patients with FRBD. After a 16-week, open-label stabilization phase (OL phase) with RLAI and TAU, patients who achieved stable remission were eligible to enter the 52-week, double-blind relapse-prevention phase (DB phase). The primary efficacy measure was time to relapse of a mood episode, as determined by a blinded, independent relapse monitoring board. Results: A total of 275 patients entered the OL phase and 139 of those patients entered the DB phase; all patients continued TAU, but were randomized either to receive adjunctive treatment with RLAI (25- 50 mg IM) (n=72) or intramuscular placebo (n=67). Mean age was 39.1 +/- 11.8 and 71.9% were male. Completion rates were 59.7% with RLAI and 43.3% with placebo. Time to relapse was significantly longer with RLAI augmentation than with placebo (P=0.004, Log-Rank test). The relative risk of relapse was 2.4 fold higher with placebo than with RLAI; relapse rates were 47.8% (n=32) and 22.2% (n=16), respectively (P<0.01). Most common adverse events (RLAI vs placebo) were tremor (23.6% vs 16.4%), insomnia (19.4% vs 23.9%), muscle rigidity (11.1% vs 6.0%), weight increase (6.9% vs 1.5%) and hypokinesia (6.9% vs 0.0%). Conclusion: In patients with FRBD, addition of adjunctive RLAI to TAU significantly delays the time to mood episode relapse. No unexpected safety or tolerability trends were noted. Supported by Ortho-McNeil Janssen Scientific Affairs, L.L.C.

**REFERENCES:**

1. Rendell JM, Geddes JR: Risperidone in long-term treatment for bipolar disorder. Cochrane Database Syst Rev 2006: 18: CD004999.
2. Han C, Lee MS, Pae CU, Ko YH, Patkar AA, Jung IK: Use fulness of long-acting injectable risperidone during 12-month maintenance therapy of bipolar disorder. Prog Neuropsycho pharmacol Biol Psychiatry 2007; 31:1219-1223.

**NR3-067**

## ADDITIONAL TREATMENT NEEDS OF PATIENTS WITH DEPRESSION: RESULTS OF A NATIONAL ONLINE SURVEY

*Larry Culpepper, M.D. 1 BMC Place, Dowling 5, Boston, MA 02118, Linda Carpenter, M.D., Ibrahim Gunay M.D. M.B.A., John W. Winkelman M.D. Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to; 1) Identify treatment needs of patients with depression not addressed by current prescription antidepressants; 2) Understand and recognize patient experience regarding the side effects of prescription antidepressant treatment; and 3) Consider the impact side effects from prescription antidepressants can have on treatment compliance and/or discontinuation.

**SUMMARY:**

Background: Patients with depression often report treatment-associated side effects that lead to non-compliance and discontinuation. It is estimated as few as 22% of patients with depression are adequately treated with antidepressants. A nationwide online survey was conducted among US patients with depression to understand their view regarding satisfaction with current treatments.

Methods: A questionnaire was developed by a panel representing psychiatry, primary care and sleep medicine. Survey implementation, data collection, and tabulation were conducted by Harris Interactive® (HI). In May 2007, 6,300 patients were randomly selected from HI's Chronic Illness Panel and invited to take an anonymous, self-administered online survey.

Results: Respondents (N=505) were aged 18-64, diagnosed with "depression," (by self report) and either currently taking (N=435) or had recently (within =2 years) taken (n=70) a prescription antidepressant. Of respondents taking antidepressants, 72% reported treatment associated side effects (weight gain 46%; sexual dysfunction 44%; sleep disturbance 38%). A substantial fraction of respondents rated these side effects as ones they were "not at all willing to tolerate" from their antidepressant (48%, 29% and 32%, respectively) even assuming clinical benefit, and indicated certain side effects "strongly/very strongly impacted quality of life" (weight gain 58%; insomnia 32%; sexual dysfunction 34%). Weight gain and sexual dysfunction were each related to the decision to discontinue an antidepressant for 20% of respondents (n=386). Of those patients describing themselves as "extremely/very satisfied" with their treatment (n=242), 50% would still consider switching to a medication with fewer side effects.

Conclusions: These data confirm that patients taking antidepressant medications commonly struggle with side effects which may add additional burden on top of depressive symptoms. Supported by funding from Novartis

Pharmaceuticals Corporat

**REFERENCES:**


1. Kessler RC, Berglund P, Demler O, et al. The epidemiol ogy of major depressive disorder: results from the National Comorbidity Survey Replication (NCS-R). Jama. Jun 18 2003;289(23):3095-3105.
2. Masand PS. Tolerability and adherence issues in antidepres sant therapy. Clin Ther. Aug 2003;25(8):2289-2304.


**NR3-068**

## FIRST EPISODE OF BIPOLAR DISORDER POST–INDUCED ABORTION: CASE SERIES


*Laura Lorenzo, M.D. French 3107 - 7C, Buenos Aires, Argentina 01425, Luis Herbst, M.D., Eduardo Leiderman, M.D., Gustavo Lipovetzky, M.D., Federico Pavlovsky, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize and to diagnose first episodes of bipolar disorder after induced abortion.

**SUMMARY:**


Introduction:The post–partum is a period of vulnerability to the onset of unipolar or bipolar mood disorders. After the clinical observation of the onset of bipolar disorder in patients that had an induced abortion, we constructed the hypothesis that the post–induced abortion period might be also a vulnerable period for the first onset of bipolar mood disorder. A MEDLINE search reported very few **references**. This case series highlights the possibility of a bipolar onset risk period after induced abortion. As far as we know, this is the largest case series in the literature about this issue. Objective: The objective is to report four cases of first episode of post induced abortion bipolar mood disorder. Method: We chose four cases of ambulatory patients. Their first mood episode had to be after induced abortion. We excluded all patients who had any affective episode before the induced abortion. The patients should fulfill DSM–IV criteria for manic, hipomanic or mixed episode after the abortion or, if first depressed, within two years. Results: In all the cases the first episode was depressive. The four cases had a manic, hipomanic or mixed episode within two years after abortion. Conclusions: In this case series all the patients had their first bipolar episodes after the abortion. Future studies will need to evaluate this correlation.


**REFERENCES:**


1. Mahe V, Montagnon F, Nartowski J, Dumane A: Post – Abor tion Mania. Br J Psychiatry 1999; 175:389–90.
2. Broen AN, Moum T, Bødtker AS, Ekeberg O. Psychological impact on women of miscarriage versus induced abortion: a 2-year follow-up study. 3Psychosomatic Medicine 2004;66:265-271.


**NR3-069**

## COMPARISONS OF THE EFFICACY AND SAFETY OF DULOXETINE FOR THE TREATMENT OF FIBROMYALGIA IN PATIENTS WITH VS. WITHOUT MAJOR DEPRESSIVE DISORDER (MDD)


*Lesley Arnold, M.D. 222 Piedmont Avenue, Cincinnati, OH 45219, James I. Hudson, M.D., Fujun Wang, Ph.D., Madelaine M. Wohlreich, M.D., Apurva Prakash, B.A., Daniel K. Kajdasz, Ph.D., Amy S. Chappell, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to discuss the impact of co-morbid MDD on the efficacy and safety of duloxetine in treating the pain and other symptoms associated with fibromyalgia.

**SUMMARY:**


Background: Fibromyalgia and MDD are often co-morbid conditions.

Objective: To determine whether co-morbid MDD influenced the efficacy and safety of duloxetine in treating fibromyalgia.

Methods: This was a post-hoc analysis using pooled data from 4 double-blind, placebo-controlled studies of patients with American College of Rheumatology-defined primary fibromyalgia with or without MDD. Patients were randomized to duloxetine [60 or 120 mg/d (N=797)] or placebo (N=535) for 3 months. Efficacy measures included the Brief Pain Inventory average pain score [BPI], 17-item Hamilton Depression Rating Scale [HAMD17], Fibromyalgia Impact Questionnaire [FIQ], and Patient's/Clinician's Global Impressions of Improvement/ Severity [PGI-I and CGI-S] scales.

Results: At baseline, 26% of patients met diagnostic criteria for MDD. At endpoint (3 months or last observation), duloxetine showed significantly ($P<.05$) greater improvement vs. placebo on the BPI, FIQ, CGI-S and PGI-I in patients with and without co-morbid MDD. The effect of duloxetine on these efficacy measures was consistent across fibromyalgia patients with or without MDD ($P>.1$ for treatment-by-strata interaction). On the HAMD17, duloxetine showed significantly ($P<.05$) greater improvement vs. placebo in patients with co-morbid MDD. The safety profile of duloxetine vs. placebo with respect to the incidence of adverse events, serious adverse events, or discontinuation due to adverse events was similar for fibromyalgia patients with vs. without MDD ($P>.1$ treatment-by-strata interaction).

Conclusions: Duloxetine was equally effective in reducing pain and other symptoms in fibromyalgia patients with and without MDD and demonstrated a similar safety profile for both groups. For fibromyalgia patients with co-morbid MDD, duloxetine showed a significantly greater improvement in depressive symptoms (as measured by the HAMD17) compared with placebo. Funding provided by Eli Lilly and Company.


**REFERENCES:**


1. Hudson JI, Pope HG Jr. The relationship between fibromyal gia and major depressive disorder. Rheum Dis Clin North Am 1996;22:285–303.
2. Wolfe F, Smythe HA, Yunus MB, Bennett RM, Bombardier C, Goldenberg DL, et al. The American College of Rheu matology 1990 criteria for the classification of fibromyalgia: report of the multicenter criteria committee. Arthritis Rheum 1990;33:160–172.


**NR3-070**

## VAGUS NERVE STIMULATION: EFFECT ON HEALTH-CARE COST AND UTILIZATION BY PA-

**TIENTS WITH TREATMENT-RESISTANT DEPRESSION**

*Lieven J Annemans, Ph.D. Ghent UniversityDept of Public HealthDe Pintelaan 185 BUILDING A, GENT Belgium 9000, Rene Sorel, M.D.; Pieternel Kölling, M.D.; Hans Van der Aa, M.D., Ph.D.; Rik Buschman, Ph.D.; Kurt Audenaert, M.D., Ph.D., Jerry Welkenhuysen, M.Sc.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to discuss the reductions in health-care cost and utilization in patients with treatment-resistant depression who received vagus nerve stimulation.

**SUMMARY:**

Introduction: More than one-third of patients treated for depression will become treatment resistant, resulting in a high societal burden and increased health-care resource utilization (1, 2). Vagus nerve stimulation (VNS) is approved for treatment-resistant depression (TRD) and has shown long-term sustained response. This study compared pre- and post-VNS resource costs and utilization in Belgian and Dutch psychiatric centers. Methods: In this retrospective patient chart analysis, medical files of all patients with TRD and receiving VNS were analyzed by an independent Clinical Research Associate. Patients had at least 18 months of recorded data before and after VNS implant (baseline). Resource use was collected per 6-month period. Resources were multiplied with unit costs from the health-care payer perspective. Results: Analysis comprised 24 patient records. Patients were aged 49.04 (SD 10.96) years at VNS implant, had a mean 3.6 (SD 2.4) previous depressive episodes before implant, and 5.9 (SD 2.0) failed therapies during the current episode. Mean MADRS score was 32.5±7.5 at baseline. During the 18 months post VNS, there were 6.0 (-69.0 – 21.0) fewer median psychiatric visits, 0.0 (-78.0 – 0.0) fewer median electroconvulsive therapy (ECT) sessions, 2.0 (-8.0 – 58.0) fewer median medications, and 28.0 (-383.0 – 109.0) fewer median hospital days per patient. Total mean hospitalization costs decreased from 20636.1€ to 6256.7€ per patient, medication costs increased from 1250.1€ to 1428.3€, and ECT, consults, and investigations decreased from 1918.7€ to 504.9€. During the 18 months post VNS, savings totaled 15628.0€ per patient (p =0.0267 Student's t-test). Conclusion: The study showed a strong and statistically significant decrease in health-care costs and utilization with VNS, suggesting that the investment in VNS may be quickly compensated by savings in hospitalization and ambulatory care. This research was supported by an unrestricted grant from Cyberonics.

**REFERENCES:**

1. Russell JM, Hawkins K, Ozminkowski RJ, Orsini L, Crown WH, Kennedy S, Finkelstein S, Berndt E, Rush AJ. The cost consequences of treatment-resistant depression. J Clin Psy chiatry 2004; 65:341-347
2. Crown WH, Finkelstein S, Berndt ER, Ling D, Poret AW, Rush AJ, Russell JM. The impact of treatment-resistant depression on health care utilization and costs. J Clin Psy chiatry 2002; 63:963-971.

**NR3-071**

**LYMPHOCYTE TAURINE TRANSPORTER AND INTERLEUKINS IN DEPRESSED PATIENTS TREATED WITH VENLAFAXINE**

*Lucimey L Lima, M.D. Laboratorio de Neuroquímica, Centro de Biofísica y Bioquímica, Instituto Venezolano de Investigaciones Científicas, Apdo. 21827, Caracas Venezuela 1020-A, Fili Fazzino, M.Sc., Francisco Obregón, M.B.A., Salvador Mata, M.D., Ph.D., Luis Arocha, M.D., Alfonso González, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) introduce the amino acid taurine with possible antioxidant properties in lymphocytes of depressed; 2) correlate the presence of taurine transporter in sub-populations of lymphocytes with differential functions, CD4+ and CD8+; and 3) highlight the effects of depression treatment on interleukins 2 and 4.

**SUMMARY:**

Introduction. A group of major depression patients had higher plasma levels of taurine than controls. Taurine is also high in lymphocytes of depressed and its levels normalized after mirtazapine. This amino acid is neurotrophic, antioxidant, membrane stabilizer, regulator of osmolarity, electrical inhibitor, and seems to protect lymphocytes and to regulate pro-inflammatory cytokines. The aims of this study were to label taurine transporter in lymphocyte sub-populations and to evaluate the inflammatory stage in depressed treated with venlafaxine and Neuro-Linguistic Programming. Methods. Forty patients, 20-60 years, with major depression episode, DSM-IV criteria, and moderate severity, Hamilton scale, were included. Half of them received venlafaxine 75 mg/day or venlafaxine and weekly sessions of psychotherapy for six weeks. Lymphocytes from blood, taken at beginning and at the end of the study, were isolated by density gradients with Ficoll/Hypaque. Plasma amino acids were determined by HPLC with fluorescence detector. Lymphocyte taurine transporter (TAUT1), CD4+, helpers, suppressors, and CD8+, cytolytic, cells were labeled with primary antibodies and second conjugated with fluoresceine or rodamine. Inteleukin-2 and interleukin-4 were determined in plasma by enzyme-linked immunosorbent assay. Results. Patients responded in a similar manner. Gamma-aminobutyric acid significantly increased after treatments. Cells expressing taurine transporter did not change among the groups. CD4+, but not CD8+ cells, lowered after treatments, and CD4+ and CD8+ cells presenting the transporter decreased. Interestingly, interleukin-4, anti-inflammatory, increased after integrative treatment. Conclusions. Taurine transporter is widely expressed in lymphocytes and is modified after antidepressant treatment, its differential localization could occur for variable protection of circulating cells. It seems that the integrative treatment ameliorate the inflammatory condition of depression.

**REFERENCES:**

1. Mauri MC, Ferrara A, Boscati L, Bravin S, Zamberlan F, Alecci M, Invernizzi G: Plasma and platelet amino acid con centrations in patients affected by major depression and under fluvoxamine treatment. Neuropsychobiology 1998; 37:124-129.
2. Lima L, Obregón F, Urbina M, Carreira I, Baccichet E, Peña S. Taurine concentration in human blood peripheral lympho cytes. Major depression and treatment with the antidepressant mirtazapine. Adv Exp Med Biol 2003; 526:297-304.

**NR3-072**

**PREVALENCE AND CORRELATES OF UNEXPLAINED PAIN IN DEPRESSED PSYCHIATRIC OUTPATIENTS: THE DEDO-PSYCHIATRY STUDY**

*Luis F Agüera-Ortiz, M.D. University Hospital 12 de Octubre-Servicio de PsiquiatriaMedicina ComunitariaAv De Cordoba km 5400, Madrid Spain 28041, Juan A. Mico, M.D., Ph.D., Inmaculada Failde, M.D., Ph.D. Jorge Cervilla, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the prevalence and importance of pain symptoms of unexplained aethiology in patients with depression that consult in psychiatric outpatient services and acknowledge the risk factors associated with both, such as age, gender or severity of depression.

**SUMMARY:**

Introduction: The combination of emotional and somatic symptoms such as pain in depression can have an enormous negative impact on the quality of life of patients, but there are few data making psychiatrists aware of the need to approach pain as part of depression assessment. Objective: To identify the prevalence of pain of unknown aetiology or of known aetiology but disproportionate severity, in a sample of patients receiving psychiatric care and to evaluate possible differences in subgroups defined by age, gender and presence of pain. Methods: 3566 patients aged 18 or older visiting a psychiatrist for the first time and receiving a *DSM-IV-TR* diagnosis of depression were studied. Severity of depression was evaluated by the HAM-D rating scale. Type and severity of pain, if any, was assessed by Visual Analogic Scales (VAS). Patients were asked about interference of the pain with quantity and quality of sleep. Analgesic and psychiatric drug treatments taken by the patients were also recorded. Results: Mean age was 49.43 (SD: 13,02) years. Gender: 71% female. Major depression (72%) and dysthimia (17%) were the most frequent diagnoses. The prevalence of pain in patients with depression was 59.1%, with a significant increase in relation to age and female gender (63% vs 47%). Pain severity also increased with age. The score on the Hamilton rating scale was higher in patients with pain (24.87 vs 22.48) both in the adult and elderly population. No differences were found depending on pain location except for joint pain. Analgesic and psychotropic drug use was higher in elderly patients. Conclusions: The high prevalence of pain in patients with depression shows the importance of identifying painful symptoms in patients with depression, approaching treatment from a global perspective. Research was partially funded by a grant from Boehringer-Ingelheim.

**REFERENCES:**

1. Bair,M.J.; Robinson,R.L.; Katon,W.; Kroenke,K.. Depres sion and Pain Comorbidity: A Literature Review. Archives of Internal Medicine 2003; 163, No. 20: 2433–45.
2. Wise TN, Fishbain DA, Holder-Perkins V. Painful physical symptoms in depression: a clinical challenge. Pain Med. 2007 Sep;8 Suppl 2:S75-82.

**NR3-073**

**WHAT DOES REMISSION LOOK LIKE IN MDD? COMPARISONS OF SYMPTOM RESOLUTION AND FUNCTIONAL IMPAIRMENT IN REMITTERS VS. NON-REMITTERS**

*Madhukar Trivedi, M.D. 6363 Forest Park Road, Dallas, TX 75235, Apurva Prakash, B.A., Adam L. Meyers, M.S., James M. Martinez, M.D., Craig H. Mallinckrodt, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to discuss the differences in symptom resolution and functional impairment for MDD remitters vs. non-remitters treated with duloxetine or escitalopram and be able to discuss the nature of residual symptoms among non-remitters.

**SUMMARY:**

Objective: To investigate differences in the nature of symptom resolution for MDD remitters vs. non-remitters. Methods: This was a post-hoc analysis from an 8-month, double-blind study that included an 8-week fixed-dose, comparison of duloxetine 60 mg/d (n=273), escitalopram 10 mg/d (n=274), and placebo (n=137); and a 6-month, flexible dose extension phase (duloxetine, 60-120 mg/d; escitalopram, 10-20 mg/d). Patients were stratified based on remission status at Week 8, and outcomes on the HAMD17 and Sheehan Disability Scale (SDS) were evaluated for remitters vs. non-remitters. Results: At 8 weeks, the proportion of remitters vs. non-remitters was not significantly different for duloxetine (44% remitted) vs. escitalopram (35% remitted), P>.05. For both drugs, 83% of patients who had achieved remission by Week 8 maintained remission status at endpoint during the 8-month study. At study endpoint, for both drugs, the mean HAMD17 total score was significantly (P<.05) lower for remitters (3 to 4) vs. non-remitters (8 to 10), as were all HAMD17 subscale scores with the exception of the sleep subscale. For both drugs among non-remitters, residual symptoms included depressed mood, insomnia, impairment in work/activities, anxiety, general somatic symptoms, and genital symptoms. In remitters, residual symptoms were similar but less severe. Depressed mood and impairment in work/activities resolved in remitters. For both drugs, the mean SDS total score was significantly lower for remitters (4 to 6) vs. non-remitters (11 to 12), and all item scores were </=2 for remitters (indicating low risk of psychiatric impairment). Conclusions: MDD remitters in the long term had significantly lower symptom burden and significantly less functional impairment than non-remitters. Residual symptoms included insomnia, anxiety, general somatic symptoms, and genital symptoms for both remitters and non-remitters. Funding provided by Eli Lilly and Company.

**REFERENCES:**

1. Pigott TA, Prakash A, Arnold LM, et al. Duloxetine versus escitalopram and placebo: an eight-month, double-blind trial in patients with major depressive disorder. Curr Med Res Opin 2007;23(6):1303-1318.
2. Leon AC, Olfson M, Portera L, Farber L, Sheehan DV. As sessing psychiatric impairment in primary care with the Shee han Disability Scale. Int J Psychiatry Med 1997;27(2):93-105.

**NR3-074**

**ADJUNCTIVE ARIPIPRAZOLE IN MDD: ANALYSIS OF EFFICACY AND SAFETY IN PATIENTS WITH ANXIOUS AND ATYPICAL FEATURES**

*Madhukar Trivedi, M.D. UT Southwestern Medical Center at*

*Dallas 6363 Forest Park Rd.Suite 13.354, Dallas TX 75235, Michael Thase, M.D., Ying Qi, Ph.D., Quynh-Van Tran, Pharm.D., Andrei Pikalov, M.D., Berit X Carlson, Ph.D., Ronald N Marcus, M.D., Robert M Berman, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to understand the efficacy and safety of aripiprazole augmentation in patients diagnosed with major depressive disorder presenting with anxious or atypical features with an inadequate response to standard antidepressants.

**SUMMARY:**

Objective: To evaluate the efficacy of adjunctive aripiprazole to standard antidepressant therapy (ADT) for patients with anxious and atypical depression.

Methods: Data from two identical studies of aripiprazole augmentation, consisting of an 8-week prospective ADT treatment phase and a 6-week randomized (adjunctive aripiprazole or placebo) phase were pooled to evaluate efficacy and safety in subgroups. The efficacy endpoint was the mean change in rating scale measures from end of ADT treatment to end of randomized treatment (LOCF). Similar to Sequenced Treatment Alternative to Relieve Depression Study (STAR-D), anxious depression was defined by HAMD17 criteria; atypical depression was defined by the Inventory of Depressive Symptomatology-Self Rated (IDS-SR) criteria, both at Week 8. Results: For all subpopulations analyzed, patients receiving adjunctive aripiprazole demonstrated a significantly greater improvement in the MADRS Total score versus placebo from Week 1 or Week 2 to endpoint (anxious [n=116, 120]: -8.46 vs. -5.65, p=0.007; non-anxious [n=238, 224]: -8.76 vs. -5.39, p<0.001; atypical [n=90, 91]: -9.17 vs. -5.08, p<0.001; non-atypical [n=264, 256]: -8.49 vs. -5.75, p<0.001). At endpoint, remission rates trended or were greater with adjunctive aripiprazole versus placebo (anxious [n=116, 120]: 19% vs. 11%, p=0.119; non-anxious [n=238, 224]: 28% vs. 17%, p=0.005; atypical [n=90, 91]: 17% vs. 8%, p=0.069; non-atypical [n=264, 256]: 28% vs. 18%, p<0.001). Akathisia of mild to moderate severity was reported more frequently with anxious patients (37%) than nonanxious (22%) (OR: 1.95, 1.23-3.05). Restlessness and weight gain did not differ between subgroups. Conclusions: Adjunctive aripiprazole improves depressive symptoms in patients with anxious and atypical features. Similar to STAR-D trial, overall remission rates were lower for anxious patients as compared to nonanxious patients.
Supported by Bristol-Myers Squibb and Otsuka. (CN138-139 and CN138-163)

**REFERENCES:**

1. Berman RM, Marcus RN, Swanink R, et al: The Efficacy and Safety of Aripiprazole as Adjunctive Therapy in Major Depressive Disorder: A Multicenter, Randomized, Double-blind, Placebo-controlled Study. J Clin Psych 2007;68:843-853.
2. Trivedi MH, Rush AJ, Wisniewski SR, et al: Evaluation of Outcomes with Citalopram for Depression Using Measure ment-Based Care in STAR-D: Implications for Clinical Prac tice. Am J Psych 2006;163;28-40.

**NR3-075**

## THE ROLE OF PLEASURE IN THE RESPONSE TO EXERCISE THERAPY FOR THE TREATMENT OF DEPRESSION

*Mariano Llosa, M.D. 856 47th street First floor, Brooklyn, NY 11220, Luis M. Llosa, M.D., Alfredo A. Massa, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the significance of exercise as a treatment for depression and its potential value in the treatment of certain subtypes of depression.

**SUMMARY:**

Objectives: Multiple treatments have been used for depressed patients. The choice of treatment may depend on the patient's depressive characteristics. Exercise is one of the proposed treatments for depression. Our main goal is to explore if there is a difference in response to exercise between atypical and melancholic depression.

Methodology: We reviewed 120 articles in Pub Med and Google Scholar published between the years 1988-2007 and selected only those that focused on exercise as a treatment for depression.

Results: Multiple studies have shown the effectiveness of exercise in the treatment of depression. Prospective epidemiological studies have reported that those who become active or stay fit are less likely to suffer clinical depression. A meta-analysis published on 1998 concluded that physical activity is associated with a decreased risk of developing clinical depression and its efficacy is of similar magnitude as psychotherapeutic interventions. One study reported that even a single bout of exercise improves anxiety, depression and increases positive well-being and vigor scores.

A recent review of reviews concluded that there is a moderate association between physical activity and indices of subjective well-being. There is also extensive literature regarding exercise as a positive and pleasurable experience. According to the DSM IV there are two contrasting subtypes of depression, atypical and melancholic. One of the critical differences between this two, is the positive mood reactivity to usual pleasurable stimuli in patients with atypical depression. However no studies comparing the response to exercise therapy in atypical vs. melancholic depression were found.

Conclusions: Patients with atypical depression may respond better to exercise treatment due to their ability to find pleasure with positive stimuli. Studies focusing on the effectiveness of exercise in these subtypes of depression are needed.

**REFERENCES:**

1. Craft LL: Exercise and clinical depression: examining two psychological mechanisms. Psychol Sport Exerc 2005;6:151-171
2. Keneth R Fox: The influence of physical activity on mental well-being. Public Health Nutrition 1999;2(3a):411-418

**NR3-076**

## MEDICATION TREATMENT PERCEPTIONS, CONCERNS AND EXPECTATIONS AMONG INDIVIDUALS WITH TYPE I BIPOLAR DISORDER

*Martha Sajatovic, M.D. Dept. of Psychiatry - HPV5080Uni-*

*versity Hospitals Case Medical Center 11100 Euclid Ave., Cleveland, OH 44106, Janis Jenkins, Ph.D., Kristin A. Cassidy, M.A., William J. Meyer, B.S., Jane A. West, B.A., Omar Fattal, M.D., David Muzina, M.D., Roknedin Safavi, M.D., Elizabeth Singer, B.A., Elisa Colangelo B.S., Douglas Smith, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to have a greater understanding of treatment expectations and concerns among individuals with bipolar disorder.

**SUMMARY:**

Introduction: Subjective experience with medication treatments may affect illness outcomes among populations with bipolar disorder (BD). This study qualitatively evaluated perceived treatment effects, concerns and hopes/expectations among 90 individuals with BD. Methods: Adults with type I BD confirmed by the Mini Neuropsychiatric Inventory (MINI), mean age 36.6 years, 50% women, 74.2% Caucasion, 15.7% African-American completed a semi-structured ethnographic interview that was audiotaped, transcribed, coded and analyzed (utilizing Atlas Ti software) along emergent themes. Results: Individuals generally perceived benefit from drug treatment, primarily in the form of "stabilizing" or "balancing" mood (36%), decreased anxiety/depressive symptoms (21%) and improved sleep (13%). While 1/3 of individuals denied specific concerns regarding medication treatments, nearly ¼ (23%) of individuals expressed fears over possible long-term side effects, particularly diabetes or liver/kidney damage. Individuals cited media stories and advertisements regarding possible risks with atypical antipsychotic medications. Hopes and expectations for bipolar medication treatment ranged from symptom or functional status-based such as desiring mood stabilization (17%), and elimination of specific symptoms (15%) to more global hopes such as "being normal (19%) or having their illness "cured" (19%)

Conclusions: While individuals with BD appreciate the mood-stabilizing effects of medications, concerns regarding long-term adverse effects and discrepancy between actual effects of medications and hoped for outcomes can be substantial. Subjective experience with medications should be explored in order to optimize treatment collaboration and outcomes. This study was supported by NIMH K 23-MH0655997, a grant from the Ohio Department of Mental Health, and a grant from the Fairview/Lutheran Foundation.

**REFERENCES:**

1. Bauer MS: Supporting collaborative practice management: the Life Goals Program, in Psychological Treatments of Bipolar Disorder. Edited by Johnson SL, Leahy RL. New York, NY, Guilford Press, 2004, pp 203-225.
2. Berk M, Berk L, Castle D: A collaborative approach to the treatment alliance in bipolar disorder. Bipolar Disord 2004; 6(6): 504-518.

**NR3-077**

## QUETIAPINE IN THE MAINTENANCE TREATMENT OF BIPOLAR I DISORDER: COMBINED DATA FROM TWO LONG-TERM PHASE III STUDIES

*Martin Brecher, M.D. 1800 Concord Pike, WilmingtonDE 19850-5437, Henrik M. Anderssen, Björn Paulsson, MD*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand that quetiapine, when given in combination with lithium or divalproex, can prevent the recurrence of mania or depression mood events in patients with bipolar I disorder, regardless of the polarity of the index episode. Participants may choose to apply these findings to medication selection when treating patients with bipolar illness.

**SUMMARY:**

Introduction: Combined data are presented from two long-term-studies (D1447C00126; D1447C00127) that examined the efficacy and safety of quetiapine (QTP) in combination with lithium (Li) or divalproex (DVP) in the prevention of mood events (mania, mixed, or depression) in patients with bipolar I disorder.

Methods: The studies consisted of pre-randomization and randomized phases. Pre-randomization-patients received open-label QTP (400–800 mg/day; flexible, divided doses) with Li or DVP (target serum concentrations 0.5–1.2 mEq/L and 50–125 ?g/mL) for a mania, mixed, or depression event to achieve =12 weeks of clinical stability. Thereafter, patients were randomized to double-blind treatment with QTP (400–800 mg/day, flexibly dosed)+Li/DVP, or placebo+Li/DVP for up to 104 weeks. The primary endpoint was the time to recurrence of any mood event; defined by medication initiation, hospitalization, YMRS or MADRS scores =20 at 2 consecutive assessments, or study discontinuation due to a mood event.

Results: 3414 patients entered the stabilization phase and 1326 were randomized and received =1 dose of study medication. Rates of recurrence were 19.3% vs 50.4% for QTP and placebo groups. The risk of recurrence of a mood event was significantly reduced in the QTP+Li/DVP relative to the placebo+Li/DVP group (HR=0.30, P<0.001). This effect was also seen for depression and mania (HRs=0.30, P<0.001). Safety data were consistent with the recognized safety profile of QTP. The incidence density of a single emergent fasting blood glucose value =126 mg/dL was higher in patients randomized to QTP+Li/DVP (10.7%, 18.03 patients per 100 patient-years) than in patients randomized to placebo+Li/DVP (4.6%, 9.53 patients per 100 patient-years).

Conclusions: QTP in combination with Li or DVP is significantly more effective than Li or DVP alone in increasing the time to recurrence of any mood event in patients with bipolar I disorder.

Supported by funding from AstraZeneca Pharmaceuticals LP.

**REFERENCES:**

1. Suppes T, Dennehy EB, Hirschfeld RM, Altshuler LL, Bowden CL, Calabrese JR, Crismon ML, Ketter TA, Sachs GS, Swann AC: The Texas Implementation of Medication Algorithms: update to the algorithms for the treatment of bipolar disorder. J Clin Psychiatry. 2005;66:870–886.
2. Chengappa KNR, Williams P: Barriers to the effective man agement of bipolar disorder: a survey of psychiatrists based in the UK and USA. Bipolar Disord. 2005;7(suppl 1):38–42.

**NR3-078**

## RISK OF RELAPSE AMONG BIPOLAR DISORDER PATIENTS WHO ARE NON-ADHERENT TO ANTI-PSYCHOTIC THERAPY AFTER HOSPITAL DIS-

**CHARGE**

*Maureen Lage, Ph.D. HealthMetrics Outcomes Research 120 Anchorage Circle, Groton, CT 06340, Mariam Hassan, PhD*

**EDUCATIONAL OBJECTIVE:**

At the end of this presentation, participants should gain increased awareness of the risk of relapse among patients with bipolar disorder who do not adhere to their antipsychotic (AP) treatment after discharge from the hospital.

**SUMMARY:**

Objective: To evaluate the relationship between non-adherence to AP medication after hospital discharge and the risk of relapse as measured by re-hospitalization. Methods: Claims data from commercial insurance plans were obtained (2000-2006). Patients (18-64 y) were included if they were hospitalized with a diagnosis of bipolar disorder, received a prescription for an AP between 0 and 14 days post discharge, and had continuous insurance coverage from 6 months prior through 12 months post date of initial use of AP medication (N=1973). Adherence was determined in terms of the gap in AP refills and the Medication Possession Ratio (MPR, ie, the number of unique days of prescribed medication during the treatment period). The longest time period between the end of one prescription for an AP and receipt of the next prescription for an AP was considered a gap. Multivariate stepwise logistic regressions that controlled for patient characteristics, type of bipolar disorder, general health status, and comorbid conditions were used to assess the relationship between medication nonadherence and re-hospitalization. Results: Average MPR among patients discharged from hospital was 0.46 (±0.32). In the 12 month post-period, 79.5% of patients had a gap >30 days between refills of AP. Patients with a gap in their AP medication use >30 days had a significantly higher risk of any hospitalization (Odds Ratio [OR]=1.46; 95% CI 1.14–1.87) including mental health-related hospitalization (OR=1.43; 95% CI 1.12–1.83). Patients with an MPR =0.75 (26.8%) were associated with a lower risk of any hospitalization (OR=0.73; 95% CI 0.56–0.92) and mental health-related hospitalization (OR=0.76; 95% CI 0.60–0.96). As medication adherence increased, the risk of re-hospitalization significantly decreased. Conclusion: Adherence to AP medications is associated with a reduced risk of relapse in patients with bipolar disorder.

Supported by AstraZeneca Pharmaceuticals LP.

**REFERENCES:**

1. Mattke S, Jain A, Sloss EM, et al. Effect of disease manage ment on prescription drug treatment: What is the right quality measure? Disease Management. 2007;10:91-100.
2. Sajatovic M, Valenstein M, Blow FC, Ganoczy D, Ignacio RV. Treatment adherence with antipsychotic medications in bipolar disorder. Bipolar Disorders. 2006;8:232-241.

**NR3-079**

## ADHESION AND DERMAL TOLERABILITY OF EMSAM (SELEGILINE TRANSDERMAL SYSTEM) IN HEALTHY VOLUNTEERS

*Melvin Sharoky, M.D. Independent Medical Consultant to Somerset Pharmaceuticals, Inc., Tampa, FL 33607, John.V. Murray, M.D., Jeffrey. Berg, B.S., Ross.A. Baker, Ph.D., M.B.A., Melissa. L. Goodhead, B.S.c.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to understand the adhesion characteristics and dermal tolerability of EMSAM as well as its safety profile in different age groups of healthy volunteers.

**SUMMARY:**

Introduction: EMSAM is a once a day skin patch developed to provide systemic concentrations of selegiline required for the treatment of major depressive disorder (1). This study evaluated tolerability and quantified adhesion characteristics and dermal irritation of EMSAM in healthy non-elderly (18-64 years) and elderly (=>65 years) volunteers.

Methods: This was an open-label, multicenter study of subjects randomized to one of three EMSAM dose groups (6, 9 or 12 mg/24 hr) and one of three application sites (upper torso, including chest and back; upper arm or upper thigh). EMSAM was applied daily for 21 consecutive days. Adhesion was measured on a scale of 0-4. Skin irritation was assessed at 30 min and 24 hr after patch removal and quantified using a 0-7 point scale (2). Statistical comparisons of dermal irritation and adhesion were made between the EMSAM dosage groups, age groups and application sites. Adverse events (AEs) were evaluated throughout the study.

Results: Of the 367 subjects enrolled, 321 completed the study. There were no significant differences in adhesion between dose groups. The elderly group had significantly better ($p<0.0001$) adhesion scores than the non-elderly group. The mean irritation scores for the 30 min assessment ranged from 0.52-0.70; 24 hr scores ranged from 0.05-0.15, where a score of one indicated barely perceptible erythema. Age was not a significant factor overall in irritation by dose or application site within each time point. There were no serious AEs. The percentage of subjects reporting AEs were 38.3% in the 6 mg dose group, 35.5% in the 9 mg group and 50.8% in the 12 mg group. Most AEs were mild and considered unrelated to EMSAM.

Conclusions: EMSAM was safe and well tolerated. Overall adhesion scores showed >75-90% adhesion with minimal irritation for all dose levels, age groups and test sites.

Supported by Bristol-Myers Squibb and Somerset Pharmaceuticals, Inc.

**REFERENCES:**

1. Robinson DS, Amsterdam JD: The selegiline transdermal system in major depressive disorder: a systematic review of safety and tolerability. J Affect Disord 2007:doi:10.1016/j.jad.2007.04.024.
2. Berger RS, Bowman JP. A reappraisal of the 21-day cumulative irritation test in man. J Toxicol Ot & Ocular Toxicol 1982;1:109-115.

**NR3-080**

## ASSESSING THE TRUE TREATMENT EFFECT OF ACTIVE TREATMENT VERSUS PLACEBO THERAPY IN PATIENTS WITH SEVERE MDD

*Michael E Thase, M.D. 3535 Market StreetRoom 689, Philadelphia, PA 19104, Sidney H. Kennedy, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to investigate whether the effect of treatment is equal for all patients, or whether a subgroup of patients account for most of

the true treatment effect.

**SUMMARY:**
Objective: To investigate whether the effect of treatment is equal for all patients, or whether a subgroup of patients account for most of the true treatment effect.
Methods: The analyses were limited to severely depressed patients (baseline MADRS >=30) from randomised placebo-controlled escitalopram trials in adults with major depressive disorder (MDD) (1). Potentially, this could limit the applicability of the conclusions to severely depressed patients. The distributions of final MADRS scores at end of study (Week 8, LOCF) were compared for placebo and escitalopram (chi-square test). To investigate if the treatment effect is the same for all patients (2), the mean treatment difference (5 MADRS points) was subtracted from the scores of placebo-treated patients with final MADRS scores >=5. By doing this, the two distributions would have the same mean; if the effect of treatment was constant; the two plots should be roughly identical. An attempt was made to find a model that would estimate the true effect of escitalopram. Results: The chi-square test for equal distribution of MADRS total score gave a test value of 40.66, and a p-value of 0.0006 (DF=15). After subtracting 5 MADRS points from all placebo scores the chi-square value was 34.53, with a p-value of 0.0029 (DF=15). This showed that the effect of active treatment was not the same for all patients. A model in which 11 MADRS points were subtracted from 50% of the placebo scores was a better fit to the data (chi-square of 18.93, p-value 0.2793, DF=15).
Conclusion: The effect of treatment with escitalopram is not the same for all patients. A model suggesting a clinically relevant effect of 11 points on the MADRS scale for 50% of severely depressed escitalopram-treated patients was a better fit to the data. Study supported by H. Lundbeck A/S.

**REFERENCES:**

1. Kennedy SH, Andersen HF, Lam RW: Efficacy of escitalo pram in the treatment of major depressive disorder com pared with conventional selective serotonin reuptake inhibi tors and venlafaxine XR: a meta-analysis. J Psychiatry Neu rosci 2006;31:122-131.
2. Moncrieff J, Kirsch I. Efficacy of antidepressants in adults. BMJ 2005;331:155-157.

**NR3-081**

## OUTCOME OF ANTIDEPRESSANT TREATMENT FOR BIPOLAR DEPRESSION UNDER OPEN VERSUS RANDOMIZED DOUBLE BLIND CONDITIONS IN STEP-BD

*Michael H Allen, M.D. Department of PsychiatryUniversity North Pavillion4455 East 12th Avenue, Denver, CO 80262, Joseph Goldberg, M.D., Chris Schneck, M.D., Charles Bowden, M.D., Miriam Dickinson, Ph.D., Alan Swann, M.D., Gary Sachs, M.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to describe the risks and benefits of antidepressants in bipolar depression.

**SUMMARY:**
Introduction: Traditional antidepressants (AD) are widely used in bipolar disorder despite potential problems and a lack of supporting evidence. A randomized, double blind, placebo-controlled equipoise study within STEP-BD found trends favoring mood stabilizer (MS) alone over the combination of AD and MS, but found no increase in switch rates with AD-MS combinations compared to MS alone. However, due to the small proportion of depressed subjects randomized, questions remain regarding the generalizability of th0 findings. Hypothesis: In open, naturalistic treatment using the same clinicians and measures as the STEP-BD randomized controlled trial, AD's will prove superior to MS alone. Methods: A first prospectively identified episode of BP1 or BP2 depression was identified for 1790 of 4360 subjects; 1021 had received no AD in the prior 30 days, 950 had at least one subsequent visit and 862 were followed at least 60 days. Of these, 720 were receiving MS and 142 were not. Of the MS group, 211 received an AD within 60 days of the index visit and 509 did. For the group not on MS, 51 received AD and 91 did not. Outcomes included transient remission defined as =2 clinically significant symptoms for 1-7 weeks, durable recovery defined as sustained remission for 8 or more weeks, and treatment emergent affect switch. Results: Of MS treated patients, 211 who received AD did no better in terms of transient remission (38.4% vs. 36.2%, p=.63) or durable recovery (36.0% vs. 34.0%, p=.31) nor did they experience more treatment emergent affective switch (13.6% vs 15.45%, p=.56). The group receiving AD with MS achieved transient remission more often than those treated with AD without MS (74.4% vs. 57.1%, p=.13). Discussion: Despite attempting to select appropriate patients, investigators did not alter the frequency of response or affective switch. AD alone appeared least effective. Because there was no placebo, these results may be more generalizable.

**REFERENCES:**

1. Effectiveness of Adjunctive Antidepressant Treatment for Bipolar Depression (2007). Sachs GS, Nierenberg AA, Ca labrese JR, Marangell LB, Wisniewski SR, Gyulai L, Fried man ES, Bowden CL, Fossey MD, Ostacher MD, Ketter TA, Patel J, Hauser P, Rapport D, Martinez JM, Allen MH, Miklowitz DJ, Otto MW, Dennehy EB and Thase ME. New England Journal of Medicine 356:1711-22, 2007.
2. Belmaker RH. Treatment of bipolar depression. N Engl J Med 351:476, 2007.

**NR3-082**

## CHANGES IN SLEEP DURATION AND CHANGES IN MOOD IN BIPOLAR DISORDER

*Michael Bauer, M.D. 1Department of Psychiatry and Psychotherapy, Universitätsklinikum Carl Gustav Carus, Technische Universität, Dresden, Germany 01307, Tasha Glenn,Ph.D., Paul Grof, M.D., Natalie Rasgon, M.D., Martin Alda, M.D., Mazda Adli, M.D., Peter C Whybrow, M.D.*

**EDUCATIONAL OBJECTIVE:**
The viewer should understand that in patients with bipolar disorder a change in normal sleep duration of greater than 3 hours may signify that a large mood change is imminent. Sleep duration, rather than sleep onset or sleep offset was found to be the most useful measure to distinguish oncoming mood changes.

**SUMMARY:**
Objective: Sleep disturbances frequently precede the onset of both mania and depression. This study investigated whether

changes to sleep duration (sleep plus bedrest), sleep onset, or sleep offset would be most useful to distinguish oncoming large changes in mood.
Methods: Self-reported mood and sleep data (mean 265 ± 103 days) from 101 outpatients receiving standard treatment were analyzed. A time series of daily mood, sleep duration, sleep onset and sleep offset was available for each patient. The cross correlation function was used to determine the latency between a change in sleep and change in mood for time shifts of between –7 to 7 days.
Results: An inverse correlation was found between a change in sleep duration and change in mood in 42 of 101 patients (42%), usually with a time latency of one day. The relationship between sleep duration and mood was stronger than that found for sleep onset or sleep offset. Patients with a significant cross-correlation between sleep and mood reported about two-thirds of all large sleep changes of >3 hours and four-fifths of all large mood changes (>20 on 100-unit scale).
Conclusion: In most patients with a significant correlation between sleep and mood, the mood change occurred on the day following the sleep change. A change in sleep duration of more than 3 hours may indicate that a large mood change is imminent.

**REFERENCES:**


1. Bauer, M, Grof, P, Rasgon, N, Bschor, T, Glenn, T, Whybrow, PC: Temporal relation between sleep and mood in patients with bipolar disorder. Bipolar Disord 2006; 8,160-167
2. Jackson, A, Cavanagh, J, Scott, J: A systematic review of manic and depressive prodromes. J Affect Disord 2003; 74,209-221


**NR3-083**

## RE-EVALUATING DSM-IV CRITERIA FOR ALCOHOL DEPENDENCE IN BIPOLAR DISORDER


*Michael J. Ostacher, M.D. 50 Staniford Street, Suite 580, Boston, MA 02114, Andrew A. Nierenberg, M.D., Sarah M. Bhagat, B.A., Rebecca M. Ametrano, B.A., Claire Tilley, B.A., Astrid Desrosiers, M.D., Gary S. Sachs, M.D., Roger D. Weiss, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant will understand whether the *DSM-IV* diagnosis for dependence is a valid measure for individuals with bipolar disorder (BD).

**SUMMARY:**


Objective: In the presence of BD, diagnosing co-morbid alcohol dependence can be challenging. It can be difficult to determine if *DSM-IV* criterion that requires a persistent physical or psychological problem is due to alcohol or due to the BD. Therefore, we investigated the contribution to the diagnosis of alcohol dependence in bipolar disorder of the *DSM-IV* criterion of continued use despite knowledge of having a persistent or recurrent physical or psychological problem due to alcohol (Item 7). We hypothesized that fewer subjects with BD would meet criteria for AD if this criterion was excluded. Methods: 542 subjects with BD were evaluated at the Massachusetts General Hospital Bipolar Clinic and Research Program between September 1999 and September 2005. Evaluations were completed using structured clinical interviews by two independent investigators. Results: 163 subjects (30%) met lifetime *DSM-IV* criteria for AD. Sixty (11%) also met criteria for current AD. Those individuals with a diagnosis of AD endorsed an average of 5.44 dependence criteria (SD=1.44). When the criterion of interest was excluded, 151 subjects (93%) still fulfilled *DSM-IV* criteria for AD. Conclusions: Nearly all subjects with BD and AD would still meet dependence criteria even if item 7 were excluded. This suggests that item number 7 does not result in substantial overdiagnosis of AD in patients with BD.


**REFERENCES:**


1. Schuckit MA, Smith TL, Danko GP, Bucholz KK, Reich T, Bierut L. Five-year clinical course associated with *DSM-IV* alcohol abuse or dependence in a large group of men and women. Am J Psychiatry. 2001 Jul;158(7):1084-90.
2. Hasin, DS, Grant, BF: The co-occurrence of *DSM-IV* alcohol abuse in *DSM-IV* alcohol dependence. Arch Gen Psychiatry 2004; 61: 891-896.


**NR3-084**

## ZIPRASIDONE MONOTHERAPY IN BIPOLAR II DEPRESSION: AN OPEN TRIAL


*Michael Liebowitz, M.D. NY State Psychiatric Institute1051 Riverside Drive, Unit 120, New York, NY 10032, Ester Salman, B.S., Arnold Mech, M.D., David Dunner, M.D., Rajiv Pratap, B.Tech.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to more effectively treat bipolar II depression, and should be more familiar with how treatment studies in bipolar depression are conducted.

**SUMMARY:**


Introduction: The use of atypical neuroleptics for bipolar depression is currently being studied extensively. Given ziprasidone's favorable side effect profile as compared to other atypical neuroleptics, and the dearth of studies of this drug in depressed bipolar patients, we initiated an 8 week open monotherapy trial in bipolar II patients suffering major depressive episodes. Method: Patients met *DSM IV* criteria for bipolar II disorder, were in a major depressive episode, and had a 17 item HAM-D score of 18 or greater. Ziprasidone was begun at 20mg bid and raised step wise to 60 mg bid if needed and tolerated. Change was assessed on the HAM-D(primary outcome), HAM-A, MADRS, YMRS, CGI-S and CGI-I scales. Safety and tolerability were assessed. The study was approved by Asentral IRB and all patients gave written informed consent. Results: Twenty patients (including 4 early terminators) have completed this ongoing study. For all patients, using LOCF, mean baseline and endpoint scores were as follows: HAM-D 21.5(2.4) and 10.0(6.3); HAM-A 19.6(4.1)and 11.0(6.1); MADRS 28.0(5.0) and 13.1(8.6); YMRS 7.9(6.0) and 3.5(3.5); and CGI-S 4.1(0.3) and 2.25(1.0). Significant improvement was seen at all visits on HAM-D and CGI-S (beginning week 1) and on MADRS and HAM-A (beginning week 2). Eight patients (40%) were responders and 4 (20%) remitters at week 1; 12(60%) were responders and 9(45%) remitters by the end of treatment. There were no serious AE's and no patient became manic. Occasional mild hypomania responded to dosage reduction. Mean end of study dose was 53 mg/day. Conclusions: Ziprasidone at a relatively low dose appears to be a rapid, effective and well tolerated treatment for bipolar II patients experiencing major depression. However, the findings must be confirmed by larger, controlled trials.

This study was supported by a grant from Pfizer, Inc.

**REFERENCES:**

1. Sachs GS, Nierenberg AA, Calabrese JR, Marangell LB, Wisniewski SR, Gyulai L et al: Effectiveness of adjunctive antidepressant treatment for bipolar depression. N Engl J Med 2007; 356:1711-1722.
2. Farrelly N, Sachs G, Moller H, Grunze H: Recent advances in the treatment of bipolar depression. Clinical Approaches in Bipolar Disorders 2007; 6(1):20-27.

**NR3-085**

## RESIDUAL SYMPTOMS IN DEPRESSIVE PATIENTS TREATED IN PRIMARY CARE

*Miquel A Roca, Ph.D. Universidad Islas BalearesDep. PsicologiaCtra Valldemossa km 7.5, Palma de MallorcaSpain 07122, Enrique Baca, Ph.D., Miquel Roca, Ph.D., Salvador Cervera, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the importance of residual symptoms in depression, focused in the primary care patients and different option for treatment.

**SUMMARY:**

Introduction: Frequently most depressive patients continue having symptoms after treatment. Residual symptoms are common, not only in patients with partial response but also in those who fulfil remission and response criteria. The aim of this study is to know which residual symptoms remain after six-month treatment with venlafaxine in depressive patients in primary care and psychiatry.
Methods: Data from 2 multicenter, open-label, prospective, naturalistic studies carried out in Spain will be used. The instruments used are the Hamilton for Depression Rating Scale (HAM-D17) and the Hamilton Anxiety Scale (HAM-A).
Results: The sample is made up of 10993 primary care patients. After 6 months of treatment, 74.9% of the patients achieved remission. An individual analysis of the remitters' items, considering a =2 score as residual symptoms according to HAM-D17, showed that the item that stands out is "Feelings of guilt" (item 2), with 28.3% of patients (N=2186). The scores for the other items that score = 2 remain below 1,0% in all cases. "Weight loss", "Somatic symptoms general" and "Suicidal ideation" are the items less scored by patients with residual symptomatology, with 0% of patients.
Conclusion: The number of residual symptoms according to HAM-D17 is minimal after treatment with venlafaxine extended release. Only "Feelings of guilt" is reported by a significant number of patients. The remaining symptoms only persist in a percentage below 1,0%.

This study has been supported by Wyeth Farma, Spain.

**REFERENCES:**

1. Menza M, Marin H, Opper RS. 2003. Residual symptoms in depression: Can treatment be symptom –specific? J Clin Psychiatry 64;5: 516-523
2. Thase ME. Remission rates during treatment with venlafaxine or selective serotonin reuptake inhibitors. Br J Psychiatry 2001; 178 (3): 234-241.

**NR3-086**

## ASENAPINE PHARMACOKINETICS: INFLUENCE OF INHIBITION OF GLUCURONIDATION BY VALPROATE

*Mireille Gerrits, Organon, a part of Schering-Plough Corporation, PO Box 20, Oss, Netherlands 5340 BH, Edwin Spaans, J.M. Ad Sitsen, Henrik J.M.M. de Greef, Pierre A.M. Peeters*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) describe how valproate affects the pharmacokinetics of asenapine and its N-glucuronide and N-desmethylasenapine metabolites; and 2) discuss potential clinical consequences of the interaction of valproate and asenapine.

**SUMMARY:**

Objective: Asenapine is a novel psychopharmacologic agent being developed for the treatment of schizophrenia and bipolar disorder. Asenapine is extensively metabolized, with N-glucuronide (N-gluc) and N-desmethylasenapine (desM) as two of its major metabolites, both of which are biologically inactive. Valproate, an anticonvulsant drug used as a mood stabilizer in bipolar disorder, is a glucuronyltransferase inhibitor. We investigated the pharmacokinetic interaction between asenapine and valproate. Methods: In this open-label, crossover study, 24 healthy volunteers received two single sublingual doses of asenapine 5 mg, once alone and once under steady-state exposure to valproate (in randomized order). Blood samples collected up to 72 hours after asenapine dosing were analyzed for asenapine and its metabolites using liquid chromatography-mass spectometry. Pharmacokinetic variables were calculated and drug interactions (asenapine during steady-state valproate versus asenapine alone) were tested using analysis of variance. Results: Steady-state exposure to valproate did not affect asenapine pharmacokinetics but did decrease formation of the N-gluc and desM metabolites. For N-gluc, AUC and Cmax were decreased by factors of 7.4 and 6.6, respectively. For desM, AUC was decreased by 30%, but Cmax was not significantly altered. Conclusions: Administration of asenapine during steady-state exposure to valproate did not affect the pharmacokinetics of asenapine itself but slightly decreased the formation of its desM metabolite and significantly decreased the formation of its N-gluc metabolite. Because N-gluc does not contribute to the therapeutic effect of asenapine, this observation is not expected to be clinically relevant. This research was supported by Organon, a part of Schering-Plough Corporation.

**REFERENCES:**

1. DeVane CL: Pharmacokinetics, drug interaction, and toler ability of valproate. Psychopharmacol Bull 2003; 37: 25-42.
2. Wen X, Wang JS, Kivistö KT, Neuvonen PJ, Backman JT: In vitro evaluation of valproic acid as an inhibitor of human cy tochrome P450 isoforms: preferential inhibition of cyto chrome P450 2C9 (CYP2C9). Br J Clin Pharmacol 2001; 52:547-553.

**NR3-087**

## PSYCHIATRIC COMORBIDITY IN CHRONIC MIGRAINE:PRESENTATION, TREATMENT, IMPACT AND OUTCOME

*Muhammad A Abbas, M.D. 109 Marlboro Ro, Upper Darby, PA 19080, William B. Young, M.D., Mary Hopkins, R.N.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to acknowledge that depression can be a consequence of living with chronic, disabling headaches and may respond as the headaches improve. However, preexisting headache or anxiety may precipitate or exacerbate headaches in patients who are headache-prone. Headaches or affective distress may not improve until the comorbid psychopathology improves.

**SUMMARY:**
Objective: Patients with chronic migraine frequently have psychiatric disorders. A framework that uses this knowledge to improve the treatment plan has not been established. Methods: We prospectively studied 82 subjects with chronic migraine and a psychiatric comorbidity to see the effects of the psychiatric comorbidity on presentation and treatment, and its impact on migraine outcome. Results: Eighty-two subjects consented to the study. Sixty-nine subjects were women (84%) and 13 were men (16%) table 1. Sicty-six patients( 80%) have completed the 3, 6, and 12 month data, while 68 patients (82%) completed 3 and 6 months data. The mean age was 39.7±13.2 years. The mean age of onset of episodic migraine was 18.6±11.5 years, and the mean duration of daily headache was 7.0±8.0 years. Twenty-three patients (28%) had aura (16 visual, 1 sensory, and 6 mixed). Seventy one (86.6%) of the study population overused acute treatment, with a mean duration of overuse of 4.3±5.4 years. In the medication-overuse population, the average number of abortive medications taken per day was 4.4 (range 1-16), the average number of days per week with abortive use was 6.3 ( range 1-7), and the average number of months with medication overuse was 56 (range 3-300). Subjects overused triptans, narcotics, NSAIDS, barbiturates, caffeine and over-the-counter analgesics. Headache frequency and intensity were 6.2±5.9 and 7.8±3.4 per month, respectively. At 12 months, the mean exacerbation headache frequency and intensity decreased to 4.0±4.2 and 7.6±1.8, respectively. The headache severity index was 6.5±1.5 at headache onset and 4.5±2.5 at 12 months ($p<0.0001$ for difference, Dunnett's method for multiple comparisons). Results: Our study is consistent with other studies that show a high prevalence of psychiatric comorbidity in CM.16 Regardless of psychiatric comorbidity, our patients had decreased headache severity and intensity over time.

**REFERENCES:**
1. Marazziti D, Toni C, Pedri S, et al. Headache, panic disorder and depression: comorbidity or a spectrum? Neuropsychobi ology 1995;31:125-129.
2. Mitsikostas DD, Thomas AM. Comorbidity of headache and depressive disorders. Cephalalgia 1999;19:211-217.

**NR3-088**

## ADJUNCTIVE ER QUETIAPINE FUMARATE (XR) IN PATIENTS WITH MAJOR DEPRESSIVE DISORDER AND INADEQUATE ANTIDEPRESSANT RESPONSE

*Nizar El-Khalili, M.D. Alpine Clinic3660 Rome Dr LafayetteIN 47905USA, Lafayette, IN 47905, Mark Joyce, M.D., Sarah Atkinson, M.D., Robert Buynak, M.D., Catherine Datto, M.D., Petter Lindgren, M.Stat., Hans A Eriksson, M.D., Martin Brecher, M.D., D.MSc., M.B.A.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to demonstrate knowledge and understanding of the efficacy and safety of once-daily extended release quetiapine fumarate (quetiapine XR) in combination with an antidepressant in patients with major depressive disorder and an inadequate response to antidepressant therapy. To become familiar with results of a double-blind, randomized, placebo-controlled study of quetiapine XR in these patients.

**SUMMARY:**
Objective:Major depressive disorder (MDD) is a prevalent condition associated with impaired functioning.1,2 This study (D1448C00006) assessed the efficacy of once-daily extended release quetiapine fumarate (quetiapine XR) + antidepressant (AD) compared with AD alone in patients with MDD and inadequate response to AD therapy. Methods: 6-week randomized phase (2-week post-treatment phase), multicenter, double-blind study. Inclusion criteria:DSM-IV MDD; HAM-D score=/>20, HAM-D item 1 (depressed mood) score=/>2 at enrolment; inadequate response to AD during current episode. Patients received AD (SSRI/SNRI/TCA/bupropion) + quetiapine XR 150, 300mg/day or placebo. Primary endpoint: change from randomization to Week 6 in MADRS score. Other assessments:Week 6 MADRS response (=/>50% reduction in score from randomization) and remission (MADRS total score =/<8); HAM-D; CGI-S. Adverse events (AEs) were recorded throughout the study. Results:446 patients were randomized:148, 150, and 148 to quetiapine XR 150, 300mg/day and placebo, respectively. Mean baseline scores:MADRS 27.2, 27.6, and 27.6; HAM-D 24.0, 24.0, and 24.2, respectively. Quetiapine XR 300mg/day+AD showed significant advantage vs placebo + AD for: 1) change in MADRS total score at Week 6 (-14.70 vs -11.7; $p<0.01$); 2) improvement in MADRS from Week 1 onwards; 3) response (58.9% vs 46.2%; $p<0.05$); 4) remission (42.5% vs 24.5%; $p<0.01$); 5) HAM-D change at Week 6 (-13.53 vs -10.80; $p<0.01$); 6) CGI-S change at Week 6 (-1.52 vs -1.23; $p<0.05$). For quetiapine XR 150mg/day+AD improvements in these variables were not significantly different vs placebo, except for MADRS improvement at Weeks 1 and 2, and HAM-D change at Week 6. Most common AEs (>10% Weeks 1-6) were dry mouth, somnolence, sedation, dizziness, constipation, fatigue, and headache. Conclusion:In patients with MDD, adjunct quetiapine XR 300mg/day is effective and well tolerated, with symptom improvement observed as early as Week 1. Study sponsored by AstraZeneca.

**REFERENCES:**
1. Hasin DS, Goodwin RD, Stinson FS, Grant BF: Epidemiol ogy of major depressive disorder: results from the National Epidemiologic Survey on Alcoholism and Related Condi tions. Arch Gen Psychiatry 2005; 62:1097-1106.
2. Prince M, Patel V, Saxena S, Maj M, Maselko J, Phillips MR, Rahman A: No health without mental health. Lancet 2007; 370:859-877.

**NR3-089**

## MIRTAZAPINE VERSUS OTHER ANTIDEPRESSANTS IN THE ACUTE-PHASE TREATMENT OF ADULTS WITH MAJOR DEPRESSION: SYSTEMATIC REVIEW AND META-ANALYSIS

*Norio N Watanabe, M.D. Department of Psychiatry and Cognitive-Behavioral Medicine, Nagoya CityUniversity Graduate School of Medical Sciences, Mizuho-cho, Mizuho-ku, Nagoya-JAPAN, Ichiro M Omori, Ph.D., Atsuo Nakagawa, M.D., Andrea Cipriani, M.D., Corrado Barbui, M.D., Hugh McGuire, M.Sc., Rachel Churchill, Ph.D., and Toshi A Furukawa, Ph.D. on behalf of the Meta-Analysis of New Generation Antidepressants (MANGA) Study Group*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to be familiar with the findings from the best available evidence from RCTs on the efficacy of mirtazapine for depression.

**SUMMARY:**

Objective:To conduct a comprehensive systematic review and meta-analysis of the efficacy and tolerability of mirtazapine over other antidepressants (ADs) in the treatment of major depression.Data Sources:Studies were initially identified through comprehensive electronic searches up to June 2006. No language restriction was imposed. Pharmaceutical companies and experts in the field were contacted for more studies. Study Selections:Twenty-five randomized controlled trials were included. Data extraction:Two independent assessors examined trial quality of the trials and extracted data on an intention-to-treat basis.

Data Synthesis:Our primary outcome was the relative risk (RR) of response with the 99% confidence intervals. In relation to the early phase of treatment (at 2 weeks), there were no statistically significant differences between mirtazapine and the tricyclics in terms of the response (RR 0.90, 99%CI: 0.69 to 1.18, P=0.30) or remission (0.87, 0.52 to 1.47, P=0.50) outcomes, but mirtazapine was superior to the SSRIs in terms of both the response (1.36, 1.13 to 1.64, P<0.0001) and remission (1.68, 1.20 to 2.36, P<0.0001). In the subgroup analyses, mirtazapine significantly produced more response than paroxetine (2.02, 1.09 to 3.75, P=0.003) and venlafaxine (1.77, 1.08 to 2.89, P=0.003). At the end of acute-phase treatment (6-12 weeks), no significant differences were observed in the efficacy outcomes. No significant differences were observed between mirtazapine and the other ADs in terms of the total number of dropouts due to any reason or the total number of dropouts due to the development of side effect (during the trials either.

Conclusions:Although mirtazapine is likely to have a faster onset of action than SSRIs, no significant differences were observed at the end of 6- to 12-weeks' treatment. Clinicians should focus on other practically relevant considerations to tailor treatment to best fit the needs of individual patients.

**REFERENCES:**

1. Cipriani A, Barbui C, Brambilla P, Furukawa TA, Hotopf M, Geddes JR: Are all antidepressants really the same? The case of fluoxetine: a systematic review.J Clin Psychiatry. 2006; 67:850-64.
2. Fava M, Rush AJ, Wisniewski SR, Nierenberg AA, Alpert JE et al.: A comparison of mirtazapine and nortriptyline follow ing two consecutive failed medication treatments for de pressed outpatients: a STAR*D report. Am J Psychiatry 2006;163:1161-72.

**NR3-090**

**SIDE-EFFECT PROFILE OF MIRTAZAPINE IN COMPARISON WITH SSRIS, TRICYCLICS AND OTHER ANTIDEPRESSANTS FOR DEPRESSION: SYSTEMATIC REVIEW AND META-ANALYSIS**

*Norio N Watanabe, M.D. Department of Psychiatry and Cognitive-Behavioral Medicine, Nagoya City University Graduate School of Medical Sciences, Mizuho-cho, Mizuho-ku, Nagoya-JAPAN, Ichiro M Omori, Ph.D., Atsuo Nakagawa, M.D., Andrea Cipriani, M.D., Corrado Barbui, M.D., Hugh McGuire, M.Sc., Rachel Churchill, Ph.D., and Toshi A Furukawa, Ph.D. on behalf of the Meta-Analysis of New Generation Antidepressants (MANGA) Study Group*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to be familiar with the findings from the best available evidence from RCTs on the side-effect profile of mirtazapine for depression.

**SUMMARY:**

Objective:To conduct a systematic review and meta-analysis of the side effect profile of mirtazapine in comparison with other antidepressants (ADs) in the acute-phase treatment of depression.Data Sources:Studies were identified through comprehensive electronic searches up to June 2006. No language restriction was imposed. Pharmaceutical companies and experts in the field were contacted for more studies.Study Selections:Twenty-five randomised controlled trials following up 4842 patients for up to six months were included.

Data extraction:Two independent assessors examined trial quality and extracted data on an intention-to-treat basis.

Data Synthesis:The primary outcome was the relative risk (RR) of the number of patients experiencing side effects classified according to the organ systems. The secondary outcomes included a RR of the number of patients having each side effect and a RR of the number of patients experiencing at least one side effect.

In the primary outcome analyses, patients treated with mirtazapine experienced significantly less gastrointenstinal side effects in comparison with TCAs (RR 0.69, 95%CI 0.49-0.97, P=0.03), dermatological with SSRIs (RR 0.28, 0.17-0.47, P<0.00001) and SNRIs (RR 0.03, 0.01-0.54, P=0.02), cardiovascular with another type of antidepressants (trazodone) (RR 0.24, 0.08-0.76, P=0.01), and genitourinary with SSRIs (RR 0.49, 0.27-0.86, P=0.01). In terms of each side effect, mirtazapine was likely to cause some specific events including weight gain and somnolence compared to other antidepressants. No significant differences were observed in terms of patients experiencing at least one side effect between mirtazapine and other ADs.

Conclusions:

Mirtazapine is less likely to bring gastrointenstinal side effects in comparison with other ADs are, but is more likely to cause weight gain and somnolence. Clinicians should note the these to tailor a treatment to best fit an individual patient's needs.

**REFERENCES:**

1. Brambilla P, Cipriani A, Hotopf M, Barbui C: Side-effect profile of fluoxetine in comparison with other SSRIs, tricyclic and newer antidepressants: a meta-analysis of clinical trial data. Pharmacopsychiatry. 2005; 38:69-77.
2. Gartlehner G, Hansen RA, Carey TS, Lohr KN, Gaynes BN, Randolph LC: Discontinuation rates for selective serotonin

reuptake inhibitors and other second-generation antidepres sants in outpatients with major depressive disorder: a system atic review and meta-analysis. Int Clin Psychopharmacol. 2005; 20:59-69.

**NR3-091**

## CROSS-CULTURAL DIFFERENCES IN THE U.S. AND INDIA DO NOT AFFECT THE EFFICACY OF RISPERIDONE LONG-ACTING INJECTABLE IN BIPOLAR PATIENTS

*Norris Turner, Pharm.D. 1125 Trenton-Harbourton Road, Titusville, NJ 08560, Wayne Macfadden, M.D., Ibo Turkoz, M.S., Tom Haskins, Ph.D., Larry Alphs, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant will recognize that cross-country differences in baseline demography and psychiatric history between patients in the United States and India do not affect the efficacy of risperidone long-acting injectable as adjunctive treatment to treatment as usual (TAU) in delaying time to relapse in patients with frequently relapsing bipolar disorder.

**SUMMARY:**

Introduction: This multinational (United States, India) study is the first controlled trial of a long-acting injectable atypical antipsychotic in patients with bipolar disorder. Baseline demographics, psychiatric history, disposition and primary efficacy data were compared between the two countries. Methods: A double-blind (DB), placebo (PBO)-controlled study that assessed augmentation of treatment as usual (TAU) for bipolar disorder with risperidone long-acting injectable (RLAI) in patients with frequently relapsing bipolar disorder (>=4 mood episodes in the past 12 months) was conducted. TAU consisted of any clinically determined combination of mood stabilizers, antidepressants and anxiolytics; other antipsychotics were tapered off. After a 16-week, open-label (OL) stabilization phase with RLAI+TAU, patients who remitted were eligible to enter the 52-week, DB relapse prevention phase where they received RLAI+TAU or PBO+TAU. Relapse rates were the primary endpoint and data were stratified by country. Results: Of the 275 patients who entered the OL phase, 98 were from the United States and 177 were from India. Patient variables at OL baseline that differed between the United States and India included gender, race, weight and most recent episode. Twenty-three patients in the United States and 116 in India achieved remission in the OL phase and entered the DB phase. In the United States, relapse rates were 23.1% (3/13) with RLAI+TAU and 60.0% (6/10) with PBO+TAU. Rates in India were 22.0% (13/59) and 45.6% (26/57), respectively. The hazard of relapse for country was 0.615, which was not significant (95% CI: 0.30, 1.27; P=0.190). Conclusion: Differences in baseline patient characteristics between the United States and India were observed. Despite these differences, the likelihood of relapse was comparable between the United States and India in patients who received RLAI+TAU vs PBO+TAU. Supported by Ortho-McNeil Janssen Scientific Affairs, L.L.C.

**REFERENCES:**

1. Han C, Lee MS, Pae CU, Ko YH, Patkar AA, Jung IK: Use fulness of long-acting injectable risperidone during 12-month maintenance therapy of bipolar disorder. Prog Neuropsycho pharmacol Biol Psychiatry 2007; 31:1219-1223.
2. Patel V, Andrade C: Pharmacological treatment of severe psy chiatric disorders in the developing world: lessons from India. CNS Drugs 2003; 17:1071-1080.

**NR3-092**

## OLANZAPINE/FLUOXETINE COMBINATION IN TREATMENT-RESISTANT DEPRESSION: AN 8-WEEK OPEN-LABEL EXTENSION

*Olawale Osuntokun, M.D. Lilly Corporate Center, Indianapis IN 46285, David B. Henley, M.D., Michael Case, M.S., Susan B. Watson, Ph.D. (presenting), Giedra M. Campbell, M.A., Sara A. Corya, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to describe the efficacy and safety findings from an 8-week open-label trial extension of olanzapine/fluoxetine combination in patients with treatment-resistant depression.

**SUMMARY:**

OBJECTIVE: To examine the efficacy and safety of olanzapine/fluoxetine combination (OFC) in an 8-week open-label extension trial of treatment-resistant depression (TRD). METHODS: Patients were aged 18 to 65 with TRD, defined as retrospective failure to respond to a non-fluoxetine antidepressant during the current episode plus prospective failure to respond to fluoxetine during an 8-week lead-in phase. During the 8-week double-blind phase, patients had been randomized to OFC, fluoxetine, or olanzapine. During the open-label extension, all patients took OFC (N=460). Baseline was the last visit prior to open label participation. The primary efficacy measure was baseline to endpoint change on the Montgomery-Åsberg Depression Rating Scale (MADRS). RESULTS: Patients who took OFC during the double-blind phase had a significantly lower mean baseline MADRS score (16.0) than patients who took fluoxetine (20.6, p<.001) or olanzapine (19.2, p=.002). Patients from all double-blind phase treatment groups had mean MADRS improvements during the open-label extension: 1.5 pts for the OFC group, 6.0 pts for the fluoxetine group, and 3.8 pts for the olanzapine group. The largest single-week mean changes occurred in the first week following the switch to OFC. Remission (endpoint MADRS <=10) rate was 41.5% by the end of open-label treatment (with some having remitted during the double-blind phase). Adverse events occurring in >=5% of patients were: increased weight, increased appetite, dry mouth, fatigue, somnolence, hypersomnia, dizziness, and sedation. Mean weight change was +2.8 kg, with 8.3% of patients gaining >=10% of body weight. Nonfasting glucose mean change was +2.2 mg/dL. Nonfasting cholesterol mean change was +10.0 mg/dL. CONCLUSION: All double-blind phase groups showed mean improvements in depressive symptoms during the open-label extension. OFC's safety profile was generally consistent with those of its component monotherapies. Research supported by Eli Lilly and Company.

**REFERENCES:**

1. Thase ME, Corya SA, Osuntokun O et al: A randomized, double-blind comparison of olanzapine/fluoxetine combina tion, olanzapine, and fluoxetine in treatment-resistant major depressive disorder. J Clin Psychiatry 2007; 68:224-236

2. Corya SA, Williamson DJ, Sanger TM et al: A randomized, double-blind comparison of olanzapine/fluoxetine combina tion, olanzapine, fluoxetine, and venlafaxine in treatment-re sistant depression. Depress Anxiety 2006; 23:364-372

**NR3-093**

## EFFICACY, TOLERABILITY AND SIDE EFFECT PROFILE OF FLUVOXAMINE FOR MAJOR DEPRESSION: COCHRANE SYSTEMATIC REVIEW

*Omori Ichiro, Ph.D. Mizuhoku Hagiyama 2-21-1-305, Nagoya-Japan 467-0011, Norio Watanabe, M.D., Ph.D., Atsuo Nakagawa, M.D., Tatsuo Akechi, M.D., Ph.D., Andrea Cipriani, M.D., Corrado Barbui, M.D., Hugh McGuire, M.Sc., Rachel Churchill, MSc, Ph.D., Toshi A Furukawa, M.D., Ph.D., on behalf of the Meta-Analysis of New Generation Antidepressants (MANGA) Study Group.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participants should be familiar with the findings from the best available evidence from RCTs on the efficacy of fluvoxamine for depression.

**SUMMARY:**

OBJECTIVE: Given the plenitude of new generation antidepressants (ADs), their relative effectiveness and which new generation AD to prescribe as a first-line agent is an urgent clinical concern. We have been conducting the most up-to-date and comprehensive systematic reviews and meta-analyses of serotonin reuptake inhibitors (SSRIs), serotonin-noradrenaline reuptake inhibitors (SNRIs) and other new generation ADs within the framework of the Cochrane Collaboration. This review presents the updated comprehensive systematic review of fluvoxamine for major depression in adult patients. METHODS: All randomized-controlled trials comparing fluvoxamine against other ADs in treatment for depression were identified through comprehensive electronic search. Reference search of identified **references** and contacting researchers in the field were done. The primary outcome was defined as a relative risk (RR) of response, and the secondary outcome was defined as a RR of remission. Tolerability and side-effect profile were also examined. RESULTS: Fifty-three trials satisfied the eligibility criteria, and 49 of those had appropriate data for the meta-analysis. Fluvoxamine showed no significant difference in comparison with TCAs at end of acute phase both on response (RR 0.99, 99%CI [0.86, 1.14]), and on remission (0.98, [0.71, 1.35]). Fluvoxamine showed no significant difference in comparison with other SSRIs both on response (0.99, [0.85, 1.16]), and on remission (1.01, [0.77, 1.34]). There were no large differences between fluvoxamine and any other ADs in terms of tolerability. There is evidence of differing side effect profiles, especially when comparing gastrointestinal side effects between fluvoxamine and TCAs. CONCLUSIONS: This systematic review indicates there are no significant differences in effectiveness and tolerability between fluvoxamine and other ADs. Clinicians should focus on clinically relevant differences including those in side-effect profiles.

**REFERENCES:**

1. Cipriani A, Barbui C, Brambilla P, Furukawa TA, Hotopf M, Geddes JR (2006) Are all antidepressants really the same? The case of fluoxetine: a systematic review. J Clin Psychiatry 67: 850-864.
2. Cassano GB, Conti L, Massimetti G, Mengali F, Waekelin JS, Levine J (1986) Use of a standardized documentation system (BLIPS/BDP) in the conduct of a multicenter international trial comparing fluvoxamine, imipramine, and placebo. Psy chopharmacol Bull 22: 52-58.

**NR3-094**

## DIFFERENCES IN OUTCOME OF DSM-IV BIPOLAR I AND II DISORDERS

*Outi Mantere, M.D. National Public Health InstituteMannerheimintie 166, Helsinki, Finland FIN-00300, Suominen K, M.D., Ph.D., Valtonen HM, M.D., Ph.D, Arvilommi P, M.D., Leppämäki S, M.D., PhD,Melartin T, M.D., Ph.D., Isometsä E, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand the differences in the course of bipolar I and II disorders and the mechanisms behind the differences.

**SUMMARY:**

Introduction: It remains controversial whether the proportion of time spent in different symptom states differs between BD I and II (1-3), and if so, what the underlying factors are. In this study, we wanted to determine the differences in the outcome of BD I and II patients in a modern secondary-level psychiatric setting, taking into account several possible confounding factors. We hypothesized that the main difference between BD I and II is that BD II patients have a greater proportion of phases that are depressive. As a consequence, since the depressive phases have a longer duration than other phases, BD II patients spend more time ill. Methods: In a prospective, naturalistic study of 191 secondary care psychiatric in- and outpatients diagnosed in an acute phase of BD I or II, 160 patients (85.1%) could be followed for 18 months. Using a life chart, the exact timing of symptom states in follow-up was examined. Differences between BD I (n=75) and II (n=85) in duration of index phase and episode, time to full remission and recurrence, and time in any mood episode were investigated. Results: Patients with BD II spent a higher proportion of time ill (47.5% vs. 37.7%, p=0.02) and in depressive symptom states (58.0% vs. 41.7%, p=0.003) than BD I patients. This was a result of the higher proportion (61.7 % vs. 48.6 %, p=0.03) and mean number (1.69 vs. 1. 11, p= 0.006) of depressive illness phases in BD II, rather than of differences in the duration of depressive phases. Type of index phase strongly predicted the outcome. In linear regression models, both BD II and type of index phase predicted more time spent in depressive symptom states. Discussion: In medium-term follow-up, BD II patients spend about 40% more time in depressive symptom states than BD I patients because a higher proportion of them have depressive phases and the frequency of these is higher. Conclusions: In medium-term, the outcome of BD II may be even worse than of BD I.

**REFERENCES:**

1. Judd LL, Schettler PJ, Akiskal HS, Maser J, Coryell W, Solo mon D, Endicott J, Keller M: Long-term symptomatic status of bipolar I vs. bipolar II disorders. Int J Neuropsychophar macol 2003; 6(2):127-137.
2. Post RM, Denicoff KD, Leverich GS, Altshuler LL, Frye MA, Suppes TM, Rush AJ, Keck PE, Jr., McElroy SL, Luck enbaugh DA, Pollio C, Kupka R, Nolen WA: Morbidity in 258 bipolar outpatients followed for 1 year with daily

prospective ratings on the NIMH life chart method. J 3Clin Psychiatry 2003; 64(6):680-90; quiz 738-9.

**NR3-095**

## CAREGIVER EXPERIENCE AND BELIEFS ABOUT DEPRESSION

*Peter L Cornwall, M.B.B.S St Luke's Hospital*
*Marton Rd, Middlesbrough, United Kingdom TS4 3AF,*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be aware of the importance of caregiver experience in depressive disorders, and in the influence that the caregiver's beliefs about the illness can have on their experience of caregiving.

**SUMMARY:**

Objectives: There have been no longitudinal studies examining caregiver experience in depression. We investigated the experience of caregiving and beliefs about depression longitudinally in a cohort of co-habiting spouses of patients with major depressive disorder. Method: We interviewed 43 depressed patients and their co-habiting spouses separately at baseline and at 6 month follow-up assessing demographic and illness variables, caregiver experience, caregiver distress, and beliefs about depression. Outcome was measured in terms of improvement in IEQ (burden) and GHQ (distress) scores. Results: The spouses reported a moderate level of burden and a marked level of distress at baseline. Severity of burden at baseline was associated with distress and patient-reported illness severity, but not with observer-reported illness severity or spouse neuroticism. Spouses experiencing greater caregiver burden were more likely to endorse autonomous or interpersonal reasons for depression but not biological reasons. At follow-up duration of illness episode alone had a significant effect in predicting variance in change in spouse burden. Patient remission and endorsing autonomous reasons for depression reliably predicted low burden at outcome. Shorter relationship duration and endorsing interpersonal reasons for depression were associated with greater spouse distress at outcome. Discussion: Spouse beliefs have not previously been investigated as a potential factor in determining caregiver experience. The results suggest that where the spouse believes the patient is in someway to blame for the illness, rather than considering interpersonal or biological explanations, this has a detrimental effect of spouse's experience as a caregiver. The study replicates van Wijngaarden et al (2004) in showing that caregiver burden is predicted by a shorter duration of illness. This is the first study showing a relationship between spouse beliefs and caregiver experience.

**REFERENCES:**

1. Cornwall PL, Scott J, Garland A, Pollinger BR: Beliefs about depression in depressed patients and their partners. Behav Cogn Psychoth 2005; 33: 131-138.
2. van Wijngaarden B, Schene AH, Koeter MWJ: Family caregiving in depression: impact on caregivers' daily life, distress and help seeking. J Affect Dis 2004; 81: 211-222.

**NR3-096**

## EFFECTIVENESS OF OPEN ADJUNCTIVE ZIPRASIDONE FOR OBESE AND OVERWEIGHT IN PATIENTS WITH BIPOLAR DISORDER

*Po W Wang, M.D. 401 Quarry Road, Stanford, CA 94304, Kristine L. Keller, B.S.C., Shelly Hill, M.S., Meredith Childers, M.A., Terence A. Ketter, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize that adjunctive ziprasidone may allow weight loss in obese and overweight bipolar disorder patients.

**SUMMARY:**

OBJECTIVE: To assess the effectiveness and tolerability of open adjunctive ziprasidone (ZIP) in obese and overweight patients with bipolar disorders (BD).
METHOD: Seventeen obese and three overweight (overall mean baseline body-mass index, BMI, 31.8±2.5) BD patients (16 female; 6 BD-I, 13 BD-II, 1 BD-NOS) received ZIP starting with 80 mg at bedtime with food or at dinner time and increasing daily by 20 mg/day as necessary and tolerated (mean final dose 198±83 mg/day, range 40-320 mg/day) for a mean 75.9±21.6 days. Weight was assessed at six weekly visits and three bi-weekly visits. Subjects entered the study in diverse mood states. Mean baseline Clinical Global Impression – Severity of Illness (CGI-S) score was 3.0±1.3 (range 1-5), Montgomery-Asberg Depression Rating Scale (MADRS) score was 10.4±10.0 (range 0-32), and Young Mania Rating Scale (YMRS) score was 3.4±4.0 (range 0-14). At baseline all subjects were taking antimanic agents implicated in causing weight gain (atypical antipsychotics in 18, lithium in 6), which could be reduced or discontinued at the investigators' discretion.
RESULTS: Weight decreased significantly at a rate of 0.14 BMI units (0.85 pounds) per week ($p < 0.0001$). Overall mean MADRS, YMRS, and CGI did not change significantly, despite being able to decrease or discontinue other psychotropic medications implicated in causing weight gain in most (18/20) patients. Three patients with chronic treatment resistant depression remitted (CGI-S <= 2). Three patients discontinued due to inefficacy, loss of consciousness/motor vehicle accident, and viral gastroenteritis. ZIP was generally effective, with 60% subjects choosing to continue use after study completion.
CONCLUSION: Open adjunctive ZIP may yield weight loss in obese and overweight patients with BD. These preliminary data need to be considered with caution due to the small sample size, brief duration, and lack of a placebo control group.
Supported by a Research Grant from Pfizer.

**REFERENCES:**

1. Keck, P. E., Jr., Versiani, M., Potkin, S., West, S. A., Giller, E., & Ice, K. (2003). Ziprasidone in the treatment of acute bipolar mania: a three-week, placebo-controlled, double-blind, randomized trial. Am J Psychiatry 160, 741-8.
2. Weiden, P. J., Daniel, D. G., Simpson, G., & Romano, S. J. (2003). Improvement in indices of health status in outpatients with schizophrenia switched to ziprasidone. J Clin Psycho pharmacol 23, 595-600.

**NR3-097**

## ARIPIPRAZOLE AUGMENTATION IN MAJOR DEPRESSIVE DISORDER: A POOLED EFFICACY SUBPOPULATION ANALYSIS (STUDIES CN138-139 AND CN138-163)

*Quynh-Van Tran, Pharm.D. Otsuka America Pharmaceutical, Inc.2440 Research Boulevard, Rockville, MD 20850, Michael Thase, M.D., Madhukar H Trivedi, M.D., René Swanink, M.S., Andrei Pikalov, M.D., Berit X Carlson, Ph.D., Ronald N Marcus, M.D., Robert M Berman, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to understand the efficacy of aripiprazole augmentation to standard antidepressants across different subgroups of patients diagnosed with major depressive disorder.

**SUMMARY:**

Objective: To evaluate the efficacy of adjunctive aripiprazole to standard antidepressant therapy (ADT) across different subgroups in patients with major depressive disorder. Methods: Data from two identical studies of aripiprazole augmentation, consisting of an 8-week prospective ADT treatment phase and a 6-week randomized controlled trial phase were pooled to evaluate efficacy in patients with major depression without psychotic features. Patients with an inadequate response (<50% reduction HAM-D17 Total, HAM-D 17 =>14 and CGI-I =>3 at the end of the ADT phase) were randomized to adjunctive placebo or adjunctive aripiprazole (2-20 mg/day) for 6 weeks. The efficacy endpoint was the mean change in MADRS Total score from end of the ADT phase to end of randomized phase (LOCF). Subgroup analyses were performed for sex, age (<=50 years; >50 years) race (white, black, other), ethnicity, MADRS Total score (median of <=26, >26) and MADRS response (<25%, =>25% improvement from baseline in MADRS Total score) at end of ADT phase, number of previous ADTs in current episode (1, 2, =3), duration of current episode (median of <=19.2 months, >19.2 months) and ADT. Results: Of the 724 randomized patients evaluable for efficacy, 368 received adjunctive aripiprazole and 356 received adjunctive placebo. Patients treated with aripiprazole showed consistently greater reductions in the MADRS Total score vs. patients treated with placebo in all subgroups, except Hispanics, which had a small sample size. There was no significant treatment-by-subgroup interaction for any of the subgroups analyzed, except sex (p=0.005). The treatment difference was greater in females (-4.21, 95%CI [-5.69, -2.73]) vs. males (-0.64, 95%CI [-2.56, 1.27]). Conclusion: This pooled analysis shows that adjunctive aripiprazole was an effective treatment for various subgroups of patients who did not respond to a prospective ADT trial.
Supported by Bristol-Myers Squibb and Otsuka.

**REFERENCES:**

1. Berman RM, Marcus RN, Swanink R, et al: The Efficacy and Safety of Aripiprazole as Adjunctive Therapy in Major Depressive Disorder: A Multicenter, Randomized, Double-blind, Placebo-controlled Study. J Clin Psych 2007;68:843-853.
2. Pae C-U, Patkar AA, Jun T-Y, et al : Aripiprazole Augmenta tion for Treatment of Patients With Inadequate Antidepres sants Response. Depress Anxiety 2007;24:522-526.

**NR3-098**

## ASSOCIATION OF DIFFICULTY SWALLOWING AND MEDICATION NON-ADHERENCE IN BIPOLAR DISORDER

*Ranjani Manjunath, M.P.H. GlaxoSmithKlineGHO NeurosciencesFive Moore Drive RTP, NC 27709, Research Triangle Park NC 27709, Xin Gao, Ph.D., Svetlana Denevich, Pharm.D., Jodi Walton, B.S., Qin Wang, M.S., Chris L. Pashos, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) understand the association of difficulty swallowing or dysphagia and medication non-adherence among bipolar disorder patients; 2) understand that medication non-adherence can lead to poor clinical outcomes; 3) identify other factors that contribute to medication non-adherence; and 4) recognize a patient's ability to swallow when determining the best medication formulation option.

**SUMMARY:**

INTRODUCTION: Published reports indicate that patients with bipolar disorder (BPD) may have a high prevalence of difficulty swallowing (DS), which may lead to medication non-adherence. This study compares medication non-adherence in subjects with BPD and DS to counterparts without DS. METHODS: A cross-sectional online survey was conducted among adults with self report of diagnosis of BPD by a psychiatrist and currently taking BPD medications. DS was based on self report. Non-adherence was measured by the well-validated Morisky scale. Disease severity, medication burden and satisfaction, quality of life (QOL), patient-physician relationship, and socio-demographic data were also collected. Univariate and multivariate logistic regression analyses were conducted.
RESULTS: Of 266 adults, 135 (51%) reported DS. Mean (±SD) age was 43 (±14) and age at diagnosis was 33 (±14) years; 33% were female; 89% were white. Of the sample, 65% reported having >=4 manic and/or depressed episodes annually; and a mean of 3.07 (SD: 2.78) BPD medications. Higher non-adherence rates were seen in those with DS when compared to those without DS (48.9% vs. 9.2%, p<0.0001). Multivariate regression showed that BPD patients with DS were more likely to be non-adherent to their BPD medications (OR=4.72, 95% CI 1.58-14.08) than those without DS. Patients currently experiencing mania or depression (OR=2.88, 95% CI 1.17-7.12) or taking higher number of BPD medications (OR=1.25, 95% CI 1.01-1.55) were also more likely to be non-adherent. Disease severity, treatment satisfaction, QOL, and patient-physician relationship were not significantly associated with adherence. CONCLUSION: This study suggests that patients with BPD who have DS may be at higher risk for medication non-adherence. Since poor clinical outcomes have been previously associated with non-adherence, physicians may want to consider a patient's ability to swallow when determining the best formulation option.

**REFERENCES:**

1. Regan J, Sowman R, Walsh I. Pevalence of dysphagia in acute and community mental health settings. Dysphagia 2006; 21: 95-101.
2. Johnson FR, Ozdemir S, Manjunath R, et al. Factors that affect adherence to bipolar disorder treatments: a stated-pref erence approach. Med Care 2007 June;45(6):545-52.

**NR3-099**

## ESCITALOPRAM AND DULOXETINE IN THE TREATMENT OF MAJOR DEPRESSION: A POOLED ANALYSIS

*Raymond W Lam, M.D. 2255 Wesbrook Mall, Vancouver Canada V6T 2A1, Henning F. Andersen, Ph.D., Alan G. Wade, M.B.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the advantages in efficacy and tolerability of escitalopram compared to duloxetine.

**SUMMARY:**

Objective: To compare the tolerability and efficacy of escitalopram and duloxetine in the treatment of patients with major depressive disorder over 8 weeks. Methods: Data from two randomised, multi-centre, double blind studies (1,2) were pooled and analysed for all patients and for severely depressed patients (baseline MADRS>=30). The primary efficacy measure in both studies was the MADRS total score. Results: Patients were randomised to either escitalopram (10-20mg/day) (n=280) or duloxetine (60mg/day) (n=284). Escitalopram was statistically significantly superior to duloxetine with respect to mean change from baseline in MADRS total score at Weeks 1, 2, 4, and 8 (LOCF). The mean treatment difference at Week 8 was 2.6 points ($p<0.01$). For severely depressed patients, a mean treatment difference at Week 8 of 3.7 points ($p<0.01$) was seen. Response (>=50% decrease from baseline MADRS) to treatment at Week 8 was statistically significantly greater for patients treated with escitalopram, as was remission when defined as MADRS <=10 or 12. The numbers needed to treat (NNT) based on response and remission rates, in favour of escitalopram, were 8 and 11, respectively, for all patients (6 and 7, respectively, for severely depressed patients). The percentage of escitalopram-treated patients that withdrew (12.9%, n=36) was significantly ($p<0.001$) less than in the duloxetine group (24.3%, n=69). Significantly fewer ($p<0.001$) escitalopram-treated patients withdrew due to adverse events (4.6%, n=13) than from the duloxetine group (12.7%, n=36). Conclusions: This pooled analysis shows that, over 8-week treatment periods, escitalopram (10-20 mg/day) is superior in both efficacy and tolerability compared to duloxetine (60 mg/day). This study was supported by H. Lundbeck A/S.

**REFERENCES:**

1. Khan A, Bose A, Alexopoulos GS, Gommoll C, Li D, Gandhi C. Double-blind comparison of escitalopram and duloxetine in the acute treatment of major depressive disorder. Clin Drug Investig 2007; 27:481-492.
2. Wade A, Gembert K, Florea I. A comparative study of the efficacy of acute and continuation treatment with escitalopram versus duloxetine in patients with major depressive disorder. Curr Med Res Opin 2007; 23:1605-1614.

**NR3-100**

## ARIPIPRAZOLE MONOTHERAPY IN ACUTE BIPOLAR I MANIA: A RANDOMIZED, PLACEBO- AND HALOPERIDOL-CONTROLLED STUDY (STUDY CN138-162)

*Raymond Sanchez, M.D. Otsuka Pharmaceutical Development & Commercialization Inc.100 Overlook Drive, PrincetonNJ 8540, Robert D. McQuade, Ph.D., Anne Torbeyns, Ph.D., Ronald N. Marcus, M.D., Anne Dillenschneider Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to understand the efficacy and safety of aripiprazole, as acute and continuation therapy, for the treatment of acute manic or mixed episodes in patients with bipolar I disorder.

**SUMMARY:**

Objective: To evaluate the efficacy, safety and tolerability of aripiprazole monotherapy as acute and continuation therapy for bipolar mania. Methods: Patients with acute bipolar I mania, manic or mixed, requiring hospitalization were randomized (1:1:1) to double-blind aripiprazole (starting dose 15; 15 or 30 mg/day after Day 4; n=167), placebo (n=153) or haloperidol (5–15 mg/day; n=165) for 3 weeks. Aripiprazole and haloperidol patients remained on blinded treatment for a further 9 weeks. Outcome measures included: mean change from baseline in YMRS Total score at Week 3 (primary endpoint) and Week 12. Results: Mean change from baseline to Week 3 (LOCF) in YMRS Total score was significantly greater with aripiprazole (–12.0; p=0.039) and haloperidol (–12.8; p=0.005) versus placebo (–9.7). Improvements were maintained to Week 12 for aripiprazole (–17.2) and haloperidol (–17.8; LOCF). Improvements in mean CGI-S (mania) scores from baseline were significantly greater with aripiprazole (–1.4; p=0.044) and haloperidol (–1.6; p=0.004) versus placebo (–1.2; LOCF) at Week 3, increasing at Week 12 with both aripiprazole (–2.1) and haloperidol (–2.2). Response and remission rates were numerically greater with aripiprazole and haloperidol versus placebo,. Extrapyramidal AEs were more frequent with haloperidol than aripiprazole (53.3% vs. 24.0%). At Week 12, clinically relevant weight gain was reported in 5.1% and 5.8% of aripiprazole and haloperidol patients, respectively (p=0.723; LOCF). Fewer patients experienced potentially clinically relevant elevated prolactin levels with aripiprazole versus haloperidol at Week 12. Conclusions: Aripiprazole, initiated at 15 mg/day, significantly improved symptoms in acutely manic patients. Clinical improvements with aripiprazole were sustained to Week 12 and were similar to haloperidol. Aripiprazole was generally well tolerated. Supported by Bristol-Myers Squibb and Otsuka.

**REFERENCES:**

1. Tohen M, Goldberg JF, Gonzalez-Pinto Arrillaga AM, Azorin JM, Vieta E, Hardy-Bayle MC et al: A 12-week, double-blind comparison of olanzapine vs haloperidol in the treatment of acute mania. Arch Gen Psychiatry 2003;60:1218-26.
2. Smulevich AB, Khanna S, Eerdekens M, Karcher K, Kramer M, Grossman F: Acute and continuation risperidone mono therapy in bipolar mania: a 3-week placebo-controlled trial followed by a 9-week double-blind trial of risperidone and haloperidol. Eur Neuropsychopharmacol 2005;15:75-84.

**NR3-101**

## EXTENDED RELEASE QUETIAPINE FUMARATE (XR) MONOTHERAPY FOR MAJOR DEPRESSIVE DISORDER (MDD): A DOUBLE-BLIND, PLACEBO-CONTROLLED STUDY

*Richard Weisler, M.D. Department of Psychiatry, University of North Carolina at Chapel Hill 700 Spring Forest, Suite 125 Raleigh NC 27609, Mark Joyce, M.D., Lora McGill, M.D., Arthur Lazarus, M.D., M.B.A., Malin Schollin. Ph.D., Martin Brecher, M.D., DMSc., MBA*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to demonstrate knowledge and understanding of the efficacy and safety of once-daily extended release quetiapine fumarate (quetiapine XR) monotherapy in the treatment of patients with MDD as demonstrated by the results of a double-blind, randomized, placebo-controlled study.

**SUMMARY:**

Objective: MDD is highly prevalent (US lifetime prevalence estimate 13.2%).1 Antidepressant treatment results in full remission in just 39% of patients with MDD.2 This study (D1448C00001) evaluated the efficacy of once-daily extended release quetiapine fumarate (quetiapine XR) monotherapy compared with placebo in patients with MDD. Methods: 6-week randomized phase (2-week post-treatment phase) multicenter, double-blind study. Inclusion criteria: DSM-IV single episode or recurrent MDD, HAM-D total score >/=22, HAM-D item 1 (depressed mood) score >/=2 at enrolment and randomization. Patients were randomized to quetiapine XR 50, 150 or 300mg/day or placebo. Primary endpoint: change from randomization to Week 6 in MADRS score. Other assessments included: HAM-D; CGI-S. Adverse events (AEs) were recorded throughout the study.

Results: 723 patients were randomized: 182, 178, 179, and 184 to quetiapine XR 50, 150, 300mg/day, and placebo, respectively. Mean scores at baseline were: MADRS 30.9, 30.9, 30.6, and 30.5; HAM-D 25.6, 25.5, 25.7, and 25.5; HAM-A 19.6, 19.4, 19.7, and 19.3, respectively. At Week 6, all quetiapine XR groups significantly reduced mean MADRS score vs placebo (-11.07): -13.56 ($p<0.05$) for 50mg, -14.50 ($p<0.001$) for 150mg,-14.18 ($p<0.01$) for 300mg. By Day 4, all quetiapine XR groups significantly reduced mean MADRS score vs placebo (50 mg $p<0.01$; 150mg and 300mg $p<0.001$). Change in HAM-D at Week 6 was -12.35, -12.84, and -12.65 for quetiapine XR groups and -10.93 for placebo. Change in CGI-S at Week 6 was -1.43, -1.50 and -1.49 for quetiapine XR 50, 150 and 300mg/day vs -1.11 for placebo ($p<0.05$). Most common AEs (>10% Weeks 1-6) in all groups were dry mouth, sedation, somnolence, headache, dizziness. Conclusion: In patients with MDD, quetiapine XR monotherapy (50, 150 and 300mg/day) is effective and generally well tolerated with symptom improvement seen as early as Day 4. Research sponsored by AstraZeneca.

**REFERENCES:**

1. Hasin DS, Goodwin RD, Stinson FS, Grant BF: Epidemiol ogy of major depressive disorder: results from the National Epidemiologic Survey on Alcoholism and Related Condi tions. Arch Gen Psychiatry 2005; 62:1097-1106.
2. Kennedy SH, Eisfeld BS, Meyer JH, Bagby RM: Antidepres sants in clinical practice: limitations of assessment methods and drug response. Hum Psychopharmacol 2001; 16:105-114.

**NR3-102**

## POSTTRAUMATIC STRESS DISORDER AND DEPRESSION IN MORTUARY AFFAIRS/COMBAT SERVICE SUPPORT SOLDIERS DEPLOYED TO THE MIDDLE EAST

*Robert J Ursano, M.D. Dept of PsychiatryUniformed Services Universit 4301 Jones Bridge Rd, Bethesda, MD 20814, Carol S. Fullerton,, Ph.D., Quinn M. Biggs, Ph.D., M.P.H.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) demonstrate an understanding of rates of PTSD and Depression in deployed soldiers exposed to high levels of combat; 2) recognize specific post-deployment stressors in Combat Service Support (CSS) soldiers; and 3) identify aspects of an evidence informed intervention for CSS soldiers including an individual component, community outreach to buddies and spouses, and barriers to health care utilization.

**SUMMARY:**

Objective: Deployment to the Iraq/Afghanistan war and exposure to high levels of combat increase the risk for posttraumatic stress disorder (PTSD) and other psychological problems (Hoge et al., 2004). Mortuary Affairs and other Combat Service Support (CSS) soldiers are small in number requiring repeated deployments. There have been few studies of posttraumatic responses in CSS soldiers exposed to combat (McCarroll et al., 2002). This study examined PTSD and depression in CSS soldiers deployed to the Middle East. Methods: Deployed CSS soldiers (N=222) voluntarily completed questionnaires compared to non-deployed CSS soldiers (N=309). Probable PTSD was assessed by the PTSD Checklist (PCL-17), and probable depression by the Patient Health Questionnaire Depression Scale (PHQ). The Combat Exposure Scale (CES) was used to assess high (>4) and low (=4) combat exposure. Results: Approximately 19% of CSS deployed soldiers had probable PTSD vs. 8.7% non-deployed. Of those deployed, 29% had PTSD, depression or clinically significant traumatic stress (vs. 18% non-deployed). Deployed soldiers with high combat were more likely to develop PTSD compared to deployed soldiers with low combat, non-deployed soldiers with low combat or high combat ($p<.0001$). Deployed soldiers with high combat were more likely to have depression compared to deployed with low combat, and non-deployed with low combat ($p=0.0356$). Conclusions: Combat Service Support soldiers exposed to high levels of combat are at increased risk of PTSD and depression. This study has implications for a clinical intervention with CSS soldiers. We propose an intervention called TEAM: (Troop Education for Army Morale) using empirically informed principles of psychological first aid, cognitive-behavioral therapy and a stepped care model of community outreach (buddy and spouse support) to address post-deployment recovery and barriers to health care utilization.

**REFERENCES:**

1. Hoge CW, Castro CA, Messer SC, McGurk D, Cotting DI, Koffman RL: Combat duty in Iraq and Afghanistan, mental health problems, and barriers to care. NEJM 2004; 351:13-22.
2. McCarroll JE, Ursano RJ, Fullerton CS, Liu X, Lundy A: So matic symptoms in Gulf War mortuary workers. Psychoso matic Med 2002; 64:29-33.

**NR3-103**

## LONG-TERM SAFETY AND TOLERABILITY OF OPEN-LABEL ARIPIPRAZOLE AUGMENTATION OF ANTIDEPRESSANT THERAPY IN MAJOR DEPRESSIVE DISORDER

*Robert Berman, M.D. Bristol-Myers Squibb5 Research Parkway, Wallingford, CT 06492, Stephen Kaplita, B.S., Robert D McQuade, Ph.D., William H Carson, M.D., Ronald N Marcus,*

*M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to understand the long-term safety of aripiprazole augmentation of standard antidepressants in patients with major depressive disorder.

**SUMMARY:**

Objective: To evaluate the long-term safety and tolerability of adjunctive aripiprazole to standard antidepressant therapy (ADT) in the treatment of outpatients with major depressive disorder. Methods: Patients completing one of two identical trials of aripiprazole that included an 8-week prospective ADT phase followed by a 6-week randomization (adjunctive aripiprazole or placebo) phase were enrolled in this open-label, safety and tolerability trial and followed for up to one year. De novo patients were enrolled if they had an inadequate response (<50% reduction in depressive symptom severity as assessed by the Massachusetts General Hospital Antidepressant Treatment Response Questionnaire) to current ADT. Data was collected from ongoing patients from September 2004 to January 2007. The final presentation will include data from all patients. The incidence of Treatment Emergent Adverse Events (TEAEs), weight, and laboratory measurements were assessed during the 52-week study, including time course, severity, and resolution. Results: Preliminary results show that the incidence of new onset TEAEs was lower as compared to the first 42 days of aripiprazole augmentation. Mean weight change from baseline (87.3 ± 0.7 kg, n=927) after at least 36 weeks of treatment was 3.9 ± 0.4kg (n=264). There were no clinically important changes in median percent change from baseline in fasting cholesterol, HDL, LDL, triglycerides, and glucose. There were no reports of neuroleptic malignant syndrome or completed suicides. Conclusion: Aripiprazole demonstrated an acceptable long-term safety and tolerability profile when used as augmentation of ADT in patients with major depressive disorder. Supported by Bristol-Myers Squibb and Otsuka. (Study CN138-164)

**REFERENCES:**

1. Berman RM, Marcus RN, Swanink R, et al: The Efficacy and Safety of Aripiprazole as Adjunctive Therapy in Major De pressive Disorder: A Multicenter, Randomized, Double-blind, Placebo-controlled Study. J Clin Psych 2007;68:843-853.
2. Marcus RN, McQuade RD, Carson WH, et al: The Efficacy and Safety of Aripiprazole as Adjunctive Therapy in Major Depressive Disorder: 4A Second Multicenter, Randomized, Double-blind, Placebo-controlled Study. J Clin Psychopharm submitted.

**NR3-104**

## FEASIBILITY STUDY OF AN IMPLANTABLE CORTICAL STIMULATION SYSTEM FOR PATIENTS WITH MAJOR DEPRESSIVE DISORDER

*Robert H. Howland, M.D. 3811 O'Hara Street, Pittsburgh, PA 15213-2593, Robert H. Howland, M.D., Michael E. Thase, M.D., Karleyton Evans, M.D. Darin D. Dougherty, M.D., Harold Harsch, M.D., Brian H. Kopell, M.D., Douglas Kondziolka, M.D., Emad Eskandar, M.D., Alvaro Pascual-Leone, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand what cortical stimulation is, how cortical stimulation is used to influence brain function, and how it might be used therapeutically as a treatment for refractory major depression.

**SUMMARY:**

Introduction: Imaging studies show abnormal regional glucose metabolism in major depressive disorder (MDD). Ventral prefrontal cortex areas (subgenual cingulate) are hypermetabolic; dorsal regions (left dorsolateral prefrontal cortex (DLPFC)) are hypometabolic. Repetitive transcranial magnetic stimulation temporarily increases cerebral metabolism of targeted areas; it has short-lived antidepressant effects when applied to the left DLPFC. These findings prompted study of an investigational implantable cortical stimulation (CS) system targeting the left DLPFC.
Methods: After an observation phase (?8 weeks) with stable medication, 12 refractory MDD patients were implanted with an epidural CS system (Renova? DT, Northstar Neuroscience, Seattle, WA). Patients were randomized to single blind active or sham stimulation for 8 weeks (primary endpoint), then active stimulation. Medications were not changed unless indicated. Efficacy: Hamilton Depression Rating Scale (HDRS), Montgomery-Asberg Depression Rating Scale (MADRS), Global Assessment Function (GAF).
Results: Patients: 6 female, 6 male (48±6 years); MDD for 27?10 years; current episode duration 6.9?8.1 years; failed 9.8?1.7 antidepressant treatments. Ten received ECT (16.2?23.2 treatments). At baseline: mean HDRS=35.3?5.8; MADRS=32.7?4.6; GAF=42.3?5.8. One patient was excluded from further analysis (protocol deviation). Week 8: HDRS decreased by 22?20% (active stimulation; n=6) vs 3?17% (sham; n=5); MADRS decreased 22?21% (active) vs 8?15% (sham); GAF increased 23?32% (active) vs 12?9% (sham). Weeks 8 to 16 (active stimulation; n=11): mean change scores improved: 21% to 26% (HDRS), 22% to 32% (MADRS), 25% to 46% (GAF). No device-related serious adverse events. Conclusion: This study describes the first use of a CS system targeting the DLPFC. Preliminary results suggest that CS has a therapeutic effect that increases over time. A larger study is needed to confirm these findings. Funding: Northstar Neuroscience.

**REFERENCES:**

1. George MS, Nahas Z, Kozel FA, Li X, Yamanaka K, Mishory A, Bohning DE: Mechanisms and the current state of tran scranial magnetic stimulation. CNS Spectrums 2003; 8:496-514.
2. Greenberg BD, Rezai AR: Mechanisms and the current state of deep brain stimulation in neuropsychiatry. CNS Spectrums 2003; 8:522-526.

**NR3-105**

## HUMANISTIC AND ECONOMIC BURDEN IN EUROPEAN PATIENTS DIAGNOSED WITH MAJOR DEPRESSIVE DISORDER

*Roger S McIntyre, M.D. Head, Mood Disorders Psychopharmacology UnitAssociate Professor of Psychiatry and Pharmacology, University of Toronto, University Health Network399 Bathurst Street, MP 9-325Toronto, ON M5T 2S8 Canada, Patricia van Hanswijck de Jonge, Ph.D., Megan Stafford, M.Sc., Sar-*

*ah Hearn, M.Sc., Nicole Tschaut, M.Sc., Henrik Svedsäter, Ph.D., Julie Locklear, PharmD, M.B.A., Dennis A. Revicki, Ph.D., Ruth Brown, M.S.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to; 1)Identify the economic and humanistic burden of patients with Major Depressive Disorder (MDD) reported in the literature over the past 20 years in five European countries. Identify the humanistic and economic burden of treatment resistant MDD (TRD); and 2)Identify current treatment guidelines and options for MDD (and TRD) and their associated efficacies.

**SUMMARY:**

Objective: To conduct a literature review to examine the humanistic and economic burden of patients diagnosed with Major Depressive Disorder (MDD) in Europe, with a primary focus on treatment resistant depression (TRD).

Methods: A comprehensive, systematic literature review of studies published between 1987 and 2007 for five major European countries was conducted using MEDLINE, Embase, the Cochrane Library and various web-based databases, including hand reference list searches. Using predetermined eligibility criteria, two independent reviewers screened all identified studies for relevance.

Results: A total of 908 articles were identified covering studies conducted in Europe and North America (NA), with the vast majority in NA. Thirty-nine European studies fulfilled study entry criteria (humanistic burden N=11; economic burden N=22; MDD treatment guidelines N=6). No studies were identified examining burden of TRD. Several studies examining health related quality of life (HRQL) in MDD were identified, each of which reported an association between MDD and impaired HRQL and functional status (Angermeyer et al. 2002, Cervera et al 2003). Similarly, European studies (n=6) examining the economic burden of MDD reported higher medical resource use and productivity losses for patients with MDD. Annual estimated incurred costs were €2289 for patients with MDD versus €474 for healthy subjects. Number of work days lost ranged from 9-12 days for MDD patients to 2-4 days for non-depressed patients.

Conclusion: The literature review identified a paucity of studies examining both the humanistic and economic burden of MDD in Europe and no studies in TRD. Extant evidence indicates that MDD is associated with hazardous dysfunction providing the impetus for more effective prevention and treatment programs.Support for this research provided by AstraZeneca Pharmaceuticals, LP.

**REFERENCES:**

1. Angermeyer MC, Holzinger A, Matschinger H, Stengler W. Depression and quality of life: results of a follow-up study. The International journal of social psychiatry 2002; 48: 189-99
2. Cervera E, Soutullo CA, Landecho I, Murillo J. Quality of Life in 833 outpatients with major depression treated with open-label venlafaxine extended release: An observational 24-week study. International Journal of Psychiatry in Clinical Practice 2003; 7: 193-7

**NR3-106**

## METABOLIC EFFECTS OF ARIPIPRAZOLE ADJUNCTIVE THERAPY IN MAJOR DEPRESSIVE DISORDER SUBPOPULATIONS (STUDIES CN138-139 AND CN138-163)

*Ross A Baker, Ph.D. Bristol-Myers Squibb Company, 777 Scudders Mill Road, Plainsboro, NJ 08536-1615, Maurizio Fava, M.D., Robert M. Berman, M.D., Quyn-Van Tran, Pharm.D., Robert D. McQuade, Ph.D., Ying Qi, Ph.D., Berit X. Carlson, Ph.D., Ronald N. Marcus, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to understand the metabolic effects of aripiprazole augmentation to standard antidepressant therapy in patients diagnosed with major depressive disorder.

**SUMMARY:**

Objective: To evaluate the metabolic effects of adjunctive aripiprazole to standard antidepressant therapy (ADT) versus adjunctive placebo in the treatment of patients with major depressive disorder. Methods: Data from two identical studies of aripiprazole augmentation (1,2), consisting of an 8-week prospective ADT phase and a 6-week randomized (adjunctive aripiprazole or placebo) phase were pooled to evaluate metabolic changes. Mean change from baseline in waist circumference (WC) and levels of fasting total cholesterol (C), high density lipoprotein cholesterol (HDL-C), low density lipoprotein cholesterol (LDL-C), fasting triglycerides (TG), fasting plasma glucose, and hemoglobin A1C (HbA1C) were compared. Baseline was the mean level at completion of the prospective ADT phase. Statistical comparisons were made using ANCOVA. The correlation between change in body weight and change in fasting TG, and the effect of dose on pooled change in body weight were calculated. Results: Adjunctive aripiprazole produced no significant changes versus placebo in mean total C, HDL-C, LDL-C, fasting plasma glucose, WC or HbA1C. After adjusting for baseline differences (142.7 mg/dL aripiprazole; 160.1 mg/dL placebo, $p<0.04$), there was no significant difference in the median change from baseline (4 mg/dL aripiprazole and 0 mg/dL placebo; $p=0.128$) in fasting TG. Mean weight change in patients receiving doses <7.5 mg (n=111) was +1.89 kg, in those receiving 7.5 to 12.5 mg (n=89), +1.36 kg, and in those receiving >12.5 mg (n=146), +1.86 kg. Change in body weight did not correlate with change in fasting TG levels. Discussion: Overall, the short-term metabolic effects of adjunctive aripiprazole vs adjunctive placebo were not significant with the exception of weight gain. Changes in body weight did not appear to be dose-related nor did they correlate with changes in TG levels for either treatment group.

Supported by Bristol-Myers Squibb and Otsuka.

**REFERENCES:**

1. Berman RM, Marcus RN, Swanink R, et al. The Efficacy and Safety of Aripiprazole as Adjunctive Therapy in Major De pressive Disorder: A Multicenter, Randomized, Double-blind, Placebo-controlled Study. J Clin Psych 2007;68:843-853.
2. Marcus RN, Berman RM, McQuade RD, et al. The efficacy and safety of aripiprazole as adjunctive therapy in major

depressive disorder: A second multicenter, randomized, double-blind, placebo-controlled study. J Clin Psychopharm. submitted.

**NR3-107**

## THE COMPARISON OF THE DIFFERENCES IN ABNORMAL ILLNESS BEHAVIOR QUESTIONNAIRE BETWEEN NON-SOMATIZATION AND SOMATIZATION GROUP

*Sae-Heon Jang, M.D. Psychiatric department, Bongseng Hospital Zoachundong 68-11 Dong-gu, Busan Korea 601-723, Yongmyo Je, M.D. Ph.D., Daesoo Lee, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the concept of abnormal illness behavior and its specific patterns. And also the participant should be able to applicate the concept of abnormal illness behavior in diagnosing and managing the somatizing depression patients in clinical practice.

**SUMMARY:**

Object: Somatic symptoms commonly accompany depressions. But somatizing depression is easily misdiagnosed and maltreated in clinical practice. Pilowsky introduced the concept of abnormal illness behavior in 1969. It provides a conceptual framework for recognizing patients who complain somatic symptoms without definite medical problems by way of avoiding or dealing with psychiatric conflict. Acknowledgement of the illness behavior pattern in somatizing patient with depression will be helpful to recognize and manage the somatizing depression patients in clinical setting. So we tried to compare the pattern of abnormal illness behavior of somatizing patients with non-somatizing patients. Methods: We divided patients into two groups(somatization and non-somatization) with KDS(Korean Depression Scale) – somatization subscale. KDS which was developed by Min-Soo Lee in 2003 is a specialized scale to detect Korean depression patients who are commonly accompanied by multiple somatic symptoms. All patients were diagnosed as depression with ICD-10 diagnostic criteria and being treated by pharmacotherapy. And we checked Illness Behavior Questionnaire(IBQ) and HAMD-17. Results: There were significant differences in IBQ subscales between two groups. Somatization group showed more disease affirmation (6.79±2.08 vs 4.76, t=-3.137, p.=.003), more denial (3.25±1.22 vs 2.10±1.41, t=2.054, p.=.006) subcale than non-somatization group. There was no significant difference in general hypochondriasis, affective unstability, IBQ total score and HAMD-17 score between two groups. Conclusion: We concluded that disease affirmation somatically and denial psychologically can be a discriminative mechanism of somatization in depressed patients. General hypochondriasis and affective unstability didn't affect the degree of somatization in depressed patients. There was no difference in the degree of abnormal illness behavior between two groups with depression.

**REFERENCES:**

1. Pilowsky,I., & Spence, N.D. (1983). Manual for the Illness Behavior Questionnaire(IBQ). Adelaide: University of Ad elaide.
2. Min-Soo Lee & Min Kyu Rhee (2003) A Development of Ko rea Depression Scale ; J Korean Neuropsychiatry Assoc. 2003; 24: 492-506.

**NR3-108**

## ACUTE AND LONG-TERM EFFECTS OF ELECTROCONVULSIVE THERAPY ON NEUROACTIVE STEROIDS IN MAJOR DEPRESSIVE PATIENTS

*Saliha Ozsoy, M.D. Erciyes University Medical Faculty Department of Psychiatry, Kayseri, Turkey 38039, Ertugrul Esel,M.D., Yunus Hacimusalar, M.D., Mustafa Basturk, M.D.*

**EDUCATIONAL OBJECTIVE:**

The study aimed to investigate probable alterations in some neuroactive steroids such as dehydroepiandrosterone sulfat (DHEAS), 17-hydroxyprogesterone (17-OHP), testosterone and whether electroconvulsive therapy (ECT) has any effect of these hormones in patients with depression. The results might increase our understanding of how the levels of neuroactive steroids change in patients with major depression, and how electroconvulsive therapy (ECT) influences these hormones.

**SUMMARY:**

Introduction: Steroid hormones, which have agonist or antagonist effects on neurotransmitter receptors, are called neuroactive steroids (1). It is not clear how the levels of neuroactive steroids change in patients with major depression, and how antidepressant treatment influences these hormones (2). In this study, the levels of DHEAS, 17-OHP, testosterone and cortisol were measured, and how one session and a cure of ECT affect these hormones was investigated in patients with major depression.

Methods: Of 28 inpatients who were diagnosed to have major depressive disorder according to DSM-IV criteria, and evaluated as appropriate for ECT treatment, 25 (11 males, 14 females; mean age: 43.96±12.45; range: 18-60 years) who responded to ECT treatment were included in the study from. Thirty-seven healthy subjects who were in the same age range (17 males, 20 females: mean age: 38.86±10.39) were taken as control group. The levels of serum cortisol, DHEAS, 17-OHP and testosterone were measured two days before and 10 minutes after the first ECT, and three days after the last ECT in the patients. These measurements were made only once in the control subjects.

Results: Elevated basal DHEAS and decreased testosterone and 17-OHP values were found in the depressive patients compared to the controls. After the ECT cure, DHEAS levels were higher in the patients than those in controls and than those before treatment. After the treatment, 17-OHP values of the patients were lower than those of controls, but testosterone levels were not different between the groups. Single ECT application caused increases in basal cortisol and DHEAS concentrations. ECT treatment had no effect on other hormones. Elevated DHEAS and decreased testosterone were peculiar to men, while decreased 17-OHP was peculiar to women in the depressive patients.

Conclusions: Some neuroactive steroids might play a role in therapeutic effect of ECT.

**REFERENCES:**

1. Dubrovsky BO: Steroids, neuroactive steroids and neuros teroids in psychopathology. Prog Neuro-Psychopharmacol Biol Psychiatry 2005; 29: 169-192.
2. Romeo E, Ströhle A, Spalleta G, di Michele F, Hermann B, Holsboer F, Pasini A, Rupprecht R: Effects of antidepressant

treatment on neuroactive steroids in major depression. Am J Psychiatry 1998; 155: 910-913.

**NR3-109**

## CARDIOVASCULAR AUTONOMIC AND CIRCADIAN ASPECTS OF BILATERAL STIMULATION OF BRODMANN´S AREA 25 IN A PATIENT WITH TREATMENT-REFRACTORY DEPRESSION

*Salvador M Guinjoan, M.D. FLENI, Instituto "Raúl Carrea"Montañeses 2325 8th floor, Buenos Aires, Argentina C1428AQK, Elsa Y. Costanzo, M.D., Daniel E. Vigo, M.D., Ph.D., Santiago Pérez-Lloret, M.D., Marcelo Merello, M.D., Ph.D., Eduardo Tenca, M.D., Julio Antico, M.D., Daniel Cerquetti, Eng., Ramón C. Leiguarda, M.D., Martín Nogués, M.D., Angel Cammarotta, M.D., Daniel P. Cardinali, M.D., Ph.D., Rodolfo D. Fahrer, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) characterize autonomic and circadian correlates of mood improvement in a patient subjected to deep brain stimulation of Brodmann´s Area 25 (Cg25WM-DBS); 2) identify possible mechanisms of action of Cg25WM-DBS involving autonomic and circadian system; and 3) recognize orthostatic hypotension as a potential autonomic adverse effect of Cg25WM-DBS.

**SUMMARY:**

Background: Deep-brain stimulation of subcallosal cingulus white matter (i.e. associated to Brodmann´s Area 25) (Cg25WM-DBS) has recently been proposed as an effective treatment of refractory depression. Method: We performed Cg25WM-DBS in a 63 year old male with treatment-resistant depressive disorder after obtaining informed consent and approval from the local ethics and national government authorities. Patient had failed to respond to multiple drug trials and a course of 15 ECT sessions. Medications included venlafaxine 225 mg po qd and quetiapine 200 mg po bid. We examined 24 h heart rate variability (HRV) as a noninvasive tool to assess autonomic and circadian activity at baseline and during the treatment. Results: DBS-BA25 brought about an improvement in depressive symptoms within the first week of the procedure, which is maintained a month afterwards. We observed a significant effect of treatment on HRV parameters ($F=8.83$, $p=0.004$), such that parasympathetic activity (% high-frequency HRV) was higher ($43 \pm 9$ vs $27 \pm 9$ at 0800; $53 \pm 4$ vs $23 \pm 10$ at 1200) and sympathetic output (% low-frequency HRV) was lower ($57 \pm 7$ vs $73 \pm 9$ at 0800; $53 \pm 4$ vs $77 \pm 10$ at 1200) in morning hours. COSINOR analysis confirmed a 12-h phase shift of sympatho-vagal rhythm associated to Cg25WM-DBS (acrophase 0100 h during treatment, $F=3.82$, $p=0.04$ vs. acrophase 1100h at baseline, $F=4.65$, $p=0.008$). Stimulation of most dorsal electrodes unexpectedly resulted in severe orthostatic hypotension unresponsive to usual measures, which reversed immediately after resetting stimulation parameters. Conclusion: If replicated in other patients, the present results suggest that Cg25WM-DBS may due its beneficial effect in part to resetting of circadian and autonomic bodily feedback onto the central nervous system.

**REFERENCES:**

1. Mayberg HS, Lozano AM, Voon V, McNeely HE, Seminowicz D, Hamani C, Schwalb JM, Kennedy SH. Deep brain stimulation for treatment-resistant depression. Neuron 45, 651-660, 2005.
2. Johansen-Berg H, Gutman DA, Behrens TEJ, Matthews PM, Rushworth MFS, Katz E, Lozano AM, Mayberg HS. Anatomical connectivity of the subgenual cingulate region targeted with deep brain stimulation for treatment-resistant depression. Cerebral Cortex, advance access published October 10, 2007.

**NR3-110**

## SEROTONIN TRANSPORTER IN LYMPHOCYTES OF MAJOR DEPRESSION PATIENTS TREATED WITH VENLAFAXINE AND PSYCHOTHERAPY

*Salvador M Mata, M.D. Servicio de Psiquiatría, Hospital Vargas de Caracas, Caracas, Venezuela 1050, Fili Fazzino, M.Sc., Mary Urbina, M.B.A., Margarita Morles, M.D., Andrés Rojas, M.D., Luis Arocha, M.D., Alfonso González, M.D., Ph.D., Lucimey Lima, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) support the nervous-immune interaction in depression; 2) understand the systemic benefits of antidepressant treatment; and 3) document the relevance of the integrative treatment of depression.

**SUMMARY:**

Introduction. Several evidences indicate that the immune system is affected in depression, link between inflammatory and monoaminergic hypothesis of the disorder. Previous reports concern decrease of serotonin transporter in lymphocytes of depressed and modulation by antidepressants, such as fluoxetine and mirtazapine. The purpose of this research was to evaluate the response to an antidepressant alone or in combination with a psychotherapeutic intervention. Methods. This study included 58 patients, 19-64 years, diagnosed with DSM-IV criteria, and severity evaluated by Hamilton Scale of Depression (18-35). They were distributed randomly in two groups: one received venlafaxine 75 mg/day, and the other venlafaxine and weekly sessions of psychotherapy with Neuro-Linguistic Programming techniques for six weeks. Lymphocytes from blood, taken at beginning and at the end of the study, were isolated by density gradients with Ficoll/Hypaque, cultured in RPMI medium for 72 h with or without the T-cell mitogen concanavalin A. Serotonin and its metabolite were determined by HPLC with electrochemical detector in plasma and in lymphocytes. Serotonin transporter was labeled in lymphocyte membranes with [3H]paroxetine. Results. There was a clinical and comparable response to both treatments with reduction of Hamilton score greater than 50%. Serotonin transporter significantly increased after administration of venlafaxine. Serotonin and its metabolite concentrations did not change in plasma and lymphocytes between the groups. Proliferation of lymphocytes was not stimulated by the addition of the mitogen before treatments, was lower only after the combined treatment, and because this, could be normally stimulated by the mitogen. Conclusions. The effect of venlafaxine on serotonin transporter might contribute to produce changes in the functionality of lymphocytes, but only the combination of the antidepressant with psychotherapy occasioned a reduction in lymphocyte proliferation.

**REFERENCES:**

1. Lima L, Mata S, y Urbina M: Allelic isophorms and decrease of serotonin transporter mRNA in lymphocytes of major de pression patients. NeuroImmunoModulation 2005; 12:299-306.
2. S. Peña, E. Baccichet, M. Urbina, I. Carreira y L. Lima. Ef fect of mirtazapine treatment on serotonin transporter in blood peripheral lymphocytes of major depression patients. Int Im munopharmacol 2005; 5:1069-1076.

**NR3-111**

## LAMOTRIGINE MONOTHERAPY WITH AND WITHOUT BUPROPION IN THE TREATMENT OF BIPOLAR II DEPRESSION

*Scott T Aaronson, M.D. Sheppard Pratt Health System6501 N. Charles Street, Baltimore, MD 21204, Edward Zuzarte, M.D., Jennifer Sklar, M.S., Michael Sklar, M.S.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to improve their understanding about the use of mood stabilizers with and without antidepressants in bipolar II disorder.

**SUMMARY:**

Introduction: Bipolar II disorder is common but there is little guidance from clinical trials as to the optimum course of treatment. The usual treatment strategy is monotherapy with antidepressants or combination therapy with antidepressants and mood stabilizers. Our study was designed to determine if patients diagnosed with bipolar II depression who had an inadequate response to lamotrigine monotherapy would benefit from augmentation with bupropion without increasing the risk of hypomania. Methods: In this double-blind, placebo-controlled trial, potential adult subjects were identified by an interview and use of the MINI. To qualify for inclusion patients needed to have a MADRS score of >17 and a YMRS score of <14. All patients were started on open label lamotrigine and titrated to doses of 100 to 300 mg per day based on efficacy and tolerability. Subjects who completed eight weeks of lamotrigine monotherapy and did not demonstrate at least a 50% improvement in their MADRS score were eligible for randomization to 16 weeks of treatment with 150 or 300 mg of bupropion daily or matching placebo. Subjects were tracked using the MADRS, YMRS and HAMD. Results: 38 patients were screened, 30 initiated on lamotrigine and 26 completed open label. Six open-label completers met response criteria(23%). Twenty patients were randomized to augmentation with bupropion (N=9) or placebo (N=11). There was no separation between bupropion and placebo patients on scales of either depression or mania. No subject experienced treatment emergent hypomania. Based on LOCF, 82% of placebo patients and 67% of bupropion patients met response criteria at their last randomization visit.
Discussion: Patients with bipolar II depression who received lamotrigine as monotherapy did not benefit from the addition of bupropion, nor did it cause hypomania. Lamotrigine monotherapy for bipolar II depression was often effective and merits further study. This research was supported by GlaxoSmithKline.

**REFERENCES:**

1. Ketter TA, Patel J, Hauser P, Rapport D, Martinez JM, Allen MH, Miklowitz DJ, Otto MW, Dennehy EB, Thase ME: Ef fectiveness of adjunctive antidepressant treatment for bipolar depression. N Engl J Med 2007; 356:1711-22.
2. Hadjipavlou G, Mok H, Yatham LN: Pharmacotherapy of bipolar II disorder: a critical review of current evidence. Bipolar Disord 2004; 6:14-25.

**NR3-112**

## TREATMENT RESPONSE AND DURATION OF MAINTENANCE TREATMENT WITH ADJUNCTIVE ANTIDEPRESSANTS IN BIPOLAR DEPRESSION: A RETROSPECTIVE CHART REVIEW

*Shi Hyun K Kang, M.D. Seoul National Hospital30-1 Junggok3-dong, Gwangjin-gu, Seoul, Korea 139-757, YJ Kim, Ph.D.,HY Ahn M.D.,YH Joo, M.D.,Ph.D.,CY Kim, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the overall treatment response of adjunctive antidepressants and estimates of an optimal duration of maintenance treatment to minimize the risk of manic switching.

**SUMMARY:**

Antidepressants are commonly used in the treatment of bipolar depression. However, considerable controversy exists about the treatment response and the risk of switch in mood polarity associated with bipolar disorder. Only scant data are available on the optimal duration of maintenance treatment with an antidepressant to minimize the risk of manic switching. The aim of this retrospective study was to investigate the overall treatment response of adjunctive antidepressant treatment in bipolar depression in real clinical practice. We explored the treatment response of adjunctive antidepressants and an optimal duration of maintenance treatment to minimize the risk of manic switching.
In a retrospective chart review, 78 patients with bipolar disorder who were treated for a depressive episode by adding an antidepressant to ongoing mood-stabilizing medications and had been followed for at least 6 months were identified. We determined whether the subjects recovered to euthymia and/or switched into mania during the 6-month follow-up period and estimated the time from commencement of antidepressants to each mood change. Treatment responses to antidepressants were heterogeneous in patients with bipolar depression and were classified into four groups. In one group, the index episode was sustained for 6 months despite continuous treatment with antidepressants (the poor response group, N = 8, 10.3%). In a second group, an abrupt switch from depression into mania occurred during antidepressant treatment (the acute switch group, N = 15, 19.2%). In the third group, the depressive mood improved to euthymia without a manic switch (the good response group, N = 39, 50%). In the fourth group, the depressive mood improved to euthymia but manic switches occurred during maintenance treatment with antidepressants (the delayed switch group, N = 16, 20.5%). In this group, the mean duration of maintenance treatment with antidepressant, from euthymia to a manic switch, was 54.6 ± 38.9 days.

**REFERENCES:**

1. Leverich GS, Altshuler LL, Frye MA, et al. Risk of switch in mood polarity to hypomania or mania in patients with bipolar depression during acute and continuation trials of venlafax

ine, sertraline, and buporpion as adjuncts to mood stabilizer. Am J Psychiatry 2006;163:232-239
2. American Psychiatric Association: Practice Guideline for the Treatment of patients with bipolar disorder (revision) Am J Psychiatriy 2002;159(April suppl)

**NR3-113**

## DEEP BRAIN STIMULATION FOR MAJOR DEPRESSIVE DISORDER (RESISTANT TO 4 OR MORE TREATMENTS): PRELIMINARY RESULTS OF A MULTI-CENTRE STUDY

*Sidney H. Kennedy, M.D. 200 Elizabeth Street, EN8-222, Toronto, Canada M5G 2C4, Helen Mayberg, M.D., Andres M. Lozano, M.D., Ph.D., Peter Giacobbe, M.D., Raymond W. Lam, M.D., Guy Debonnel, M.D., Theodore Kolivakis, M.D., Andrew Howard, M.D., M.Sc., Abbas Sadikot, M.D., Ph.D., Christopher Honey, M.D., D.Phil.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be aware of ongoing developments in the evaluation of Deep Brain Stimulation (DBS) to subgenual cingulate gyrus – Brodmann area 25 (SCg25) for Major Depressive Disorder that is resistant to 4 or more treatments.

**SUMMARY:**

Background: Pilot data support the effectiveness of Deep Brain Stimulation to SCg25 for MDD with resistance > 4 treatments (Mayberg et al, 2005). Replication of methodology and expansion of sample size in sites other than Toronto are important for verifying this hypothesis. Methods: Three academic health science centres in Canada (McGill University, Vancouver Coastal Health Authority and University Health Network, University of Toronto) recruited 18 patients who met stringent criteria for MDD resistant to 4 or more treatments, comparable to the previously published inclusion and exclusion criteria. Bilateral quadripolar DBS electrodes were implanted in white matter immediately adjacent to SCg25 using MRI-guided stereotactic localization. Surgeries were completed between November 1, 2005 and October 31, 2007. Results: At the time of writing, 12 patients have completed 6 months of post surgery evaluation and 7 of those have been evaluated after one year. The response rate (based on a 40% reduction from baseline severity score on Hamilton Rating Scale for Depression 17 Item-HRSD-17) was 60% at 6 months and 71% after one year. Updated results on 18 subjects 6 months and 12 at one year will be presented, with additional examination of social function based on the SF-36. Conclusions: These results from a multi-site trial confirm the initial findings at 6 months that DBS to SCg25 is an effective intervention for MDD resistant to > 4 treatments in approximately 60% of eligible patients and suggest that benefits are sustained after 1 year. Funding Source: This research was supported by Advanced Neuromodulation Systems Inc. (a St. Jude company) Plano, Texas.

**REFERENCES:**

1. Kennedy SH and Giacobbe P. Treatment resistant depression – advances in somatic therapies. Annals of Clinical Psychia try 2007; 19:1-9.
2. Mayberg HS, Lozano AM, Voon V, McNeely HE, Semi nowicz D, Hamani C, Schwalb JM, Kennedy SH: Deep brain stimulation for treatment-resistant depression. Neuron 2005; 3:651-60.

**NR3-114**

## ESCITALOPRAM IN THE TREATMENT OF MAJOR DEPRESSIVE DISORDER (MDD): A POOLED ANALYSIS

*Sidney H. Kennedy, M.D. 200 Elizabeth Street, EN8-222, Toronto Canada M5G 2C4, Henning F. Andersen, Ph.D., Michael E. Thase, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to assess the efficacy of escitalopram compared with other antidepressants.

**SUMMARY:**

Objective: To conduct a meta-analysis (1) of studies comparing escitalopram with other antidepressants to assess their relative efficacy. Methods: Data from randomized, double-blind studies in MDD in which escitalopram was compared with active controls (citalopram, fluoxetine, paroxetine, sertraline, venlafaxine XR, and duloxetine) were included. The 16 studies were conducted in specialist settings (n=8 studies), general practice (n=3 studies), or both (n=5 studies). Patients had to meet the DSM-IV criteria for MDD and be >18 years old. Patients were required to have a score of >22 on the MADRS (Montgomery-Åsberg Depression Rating Scale) (2) (n=9), >30 (n=2), >26 (n=2), >18 (n=1), HAM-D17>18 (n=1) or HAM-D24>20 (n=1). The primary outcome measure was the estimated treatment difference in MADRS total score at week 8. Secondary outcome measures were the response to treatment (>50% reduction in baseline MADRS total score) and remission rate (MADRS<12). Results: 4549 patients were included in these analyses (escitalopram n=2272; SSRIs n=1750; SNRIs n=527). Escitalopram was significantly more effective than comparators in overall treatment effect, with an estimated mean treatment difference of 1.09 MADRS points (95% CI: [0.57;1.59], p<0.0001), and in response (odds ratio of 1.33 (95% CI: [1.15;1.53], p<0.0001) and remission (odds ratio of 1.22 (95% CI: [1.06;1.40], p<0.01)) rates. In analysis by medication class, escitalopram was significantly superior to SSRIs (p<0.01), and to SNRIs (p<0.01), although the statistical power was not adequate to make comparisons versus individual antidepressants other than citalopram (p<0.01). These results were similar for severely depressed patients (baseline MADRS>30). The withdrawal rate due to adverse events was 5.6% for escitalopram and 8.0% for the comparators (p<0.01). Conclusions: In this meta-analysis of 16 comparative studies, superior efficacy of escitalopram was confirmed versus both other SSRIs and SNRIs.

**REFERENCES:**

1. Kennedy SH, Andersen HF, Lam R. J Psychiatry Neurosci 2006;31:122-131.
2. Montgomery SA, Åsberg M. Br J Psychiatry 1979;134:382-389.

**NR3-115**

## WORKING MEMORY ON DEPRESSION AND ANXIETY: THE SIGNIFICANCE OF ASSESSING THE SUBJECTIVE COMPLAINTS OF WORKING MEMORY

**IN CLINICAL PRACTICE**

*Silvia Fernandez Biesa, M.B. Canary University Hospital (HUC), Psychiatry Ofra s/n 38320 Santa Cruz de Tenerife , Spain, 38320, Antonieta Nieto, P.D, José Barroso, P.D, Iván Galtier, L.P, Belén Curbelo, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) know if the complaints of the patient in the working memory correlate with a truly bad performance in specific neuropsychological tests; and 2) know the frequency of errors in working memories on depression and anxiety.

**SUMMARY:**

INTRODUCTION:In between 50-75% of depression patients feel concerned about their memory loss, which they put down to psychiatric medication. The main aim of this presentation is to analyse the relationship between the subjective perception of the working memory (WM) in depression and anxiety patients that do not take psychopharmacologic treatment, and its objective assessment. METHOD:We examined a group of 20 patients diagnosed with adaptative disorder, major depressive disorder, panic disorder, generalized anxiety disorder -according to DSM-IV-R criteria– that were not undergoing treatment, using the following tools: Montgomery-Asberg Depression Rating Scale(MADRS) and Hamilton Anxiety Rating Scales(HARS); A self-made questionnaire to measure the subjective assessment of the WM; Spatial Working Memory(SWM) and Rapid Visual Information Processing(RVP), from the Cambridge Neuropsychological Test Automated Battery(CANTAB). RESULTS:The data show that 60% of patients report having noticed changes in their WM since the beginning of their affective symptomatology. Up to 40% of patients have some punctuation of the SWM performance altered and up to 60% that of the RVP. The severity of the depression correlates with SWM between errors 6 boxes (r=0,453;p<0.05);SWM double errors (r=0,619;p<0.01); SWM total errors (r=0,528;p<0.05); SWM within errors (r=0,613;p<0.01), in a similar way to the severity of anxiety. Subjective assessment of WM impairment correlates with RVP Mean Latency (r=0,511;p<0.05);SWM between errors (r=0,537;p<0.05);SWM total errors (r=0,506;p<0.05). CONCLUSIONS: The severity of the anxiodepressive symptomatology correlates with SWM. The assessment the own patients make of their WM correlates with both the SWM performance and the RVP latency.DISCUSSION: The findings suggest that complaints on WM are related to its actual alteration. An important occasion to assess them is when a patient that performs intellectual work is discharged.

**REFERENCES:**

1. O'Brien J. T., Lloyd A., McKeith I., Gholkar A., Ferrier N.: A Longitudinal Study of Hippocampal Volume, Cortisol Lev els, and Cognition in Older Depressed Subjects. Am J Psy chiatry 2004; 161(11):2081-90.
2. Shenal B.V., Harrison D.W., Demaree H.A.: The Neuropsy chology of Depression: a Literature Review and Preliminary Model. Neuropsychol Rev 2003; 13(1):33-42.

**NR3-116**

**PLACEBO-CONTROLLED STUDY OF DIVALPROEX EXTENDED RELEASE LOADING MONOTHERAPY IN BIPOLAR OUTPATIENTS WITH MODERATE-TO-SEVERE HYPOMANIA OR MILD MANIA**

*Susan L McElroy, M.D. Dept of PsychiatryUniversity of Cincinnati Medical Center231 Albert Sabin Way, Cincinnati, OH 45267-0559, Brian Martens, M.S.W., Ryan Creech, B.A., Lena Jefferson-Wilson, M.D., Jeffrey Welge, Ph.D., Paul E. Keck, Jr., M.D.,*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to recognize the spectrum of ambulatory bipolar hypomanic and manic states and be familiar with the use of divalproex extended release loading in the treatment of patients with such states.

**SUMMARY:**

Introduction: Despite increasing awareness of "soft spectrum" or "ambulatory" bipolar spectrum disorder with hypomanic symptoms as a public health problem, there are extremely few systematic treatment studies of this condition. Because of its efficacy in mania and its excellent tolerability, we hypothesized that divalproex ER represented a promising treatment for ambulatory bipolar spectrum disorder with moderate-to-severe hypomanic or mild manic symptoms, including when accompanied by mild to marked depressive symptoms. Methods: Eight-week, double-blind, placebo-controlled, randomized clinical trial of divalproex ER (begun at 15 mg/kg and titrated to a maximum of 30 mg/kg) in bipolar spectrum outpatients with moderate-to-severe hypomania or mild mania defined as a Young Mania Rating Scale (YMRS) score =10 but <21 at baseline and at least one other study visit at least 3 days apart over the 2 weeks before baseline. Results: Of 62 subjects randomized, 60 (30 receiving divalproex ER and 30 placebo) had at least one post-baseline assessment. Eighteen patients (60%) in the divalproex ER group and 16 patients (53%) in the placebo group did not complete all 8 weeks of treatment. Random regression analysis showed that patients receiving divalproex ER had a significantly greater reduction in YMRS scores than patients receiving placebo. This investigator-initiated study was funded in-part by a grant from Abbott Laboratories. Abbott Laboratories also partially funded poster production costs and author's travel expenses.

**REFERENCES:**

1. Bowden CL, Swann AC, Calabrese JR, et al.: A randomized, placebo-controlled, multicenter study of divalproex sodium extended release in the treatment of acute mania. J Clin Psy chiatry 2006; 67(10):1501-1510
2. Suppes T, Mintz J, McElroy SL, et al.: Mixed hypomania in 908 patients with bipolar disorder evaluated prospectively in the Stanley foundation Bipolar Treatment Network: a sex-spe cific phenomenon. Arch Gen Psych 2005; 62:1089-1096

**NR3-117**

**BIPOLAR DIATHESIS OF UNIPOLAR TREATMENT RESISTANT DEPRESSION**

*Tae-Youn Jun, M.D. # 62, Youido-Dong, Youngdeungpo-Gu, SeoulKorea 150-713, Won-Myong Bahk,M.D., Young Sup Woo, M.D., Jeong-Ho Chae, M.D., Han Yong Jung, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant will understand the findings which suggest that a large part of cases of unipolar treatment resistant depression have a bipolar

diathesis.

**SUMMARY:**

In this study, we investigate the demographic and clinical characteristics, diagnostic subtypes, and illness outcome of patients with resistant depression. A medical record review of patients who were admitted at a university hospital with the diagnosis of major depressive disorder was conducted. We selected patients with "treatment resistant depression", which was defined as failure to respond to two adequate trials of antidepressants. Detailed clinical information including demographic data, age of illness onset, nature of symptoms, medical and psychiatric comorbidity, and psychiatric family history in first degree relatives was obtained. Patients were re-evaluated using the recently proposed criteria for bipolar spectrum disorder by Ghaemi et al. At discharge, 281 patients were diagnosed as major depressive disorder. Patients with treatment resistant depression (TRD) (n=68) were compared on demographic data and clinical characteristics with patients who were diagnosed with a major depressive disorder except treatment resistant depression (MDD) (n=213). Of the TRD group, 32 patients (47.1%) were bipolar spectrum disorder and 8 (3.8%) of the MDD group were bipolar spectrum disorder. ($p<0.001$) At two year follow up, diagnosis of 38 patients was changed. There was a 8.9% prevalence of bipolar disorder in our sample. Of the TRD group, 18 (26.5%) were subsequently classified as having bipolar disorder, and 7 (3.3%) of the MDD group. ($p<0.001$) There was no difference between these two groups in other clinical and demographic variables. The findings suggest that a large part of cases of unipolar treatment resistant depression have a bipolar diathesis.

**REFERENCES:**

1. Amsterdam JD, Hornig-Rohan M. 1996. Treatment algo rithms in treatment-resistant depression. In: Hornig-Rohan M, Amsterdam JD (Eds). Psychiatr. Clin. North Am. Saun ders, Philadelphia, pp. 371-386.
2. Sharma V, Khan M, Smith A. A closer look at treatment re sistant depression: is it due to a bipolar diathesis? 2005. J Af fect Disorder 84;251-257.

**NR3-118**

## DEPRESSION AS CONSEQUENCE OF TRANSITION IN SERBIA

*Tanja Lakovic, M.D. Kondina 11/9,11000 Belgrade, Serbia, Yu-goslavia 11000, Snjezana Tokovic,M.D., Andrej Ilankovic, M.D., Lana Marija Ilankovic, M.A., Nemanja Lakovic*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand that stress events as consequence of changes in society, especially changes of old habits thru the years and new aspect of lifestyle is the reason of appearance and worsening symptoms of depression.

**SUMMARY:**

Aim of study: Our investigation is an prospective analysis of group of patients treated in Primary Health Care Center "Savski venac", department of neuropsychiatry in Belgrade, Serbia. Thru the time period of 7 years we analyzed reactions connected with exposing to stress events which are consequence of democratic changes in Serbia in 2000, especially worsening of symptoms of depression until 2007 in patients with no history of mental illness. Methods: Research included 100 patients from Belgrade, Serbia, average age group of 50 years and approximate equal number of male and female sex. They are divided in two groups in dependence of level of education. For examination we used: (1) original question mark – questions about reactions which frequently have people exposed to very stressful events, and (2) Hamilton Depressive Scale (HAMD). Results: (1) In both groups during the time we have occurrence of depression, anxiety, raise of irritability, impulsivity, appearance of aggressiveness, suicidal tendencies, abuse of psychoactive products and alcohol with disorder of interpersonal relationships, disappointment in institutions of state and society; (2) in 2007 are discovered significant increase of depressive score (HAMD) at 45% of tested patients without significant distinction between groups. Conclusion: Stress events (stressful living) as consequence of changes in society, especially changes of old habits thru the years and new aspect of lifestyle is the reason of appearance and worsening symptoms of depression thru the time period of 7 years.

**REFERENCES:**

1. Thomas E.Joiner, Jessica S.Brown, Janet Kistner: The inter personal, Cognitive and Social Nature of Depression, Rout ledge, 2006.
2. Nick Crossley, Contesting Psychiatry: Social Movements in Mental Health, Routledge, 2006.

**NR3-119**

## POLYSOMNOGRAPHIC FINDINGS IN PATIENTS WITH "DYSTHYMIA": A STUDY IN AN EGYPTIAN SAMPLE

*Tarek Asaad, M.D. Ain Shams University Hospitals Institute of Psychiatrypostal code 11657Abbasia, Cairo, Egypt 11657, A. Abel Naser, M.D., Y.Abdel Razek, M.D., F. Lotaief, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) identify the sleep profile in patients with dysthymia; and 2) recognize the differences of this profile from that with major depression.

**SUMMARY:**

Background and Objective: Characteristic sleep patterns have been described in some psychiatric disorders, but the sensitivity and specificity of such changes have been always a matter of great debate. REM sleep changes, especially short REM latency, have been formerly thought as "specific" to depression. With more extensive studying, similar changes have been reported in other psychiatric and even non-psychiatric disorders, but the changes were, of course, more robust in depression. The difference between dysthymia and major depression is thought by some investigators to be "quantitative", and by others to be rather "qualitative". The aim of the present study was to highlight this area, evaluating sleep profile in patients with dysthymia and how far it resembles , or differs from what has been previously described in major depression. Subjects & Methods :20 patients fulfilling DSM-IV criteria of dysthymic disorder ( according to SCID-I assessment ) have been recruited from those attending outpatient department of Ain Shams University Psychiatric Institute , together with 10 age and sex matched healthy controls. Both patients and controls were subjected to physical and psychiatric examination, standardized

sleep questionnaire for assessment of subjective sleep complaints, as well as all-night polysomnography (repeated, when needed). Results: Significant findings included: short REM latency, prolonged first REM period, decreased slow wave sleep (SWS) and decreased sleep efficiency. REM % and REM density were not significantly different. Conclusion: dysthymic disorder shares some of the polysomnographic features described in major depression, which is in favour of considering it a "subtype" of mood disorders, rather than being a "separate" entity by itself.

**REFERENCES:**


1.Szelenberg W , Soldatos C. Sleep disorders in psychiatric practice.World Psychiatry.2005;4:186-190.

2. Buysee DJ,Germain A, Moul D, Nofzinger EA. Insomnia. In: Buysee DJ, ed. Sleep Disorders and Psychiatry. Arlington VA : American 3Psychiatric Publishing, Inc.: American Psychiat ric Publishing Review of Psychiatry;2005 :29-75.


**NR3-120**

## EMPLOYMENT STATUS AND SUBSYNDROMAL SYMPTOMS IN BIPOLAR DISORDER


*Tasha Glenn, Ph.D. ChronoRecord Association, Fullerton, CA 92834, Paul Grof, M.D., Natalie L Rasgon, M.D., Wendy Marsh, M.D., Kemal Sagduyu, M.D., Martin Alda, M.D., Danilo Quiroz, M.D., Peter C Whybrow, M.D., Michael Bauer, M.D.*


**EDUCATIONAL OBJECTIVE:**

The viewer should understand that patients with bipolar disorder who are disabled experience more subsyndromal symptoms of depression and spend more time ill than those who are busy full-time, and that residual disease may impact recovery.

**SUMMARY:**


Objective: Patients with bipolar disorder suffer high rates of disability and unemployment. This study investigated the relationship between time spent in episodes, time with subsyndromal symptoms, and employment status in patients with bipolar disorder.

Method: Mood ratings were collected daily from 107 patients with bipolar disorder who used ChronoRecord software for 5 months for recording. These were combined with data previously collected from 203 patients. The employment status was available for 293 patients: 75 were disabled, 135 were busy full-time (working or student full-time), and 83 were other (retired, home duties, unemployed, part-time employed). The time spent in episodes and with subsyndromal symptoms was analyzed based upon employment status.

Results: The age-adjusted mean days with subsyndromal depression was 27.2%, 15.3% and 18.2% in the disabled, busy full-time and other groups, respectively ($p<0.001$). The mean days with severe subsyndromal depressive symptoms was 6.4%, 3.1% and 4.5% in the disabled, busy full-time and other groups, respectively ($p=0.032$). The mean days in any episode plus with subsyndromal symptoms was 44.3%, 28.4% and 34.9% in the disabled, busy full-time and other groups, respectively ($p=0.001$). Disabled patients were more likely to have a depressed episode. However, there was no significant difference in the mean days in a depressed or manic episode, in the mean days with severe symptoms within episodes, or in the mean days with subsyndromal manic symptoms.

Conclusion: Disabled patients with bipolar disorder suffer subsyndromal symptoms of depression more frequently than those who are busy full-time. The total time spent in episodes plus time with subsyndromal symptoms is also longer for disabled patients. There is a need to better understand the impact of residual disease on functional recovery in bipolar disorder.


**REFERENCES:**


1. Huxley N, Baldessarini RJ: Disability and its treatment in bipolar disorder patients. Bipolar Disorders 2007; 9:183-196

2. Altshuler LL, Post RM, Black DO, Keck PE Jr, Nolen WA, Frye MA, Suppes T, Grunze H, Kupka RW, Leverich GS, McElroy SL, Walden 3.J, Mintz J: Subsyndromal depressive symptoms are associated with functional impairment in patients with bipolar disorder: results of a large, multisite study. The Journal Of Clinical Psychiatry 2006; 67:1551-1560


**NR3-121**

## COST-EFFECTIVENESS OF QUETIAPINE COMBINED WITH MOOD STABILIZERS COMPARED WITH MOOD STABILIZERS ALONE FOR MAINTENANCE TREATMENT IN BIPOLAR I DISORDER


*Tatia C Woodward, M.P.H. 7101 Wisconsin Avenue Suite 600, Bethesda, MD 20814, Eskinder Tafesse, Ph.D., Peter Quon, MPH, Arthur Lazarus, M.D., Rachael L. Fleurence, Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to 1) evaluate the cost-effectiveness of quetiapine combined with traditional mood stabilizers compared to mood stabilizers alone in maintenance treatment for bipolar disorder using data from a clinical trial, and 2) recognize cost-effectiveness drivers, such as quality of life loss and resource utilization, and to understand how they affect the cost-effectiveness analysis of maintenance treatment for bipolar disorder.

**SUMMARY:**


Introduction: Bipolar I disorder, an episodic and chronic illness, affects 1% of the US population (1). It constitutes a large economic burden and severely impacts the quality of life of patients and caregivers. Few studies have investigated the cost-effectiveness of maintenance treatments for bipolar 1 disorder (BPD1) (2). Methods: A Markov model was used to compare the cost-effectiveness between quetiapine (QTP) in combination with traditional mood stabilizers [divalproex (DVP) or lithium (Li)] and placebo (PBO) in combination with Li or DVP for BPD1 maintenance treatment, over 2 years, from the third party payer perspective. The model simulates a cohort of 1000 stabilized BPD1 patients (i.e., successful remission from prior acute mood episode) and estimates the quarterly risk in 3 health states: euthymia, mania, and depression. Direct costs included costs of drugs, hospitalizations, and physician visits. Efficacy data were obtained from 2 multicenter, randomized, double-blind, parallel-group trials comparing QTP with Li/DVP and Li/DVP alone for up to 2 years (Studies D1447C00126 and D1447C00127) and resource data were obtained from published literature. Mortality rates included suicide. Both benefits and costs were discounted at 3% and price year was 2007. Endpoints were costs per episode avoided and costs per quality-adjusted-life-years (QALY). Probabilistic sensitivity analysis was conducted to evaluate uncertainty in the results. Results: Treatment with quetiapine in combination with Li/

DVP was associated with decreases in acute mania (45%), acute depression (41%), and related hospitalizations (44%). The cost savings for QTP plus Li/DVP compared with Li/DVP alone, were $57 (US) per patient and the upper 95% CI for the probabilistic sensitivity analysis was $13,118 (US)/QALY. Conclusion: This study shows that QTP in combination with Li/DVP is a cost-effective maintenance treatment for patients with bipolar I disorder. Supported by AstraZeneca Pharmaceuticals.

**REFERENCES:**


1. Merikangas KR. Lifetime and 12-month prevalence of bipolar spectrum disorder in the National Comorbidity Survey repli cation. Arch Gen Psychiatry. 2007;64:543-552.
2. Calvert, NW: The cost-effectiveness of lamotrigine in the maintenance treatment of adults with bipolar 1 disorder. J Manag Care Pharm. 2006;12:322-330.


**NR3-122**

## EARLY ONSET OF ANTIPSYCHOTIC ACTION AND OUTCOME OF ZIPRASIDONE TREATMENT IN PLACEBO-CONTROLLED BIPOLAR MANIA TRIALS


*Terence A Ketter, M.D. 401 Quarry Rd, Rm 2124, Stanford, CA 94305-5723, Steve Romano, M.D., Cynthia Siu, Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize that in patients with acute mania treated with ziprasidone, early (day 4) improvement in psychotic symptoms predicts later (day 21) remission of manic symptoms.

**SUMMARY:**


Introductions: Recent research indicates intramuscular ziprasidone produces a significant, early (within 24 hours) improvement in psychotic symptoms. In this analysis, we investigated the potential for an early antipsychotic response to oral ziprasidone in subjects with acute bipolar mania. The predictive value of early response to remission of symptoms was also evaluated. Methods: We conducted a pooled analysis of two 3-week, randomized, double-blind, placebo-controlled trials of ziprasidone (40-160 mg/d) in hospitalized patients (N=415) with bipolar I disorder, and a current manic (N=257) or mixed episode (N=158), with (N=151) or without (N=245) psychotic features. Efficacy assessments included the Mania Rating Scale (MRS, derived from the SADS-C). Remission was defined as achieving a MRS score <= 12 (2). Improvement in psychosis was evaluated by a sum of the three SADS-C psychosis items (delusions, hallucinations, and suspiciousness). MMRM and logistic regression analyses were applied to estimate the time course of response. Results: Significantly greater response rate (>50% MRS decrease from baseline) and improvement in the SADS-C psychosis score were observed in the ziprasidone group (versus placebo) as early as Day 4 ($p<0.01$), and the magnitude of improvement increased with time ($p<0.003$). At Day 21, remission rate with ziprasidone monotherapy was 49% versus 36% in the placebo group ($p=0.02$). Early antipsychotic response at Day 4 was an accurate predictor of remission at Day 21 ($p<0.01$, ROC=0.76). Conclusions: Ziprasidone was associated with a rapid onset of response in psychotic symptoms in patients with acute bipolar mania. This early reduction in psychotic symptoms was found to mediate overall improvement in manic symptoms and predict remission at endpoint.


**REFERENCES:**


1. Warrington L, Loebel A, Siu C, Mamo D, Kapur S: Early Onset of Antipsychotic Action in the Treatment of of acutely agitated patients with schizophrenia. Presented at the 159th Annual APA Meeting, May 20-25, 2006; Toronto, Canada.
2. Ketter TA, Jones M, Paulson B: Rates of remission/euthymia with quetiapine monotherapy compared with placebo in patients with acute mania. Journal of Affective Disorders 100 (2007) S45–S53.


**NR3-123**

## AN OPEN-TRIAL OF DULOXETINE AMONG HISPANIC AMERICANS WITH MAJOR DEPRESSIVE DISORDER: A FOCUS ON ANXIOUS AND SOMATIC PAIN SYMPTOMS


*Terrance J Bellnier, B.Ph. SUNY University at Buffalo 36 Forest Meadow Tr., Rochester, NY 14624, Tulio R. Ortega, M.D., Sara Bingel, Pharm.D., Richard Simon, Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) identify presenting symptoms of major depressive disorder in Hispanic patients; and 2) understand the role of duloxetine in treating depression in Hispanic patients.

**SUMMARY:**


Objective: Depression is underrecognized and undertreated in Hispanic Americans possible due to presenting symptoms of pain, anxiety, the use of cultural idioms for distress and other language differences. We conducted a flexible-dose open-label 12 week evaluation of the efficacy and tolerability of Duloxetine in Hispanic patients. Method: Hispanic patients were referred to a bilingual Hispanic private practice psychiatrist over the course of 3 years. 67 bilingual Hispanic patients with major depressive disorder and a Hamilton Depression Scale-17 (HAMD) score of > 18 were included. Diagnosis was confirmed by M.I.N.I.. Demographics and treatment history were collected. Patients were assessed at baseline and at12 weeks for somatic symptoms (Patient Health Questionnaire-15(PHQ), depressive symptoms (HAMD, Clinical Global Impression-Severity (CGI)), and presenting complaints. Results: Subject characteristics: Age-48.6 +- 12.1 y/o, 7% Cuban, 4% Dominican, 16% Mexican, 73% Puerto Rican, Male=18, duration of illness =11.8 +- 8.1 years. Presenting complaints: 4% depressed mood, 20% anxiety, 76% pain and anxiety. Depressive symptoms: HAMD- 20.9 +- 1.95 to 10.2 +- 2.9 (P=<.0001, t=25.3, df=132), CGI-4.8 +- 0.6 to 3.2 +- 0.7 (p=<.0001, t=15.01), HAMD anxiety item- 2.7 +- 0.5 to 0.7 +- 0.7 (P=<.0001, t=18.2). Somatic symptoms: PHQ-10.5 +- 4.6 to 1.95 +- 2.1 (P=<.0001, t=13.7). Conclusion: Duloxetine is effective in reducing somatic pain, anxiety and depressive symptoms in bilingual Hispanic patients. The sample size and study design limits our ability to make population inferences. More comprehensive randomized, placebo controlled trials to determine efficacy and safety in Hispanic Americans are needed.


**REFERENCES:**


1. Lewis-Fernandez R. , Das K., Alfonso C., et al Depression in US Hispanics:Diagnostic and Management Considerations in Family Practice. J Am Board Fam Pract 2005;18:282-296.
2. Sanchez-Lacay J., Lewis-Fernandez R. Goetz D., et al Open Trial of Nefazadone Among Hispanics with Major Depres sion: efficacy, tolerability, and adherence issues. Depression

and Anxiety 2001;13:118-124.

**NR3-124**

## EFFECTIVENESS OF EXTENDED RELEASE QUETIAPINE AS MONOTHERAPY FOR THE TREATMENT OF ACUTE BIPOLAR DEPRESSION (TRIAL D144CC00002)

*Trisha Suppes, M.D. Department of Psychiatry Bipolar Disorder Research Program5323 Harry Hines Blvd., Dallas, TX 75390-9121, Catherine Datto, Margaret Minkwitz, Arvid Nordenhem, Chris Walker, Denny Darko*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should increase his or her awareness of the efficacy and tolerability of the once daily extended release formulation of quetiapine monotherapy in the treatment of patients with bipolar I and II disorder experiencing an episode of depression.

**SUMMARY:**

Objective: Quetiapine is the only antipsychotic approved in the USA as monotherapy for treatment of both acute mania and depression associated with bipolar disorder. This study evaluated effectiveness of quetiapine extended release (XR) once daily (QD) in bipolar depression. Method: Double-blind, placebo-controlled study in adults with bipolar I or II disorder, acutely depressed, with or without rapid cycling. Patients were randomized to 8 weeks of quetiapine XR monotherapy 300 mg QD or placebo. Primary outcome measure was change from baseline to Week 8 in MADRS total score. Secondary outcome measures included MADRS response and remission, change from baseline to Week 8 in MADRS items, and CGI-BP severity of illness and change. Change from baseline between groups was compared with ANCOVA, using LOCF approach for missing data. Results: Quetiapine XR (n=133) 300 mg QD monotherapy showed significantly greater improvement in depressive symptoms compared with placebo (n=137) from Week 1 (first assessment; P<0.001), which was maintained to endpoint (Week 8; P<0.001). The mean change in MADRS total score at Week 8 was -17.43 for quetiapine XR and -11.92 for placebo (P<0.001; baseline MADRS: quetiapine XR 29.8; placebo 30.1). Response (>/=50 reduction in MADRS total score; P<0.001) and remission (MADRS total score </=12; P<0.05) rates, assessed at Week 8, were significantly higher with quetiapine XR than placebo. Quetiapine XR improved core symptoms of depression, as assessed by change in MADRS item scores. CGI-BP-related outcomes showed significant improvement with quetiapine XR compared with placebo. Most adverse events were mild to moderate in intensity; the most common adverse events with quetiapine XR included dry mouth, somnolence, and sedation. Conclusions: Quetiapine XR (300 mg) once daily monotherapy was efficacious (from Week 1) and generally well tolerated for depressive episodes in bipolar I or II disorder. Supported by AstraZeneca Pharmaceuticals LP.

**REFERENCES:**

1. American Psychiatric Association: Practice guidelines for the treatment of patients with bipolar disorder. Am J Psychia try 2002; 159(Suppl):S2-S50
2. Seroquel [Package Insert]. Wilmington, DE: AstraZeneca Pharmaceuticals; 2007

**NR3-125**

## DEPRESSIVE SYMPTOMS AND ONSET-AGE ASSOCIATED WITH THE HISTORY OF SUICIDE ATTEMPT IN KOREAN PATIENTS WITH BIPOLAR DISORDER

*Vin Ryu, M.D. Severance Mental Health Hospital, 696-6, Tanboldong, Kwangju city, Kyonggi Province South Korea 464-100, Hyun-Sang Cho, M.D., Ph.D.,1, Se-Joo Kim, M.D., Ph.D.,1, Eun Lee, M.D.,2, Duk-In Jon, M.D., Ph.D.,3, Eun-ju Kim, M.D.,1, Jeong-Ho Seok, M.D., Ph.D.,3 Institute of Behavioral Science in Medicine and Department of Psychiatry, Yonsei University College of Medicine, Seoul, South Korea.1 Department of Psychiatry, Ilsan Hospital, National Health Insurance Corporation, Gyeonggi-do, Korea.2 Department of Psychiatry, Hallym University College of Medicine, Anyang Gyeonggi, South Korea.3*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the age of onset and depressive episode as risk factors of suicide attempts in patients with bipolar disorder and be more aware of these clinical features for the prevention of suicide in bipolar patients.

**SUMMARY:**

Objectives: Several predictors of suicide attempt in patients with bipolar disorder have been suggested through clinical observations and prospective investigations. However, it has not been sufficiently investigated in Korean patients with bipolar disorder. We retrospectively reviewed medical records of bipolar disorder patients to detect significant clinical characteristics associated with suicide attempts in Korea.

Methods: A retrospective review of 579 medical records was done. We inspected the clinical features such as age, education level, sex, illness duration, history about depressive episode and suicide attempt, age of onset, family history of psychiatric illness, comorbidity, psychotic features, and global function level. Bipolar patients were compared in respect to the presence or absence of a history of suicide attempts.

Results: Prevalence of suicide attempt was 13.1% in our patient group. The independent sample t-tests and chi-square tests showed that the depressive episode, age of onset and psychiatric family history are different between the non-attempters and attempters. The stepwise multiple logistic regression analysis revealed that the patients who begin bipolar disorder with depressive symptoms and who have earlier onset-age were associated with a history of suicide attempt.

Conclusion: A history of depression and early onset of illness may be the risk factors to attempt suicide in the bipolar patients in Korea. Clinicians should have attention to these clinical features for the prediction and prevention of suicide in the Korean patients with bipolar disorder.

**REFERENCES:**

1. Johnson SL, McMurrich SL, Yates M. Suicidality in bipolar I disorder. Suicide Life Threat Behav. 2005;35:681-689.
2. Perlis RH, Miyahara S, Marangell LB, et al. Long-Term implications of early onset in bipolar disorder: data from the first 1000 participants in the systematic treatment enhancement program for bipolar disorder (STEP-BD). Biol Psychiatry. 2004;55:875-881.

**NR3-126**

**IMPROVEMENT OF SYMPTOMS OVER 24-WEEK TREATMENT OF PATIENTS WITH MDD**

*Wade Alan G Wade, M.D. CPS Research3 Todd Campus Glasgow G20 0XA,United Kingdom, Schlaepfer TE, Andersen HF, Kilts CD*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to recognize the benefit of long-term treatment for patients with major depressive disorder.

**SUMMARY:**

Purpose: Since it is uncertain which short-term outcomes influence long-term compliance and outcomes in patients with major depressive disorder (MDD), the aim was determine which factors predict a successful outcome for long-term treatment with antidepressant medication.
Methods: Pooled analysis of four randomized, double-blind, active comparator, 24-week trials in MDD (1-4).
Results: Patients received double-blind treatment: escitalopram (N=699) or a comparator (citalopram, duloxetine or paroxetine) (N=699). Onset of response (>=20% improvement from baseline in MADRS total score) at week 2 was correlated to response (>=50% decrease from baseline MADRS total score) at week 8, and completing 8 weeks of treatment was correlated to completing 24 weeks. However, response at week 8 was a stronger predictor of achieving remission than completing 24 weeks. Residual symptoms reported by more than 5% of patients achieving complete remission (MADRS <=5) were inner tension and reduced sleep. The overall remission (MADRS ?10) rate was statistically significantly ($p<0.01$) greater for escitalopram [70.7% (494/699 patients)] than for comparators [64.7% (452/699 patients)]. There were significantly fewer patients withdrawn during 24 weeks of treatment with escitalopram (15.9%, 111 patients) than with active comparator (23.9%, 167 patients) ($p<0.0001$).
Conclusion: Response at 8 weeks was correlated to achieving remission at 24 weeks. Compared with comparators, escitalopram-treated patients were statistically significantly more likely to complete 24 weeks of treatment, and had a significantly higher remission rate.

Study supported by H. Lundbeck A/S.

**REFERENCES:**

1. Baldwin DS, Cooper JA, Huusom AK, Hindmarch I. Int Clin Psychopharmacol 2006;21:159-169.
2. Wade AG, Gembert K, Florea I. Curr Med Res Opin 2007;23:1605-1614.

**NR3-127**

**ARE LIFE EVENTS ASSOCIATED WITH LOW BACK PAIN AND DEPRESSION?**

*Wolfgang Ghedina, M.D. Psychiatric State Hospital Thurnfeldgasse 146060 Hall in Tirol Austria, 6060, Berek Klaus, M.D., Rabensteiner Evelyn, Mag., Knapp Rudolf, M.D., Dunkel Dirk, Ph.D., Haring Christian, .MD.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize assocciations between life-events, low-back-pain and depression.

**SUMMARY:**

Introduction: Low back pain and depression are prevalent medical conditions throughout the population. Through clinical observation it is often noted that many patients with low back pain also present symptoms of depression. People can be genetically predisposed to developing depression following a life event. The influence of life stress on depression is demonstrated in Caspi`s publication about polymorphism in the 5-HTT gene. Methods: In a clinical study of 182 male and female in-patients from a neurological ward, we recorded the epidemiological occurrence of low back pain with depression. We specifically noted whether over the last six months to a year they experienced psychosocial crisis' or life events that may have triggered their symptoms.
Physical symptoms and most predominantly pain, are often associated with depression.
In our investigation we included 182 male and female patients suffering from "low-back-pain" at the age of 18 to 75 years, MRI or CT was done, psychological scales for ICD-10 diagnoses, neurological screening and psychiatric interview.
Results: In our investigation we describe associations between "low-back-pain", depression and "life-events" in male and female in-patients.

**REFERENCES:**

1. Caspi A, et al. Influence of life stress on depression : modera tion by a polymorphism in the 5-HTT gene. Science 2003; 301: 386-9.
2. Kendler KS, et al. The interaction of stressful life events and a serotonin-transporter polymorphism in the prediction of episodes of major depression: a replication. Arch Gen Psy chiatry 2005; 62: 529-35.

**NR3-128**

**THE PREVALENCE OF OBSESSIVE COMPULSIVE DISORDER IN TURKISH ADOLESCENTS; EPIDEMIOLOGICAL STUDY**

*Abdullah Akpinar, M.D. Sisli Etfal Egitim ve Arastirma Hastanesi 19 Mayis Mah. Sisli, Istanbul, Turkey 34340, K. Oguz Karamustafalioglu*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to determine the prevalence of OCD in the adolescent population.

**SUMMARY:**

Introduction: Evaluating the prevalence of OCD in general population enables us to reach clearer results given that our clinical sample includes the group of patients that has not gone to a psychiatry clinic yet.Purpose: To determine the prevalence of OCD in the adolescent population.
Method: Our study group comprises 361 first grade students chosen randomly from four high schools, 57% of whom are female and 43% are male. Ages of the subjects are 14-17 years. OCD module of the SCID and symptom checklist of the Y-BOCS were used to conduct a structured interview for psychiatric evaluation. Results: The prevalence of current, lifetime, subclinical and past OCD were, 3.9%, 4.2%, 3% and 0.3%, respectively. Mean age at onset was 12.9 years. OCD was similarly prevalent among males and females. Not being the first child and being the third child in the family, was significantly

more common among persons with OCD. OCD patients were more likely to have divorced parents. Contamination and agressive obsessions; checking, counting and cleaning/washing obsessions, were the most common. Mean Y-BOCS obsession subscale score was 6.7±4.3; mean compulsion subscale score was 6.4±3.9; mean total score was 13.1±5.2.Conclusion: Although OCD is considered a relatively rare disorder, the notion based on clinical samples (0.05%-1%), epidemiological studies revealed significantly higher rates (0.2%-4). Our was to determine the prevalence of OCD in adolescent population and we found that OCD is common among adolescents. Epidemiological studies with adolescents will enable us to include persons with OCD who have not visited or been referred to psychiatry in our samples, making it possible to achieve more accurate results concerning the prevalence of OCD.

**REFERENCES:**


1. Zohar AH., Ratzoni G, Binder M ve ark. An epidemiological study of obsessive compulsive disorder and anxiety disorders in Israeli adolescents. Psychiatric Genetics 1993; 176-184.
3. Flament M.F, Whitaker A, Rapoport J L ve ark. Obsessive compulsive disorder in adolescence: an epidemiological study. Journal of the American 4.Academy of Child and Ado lescent Psychiatry 1988; 27, 764 -771.


**NR3-129**

## OBSESSIVE-COMPULSIVE DISORDER: CLINICAL FEATURES OF EARLY AGE AT ONSET


*Alice Mathis, B.S. Dr Ovídio Pires de Campos 785 - Cerqueira Cesar, Sao Paulo, Brazil 05403-010, Maria Conceição do Rosário, M.D., Ph.D., Juliana Diniz, M.D., Victor Fossaluza, Carlos Alberto Pereira, M.D., Ph.D., Roseli G Shavitt, M.D., Ph.D., Albina Torres, M.D., Ph.D., Ygor Ferrão, M.D., Ph.D., Eurípedes Miguel, M.D., Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize clinical differences between early age at obsessive-compulsive disorder and late age at onset.

**SUMMARY:**


Background: To better understand OCD heterogeneity, more homogeneous phenotypic descriptions are necessary to delimitate clinically meaningful subgroups of patients and help in the search for vulnerability genes e para a identificação de estratégias mais eficazes de tratamento. Studies indicate that OCD patients with early age at onset presents clinical features , besides a higher rate among first degree relatives to present OCD and Tic disorders. Objective: Study clinical features of early OCD patients (EO) versus late OCD patients (LO) regarding OCD symptoms, comorbidities and history family. Method: Subjects included 330 OCD patients according to *DSM-IV* criteria. The Structured Clinical Interview for Diagnosis-IV – SCID-I; Yale Global Tic Severity Scale - YGTSS; Yale-Brown Obsessive-Compulsive Scale - Y-BOCS, Dimensional Obsessive-Compulsive Scale DY-BOCS; Sensory Phenomena Scale of Sao Paulo University – USP-SPS were used to evaluate directly the 330 patients It was considered early onset if symptoms began till 10 years (EO- n=160),, and late onset after 18 years old (LO-n=95),, according Geller et al., (1998) and Rosario-Campos et al., (2001). Qui-square test was used to compare groups with 5% significance level. Results: The EO presented highter frequences of the following comorbidities in relation to LO: tic disorder, Tourette syndrome, anxiety disorders (excluding OCD), ADHD, social phobia, t. somatoform disorders, body dysmorphic disorder, kleptomania and separation anxiety disorder. The EO presented higher OCS symptoms in first degree relatives compared to LO. Beisdes, a higher frequence of sensory phenomena, “tic-like” compulsions and mental ritual. Conclusion: Results reinforce the hiphoteses that early age at OCD onset could be considered a distinct subgroup and present specifics features.


**REFERENCES:**


1. miguel ec; leckman jf; rauch s et al., Obsessive-compulsive disorder phenotypes: implications for genetics studies. Mo lecular Psychiatry 2005.
2. rosario-campos mc; leckman jf; mercadante m et al., Adults with early-onset obsessive-compulsive disorder.


**NR3-130**

## ADEQUACY OF SSRI PHARMACOTHERAPY AMOUNG MEDICAID-ENROLLED PATIENTS NEWLY DIAGNOSED WITH OBSESSIVE-COMPULSIVE DISORDER


*Cheryl S Hankin, Ph.D. PO Box 129, Moss BeachCA 94038, Jeffrey Dunn, Pharm.D., M.B.A., John Knispel, M.D., Arthur Levin, M.D., Amy Bronstone, Ph.D, Zhaohui Wang, M.S.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand what constitutes appropriate pharmacotherapy for OCD and to recognize that OCD is a significantly under-treated disorder, with only one quarter of Medicaid-enrolled adults receiving appropriate pharmacotherapy over a 9-year period.

**SUMMARY:**


Background: The American Psychiatric Association (APA) recently published clinical practice guidelines for obsessive-compulsive disorder (OCD), specifying that at least 12 weeks of a selective serotonin reuptake inhibitor (SSRI) at an adequate dose was required to achieve a therapeutic response.1 However, little is known about the current quality of pharmacologic care for OCD. Introduction: We sought to examine the adequacy of psychotropic care among Medicaid-enrolled adults newly diagnosed with OCD.

Methods: We conducted a 9-year (1997-2006) retrospective analysis of Florida Medicaid-enrolled adults (age = 18 years) newly diagnosed with OCD (ICD-9 300.3) who had received psychotropics. Adequate pharmacotherapy was defined as = 12 consecutive weeks of SSRI treatment with = 14 days between medication fills and an average daily SSRI dose (excluding the first 6 weeks of psychotropic use where titration is likely) within the target range specified by recent APA guidelines. Results: Among 2,960,421 adult Medicaid enrollees, 2,921 (0.1%) were diagnosed with OCD during the 9-year period. Among these, 987 received SSRIs. Among the 987 patients receiving SSRIs, only 25% received adequate pharmacotherapy during the study period. Specifically, 23% received less than 12 weeks on an SSRI, and 77% received SSRI doses below the minimum guideline-recommended target range. Conclusion: Inadequacy of SSRI pharmacotherapy in this sample of Medicaid-enrolled patients with newly diagnosed OCD supports findings from an earlier study by Koran and colleagues, who found that less

than half (42.8%) of newly-diagnosed HMO members with OCD received adequate SRI treatment.2 Findings suggest that widespread dissemination of APA guidelines and mental healthcare provider education may be critical to addressing pharmacotherapy needs of patients with OCD.

**REFERENCES:**


1. Koran LM, Hanna GL, Hollander E, Nestadt G, Simpson HB. Practice guideline for the treatment of patients with obses sive-compulsive disorder. Am J Psychiatry 2007;164(7 Suppl):5-53.
2. Koran LM, Leventhal JL, Fireman B, Jacobson A. Pharma cotherapy of obsessive-compulsive disorder in a health maintenance organization. Am J Health Syst Pharm 2000;57(21):1972-8.


**NR3-131**

**DOES FLUVOXAMINE CR REDUCE DISABILITY IN SOCIAL ANXIETY DISORDER?**


*David V Sheehan, M.D. 3515 East Fletcher, Tampa, FL 33613, Michael R. Liebowitz, M.D., Kathy Harnett-Sheehan, Ph.D., Amir H. Kalali, M.D., Hwa-Ming Yang, M.D., Luigi M. Barbato, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) appreciate the magnitude of disability associated with Social anxiety Disorder; and 2) evaluate evidence relating to the use of Fluvoxamine CR in the treatment of disability in Social Anxiety Disorder.

**SUMMARY:**


Background: Generalized Social Anxiety Disorder (GSAD) is associated with significant disability. Methods: The Sheehan Disability Scale (SDS) was administered to 579 subjects with a primary diagnosis of GSAD in two similarly designed 12-week randomized, double-blind, placebo-controlled, studies with flexible dosing of controlled release (CR) fluvoxamine. A last-observation-carried-forward (LOCF) analysis from the first on-treatment visit (week 2) was used to examine the effect of medication on disability for the intent-to-treat (ITT) population. Results: Fluvoxamine CR was superior to placebo in reducing social disability on the raw score analysis from week 6. It was superior in reducing work and total disability from week 8. On the mean change score analysis, improvements on fluvoxamine CR compared to placebo were statistically significant starting at week 2 for work disability ($p<0.05$), at week 6 for social disability ($p<0.03$) and total disability ($p<0.04$) and at week 8 for family disability. This Abstact was supported in part by a grant from Jazz Pharmaceuticals, Inc.


**REFERENCES:**


1. Stein MB, Kean YM. Disability and Quality of Life in Social Phobia: Epidemiologic Findings. Am J Psychiatry 2000; 157:1606-1613.
2. Sheehan DV, Harnett-Sheehan K, Raj BA. The measurement of disability. Int Clin Psychopharmacol. 1996; 11(suppl 3):89-95.


**NR3-132**

**ARIPIPRAZOLE AUGMENTATION OF SEROTONIN REUPTAKE INHIBITOR-REFRACTORY OBSESSIVE-COMPULSIVE DISORDER**


*Donald A Malone, M.D. 9500 Euclid Avenue, Desk P57, Cleveland, OH 44195, Robert T. Rowney, D.O., Jerilyn Hagan-Sowell, MSN, J.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) understand the utility of using atypical antipsychotics for the treatment of refractory obsessive compulsive disorder; 2) identify the rationale for aripiprazole as a potential augmenting agent for obsessive-compulsive disorder management; and 3) discuss preliminary findings of using aripiprazole as an augmenting agent in refractory obsessive-compulsive disorder.

**SUMMARY:**


Intro: Atypical antipsychotic medications have been effective in augmenting selective serotonin reuptake inhibitors (SSRI's) for the treatment of obsessive-compulsive disorder (OCD). Aripiprazole has not been studied in this regard, though has shown some promise as monotherapy. Given its 5-HT1a partial agonist activity, aripiprazole may by particularly effective as an augmenting agent. Methods: 10 consecutive patients meeting *DSM-IV* criteria for OCD and not responsive to current treatment with an SSRI were enrolled. Aripiprazole was added to their current SSRI in an open-label manner. The starting dose was 10mg per day, which could be increased or decreased as tolerated. Improvement was assessed using the Yale-Brown Obsessive-Compulsive Scale (YBOCS). Response was defined as = 25% improvement at 3 months. Results: 2 of the 10 patients enrolled in the study never actually started the aripiprazole despite consenting to the study. Both of them cited anxiety over new medication as the reason. 4 of the remaining 8 patients completed 3 months of treatment. 2 patients discontinued aripiprazole prematurely due to adverse effects (anxiety and restlessness) while 2 others discontinued for lack of efficacy. All 4 completers met response criteria. The responders did not differ from non-responders in age, baseline YBOCS score, or baseline GAF ($p>0.05$). The mean aripiprazole dose in the responders group at endpoint was 13.75mg (± 2.5). The mean YBOCS change in responders was from 21.25 (± 5.12) at baseline to 10.25 (± 5.74) at endpoint. Percent YBOCS improvements from baseline in the 4 responders were 31%, 36%, 62%, and 77%. Patients completing the study tolerated the aripiprazole well. Conclusion: Aripiprazole shows promise in augmenting response to SSRI's in patients with OCD. Lower starting doses may help prevent premature discontinuation and enhance long-term compliance. This study was funded through a research grant from Bristol-Myers Squibb.


**REFERENCES:**


1. Connor KM, Payne VM, Gaddle KM, et al: The use of aripip razole in obsessive-compulsive disorder: preliminary observa tions in eight patients. J Clin Psychiatry 2005; 66:49-51.
2. Bloch MH, Landeros-Weisenberger A, Kelmendi B, et al: A systematic review: Antipsychotic augmentation with treat ment refractory obsessive-compulsive disorder. Molecular Psychiatry 2006; 11:622-632.


**NR3-133**

**A 12-WEEK OPEN-LABEL TRIAL OF ADJUNCTIVE LEVETIRACETAM FOR TREATMENT REFRACTORY POST-TRAUMATIC STRESS DISORDER (PTSD)**


*Gustavo D. Kinrys, 1493 Cambridge Street, Cambridge, MA*

*02139, Fernanda Nery, B.A., Ethan Rothstein, B.A., Debora Vasconcelos e Sa, M.S., Roberto Sassi, M.D., Ph.D., Robert Dunn, M.D., Ph.D., Ricardo Bianco, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand the potential clinical application of this novel therapeutic option for the treatment of refractory PTSD patients.

**SUMMARY:**

Background: Post Traumatic Stress Disorder (PTSD) affects a significant portion of the population (5-9% lifetime prevalence) and tends to be accompanied by substantial psychiatric comorbidity due to the chronic and refractory nature of the disorder. As such, it represents a significant burden to society, especially with regard to its associated levels of psychosocial disability, somatic complications, and utilization of health care resources. Despite the effectiveness of currently available treatments for PTSD, many patients remain symptomatic after initial intervention. There remains an outstanding need for efficacious pharmacological agents that are safe and well-tolerated. We present an open-label study that examines the use of adjunctive levetiracetam in 20 patients with treatment refractory PTSD. Method: Single-blind placebo run-in period, followed by 12-week open-label adjunctive levetiracetam for patients with PTSD, who were deemed partial or non-responders to at least 8 weeks of antidepressant therapy. Results: Levetiracetam at a mean dose of 1240 mg (SD +/- 110mg), was generally well tolerated. Patients included were relatively ill with a mean baseline CGI-Severity score of 5.48 (+/-1.2), "severely ill", a mean HAM-A of 26 (+/- 4.8), and a mean duration of illness of 14 (+/- 5.3) years. Patients improved significantly on all measures (CGI-S=2.65; CGI-I=2.3, HAM-A=12.56), p=0.001, with a mean decrease in CGI-S of 2.83 points. Most patients (60% or 12/20) met responder criteria at endpoint (CGI-I=2) and 8 (40%) met remission criteria (CGI-S= 2). Conclusion: These preliminary data suggest that levetiracetam may be an effective adjunctive treatment for patients with PTSD who remain symptomatic despite initial antidepressant therapy and confirm earlier findings in the literature. Further controlled and larger studies are warranted.

**REFERENCES:**

1. Kinrys G, Worthington JJ, Wygant L, Nery F, Reese H, Pol lack MH. Levetiracetam as adjunctive therapy for refractory anxiety disorders. J Clin Psychiatry. 2007 Jul;68(7):1010-3.
2. Gower AJ, Falter U, Lamberty Y. Anxiolytic effects of the novel anti-epileptic drug levetiracetam in the elevated plus-maze test in the rat. Eur J Pharmacol. 2003 Nov 14;481(1):67-74.

**NR3-134**

## PLASMA BRAIN-DERIVED NEUROTROPHIC FACTOR (BDNF) IN PANIC DISORDER AND ITS RELATION WITH CLINICAL CHARACTERISTICS

*Ik-Keun Hwang, M.D. Department of Psychiatry, Chonbuk National University Hospital, Jeonju, South Korea 561-712, Ik-Keun Hwang, M.D., Ph.D., Jong-Chul Yang, M.D., Ph.D., Yong-Ku Kim, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to recognize that alteration of BDNF may be associated with the development and pathophysiology of panic disorder.

**SUMMARY:**

Introduction: BDNF is known to be involved in the plasticity of neurons and pathophysiology of several psychiatric illnesses. The purpose of this study was to determine whether there is an abnormality of plasma BDNF levels in patients with panic disorder, and its relation with clinical characteristics.
Methods: The 101 patients with panic disorder (mean age: 39.95 ± 10.16 years, 53 males, 48 females) who fulfilled the DSM-IV criteria for panic disorder and 101 healthy controls (mean age: 38.45 ± 10.10 years, 52 males, 49 females) were enrolled in the study. BDNF was assayed using the DuoSet ELISA Development System (R&D Systems. DY248). The clinical characteristics of the panic patients were evaluated by Panic Disorder Severity Scale (PDSS), Acute Panic Inventory (API), Agoraphobic Cognition Questionnaire (ACQ), Hamilton Anxiety Rating Scale (HAMA), duration of illness, presence of agoraphobia, insomnia, early or recent stressful events, and history about alcohol or smoking. The difference in the plasma BDNF levels between two groups and subgroup analysis were analyzed by non-parametric Mann-Whitney test, and the correlations between the BDNF level and clinical characteristics were examined by Spearman correlation coefficient using the SPSS 12.0 ($p<0.05$).
Results: The mean plasma BDNF levels of 101 panic patients were significantly lower compared with those of controls (146.55 ± 138.72 pg/ml vs. 788.89 ± 500.94 pg/ml, Z=-10.06, $p<0.001$). The HAMA score($r = -0.31$, $P <0.05$) and duration of illness($r = -0.33$, $P <0.05$) were negatively correlated with the BDNF level in panic patients. And, mean plasma BDNF level in panic patients with the recent stressful event were higher than without that (188.61 ± 166.94 pg/ml vs. 116.61 ± 106.23 pg/ml, Z=-2.67, $p<0.005$). However, other variables did not reveal any significant correlations with BDNF levels.
Conclusion: These results suggest that BDNF may play a role in the pathophysiology of panic disorder.

**REFERENCES:**

1. Pezet S, Malcangio M. Brain-derived neurotrophic factor as a drug target for CNS disorders. Expert Opin Ther Targets 2004;8:391-399.
2. Kobayashi K, Shimizu E, Hashimoto K, Mitsumori M, Koike K, Okamura N, Koizumi H, Ohgake S, Matsuzawa D, Zhang L, Nakazato M, Iyo M. Serum brain-derived neurotrophic fac tor (BDNF) levels in patients with panic disorder: as a biolog ical predictor of response to group cognitive behavioral ther apy. Prog Neuropsychopharmacol Biol Psychiatry 2005;29:658-663.

**NR3-135**

## SOCIAL COGNITION AND SYMPTOMS DIMENSIONS OF PATIENTS WITH OBSESSIVE-COMPULSIVE DISORDER

*Isabela D Soares, Ph.D. Rua Mem de Sá, 19/712 Icaraí, Niterói-Brazil 24220-261, Flavia Miele, Ph.D., Bernard P. Rangé, Ph.D., Angélica M. Prazeres, Ph.D., Manuela C. Borges, Ph.D., Jorge Moll, M.D., Leonardo F. Fontenelle, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize that the severity of comorbid psychiatric symptoms

seems to be the main determinant of the distinctive pattern of empathic abilities exhibited by patients with OCD.

**SUMMARY:**
BACKGROUND: The aim of this study is to describe the relationship between empathy, evaluated with the Interpersonal Reactivity Index (IRI), and symptom dimensions of patients with obsessive-compulsive disorder (OCD). METHODS: We evaluated 53 patients with OCD and 53 age- and sex-matched individuals from the community with the Structured Clinical Interview for the Diagnosis of DSM-IV (SCID), the Saving Inventory-Revised (SI-R), the IRI, the Obsessive-Compulsive Inventory-Revised (OCI-R), the Beck Depression Inventory (BDI), and the Beck Anxiety Inventory (BAI). RESULTS: Patients with OCD displayed greater levels of affective empathy [i.e. empathic concern ($p=0.006$) and personal distress ($p<0.001$)] than community controls. In bivariate analyses, the severity of hoarding symptoms of patients with OCD correlated with empathic concern ($r=0.39$; $p<0.001$), fantasy ($r=0.36$; $p<0.01$), and personal distress ($r=0.39$; $p<0.001$). In partial correlation analyses adjusting for comorbid depression and anxiety, only the association between hoarding and fantasy remained robust ($r=0.41$; $p<0.001$). CONCLUSIONS: Our findings suggest that hoarding is linked to specific aspects of interpersonal reactivity. Nevertheless, the severity of comorbid psychiatric symptoms seems to be the main determinant of the distinctive pattern of empathic abilities exhibited by patients with OCD.

**REFERENCES:**

1. Montag C, Heinz A, Kunz D, Gallinat J. Self-reported em pathic abilities in schizophrenia. Schizophr Res. 2007; 92(1-3):85-9.
2. Rogers K, Dziobek I, Hassenstab J, Wolf OT, Convit A. Who cares? Revisiting empathy in Asperger syndrome. J Autism Dev Disord. 2007; 37(4):709-15.

**NR3-136**

## THE BRAZILIAN PORTUGUESE VERSION OF THE SAVING INVENTORY-REVISED: INTERNAL CONSISTENCE, TEST-RETEST RELIABILITY, AND CONVERGENT AND DIVERGENT VALIDITY

*Isabela D Soares, Ph.D. Rua Mem de Sá, 19/712 Icaraí, Niterói-Brazil 24220-261, Flavia Miele, Ph.D., Bernard Rangé, Ph.D., Manuela C. Borges, Ph.D., Angélica M. Prazeres, Ph.D., Leonardo F. Fontenelle, M.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to recognize that Brazilian Portuguese version of the Saving Inventory-Revised can be employed to assess hoarding behaviors of Brazilian individuals.

**SUMMARY:**
OBJECTIVE: The aim of this study is to describe the process of adaptation and the psychometric properties of the Brazilian version of the Saving Inventory-Revised (SI-R), an instrument designed to measure the severity of hoarding behavior in different populations. METHODS: We assessed 65 patients with obsessive-compulsive disorder (OCD) and 70 individuals from the community (IC) with the Structured Clinical Interview for the Diagnosis of DSM-IV (clinical sample), the SI-R, the Obsessive-Compulsive Inventory-Revised (OCI-R), the Beck Depression Inventory (BDI), and the Beck Anxiety Inventory (BAI). RESULTS: A confirmatory factor analysis generated the three previously described domains of compulsive hoarding: acquisition, difficulty discarding, and clutter. The Brazilian version of the SI-R exhibited excellent internal consistence (Cronbach's alpha= 0.94 in OCD and 0.84 in IC), excellent to good test-retest reliability ($r=0.94$ in OCD and $r=0.59$ in IC), and excellent to moderate convergent validity, using the hoarding dimension of the OCI-R as a reference point ($r=0.88$ in OCD and $r=0.55$ in IC). Nevertheless, the SI-R total scores correlated significantly with comorbid anxiety ($r=0.58$ in OCD and $r=0.42$ in IC) and depressive symptoms ($r=0.60$). CONCLUSIONS: Our findings suggest that hoarding is a construct measurable by the SI-R in the Brazilian population.

**REFERENCES:**

1. Frost RO, Steketee G, Grisham J. Measurement of compul sive hoarding: saving inventory-revised. Behav Res Ther. 2004; 42(10):1163-82.
2. Tortella-Feliu M, Fullana MA, Caseras X, Andión O, Torrubia R, Mataix-Cols D. Spanish version of the savings inventory-revised: adaptation, psychometric properties, and relationship to personality variables. Behav Modif. 2006; 30(5):693-712.

**NR3-137**

## ANXIOLYTIC-LIKE EFFECTS OF NG2-83, A NOVEL COMPOUND WITH SELECTIVITY FOR ALPHA3 SUBUNIT-CONTAINING GABA(A) RECEPTORS, IN A MONKEY CONFLICT MODEL

*James K Rowlett, Ph.D. Harvard Medical SchoolNew England Primate Research Center, Box 9102, One Pine Hill Drive, Southborough, MA 01772-9102, Kristen M. Bano, B.S., Kenneth Sprenger, M.D., M.B.B.Ch., Yong Liu, Ph.D., John H. Kehne, Ph.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to understand mechanisms of action underlying the anxiolytic effects of benzodiazepine-type compounds.

**SUMMARY:**
Partial allosteric activators at the benzodiazepine (BZD) site with preferential activity at subtypes of GABA(A) receptors may have improved therapeutic profiles relative to non-selective full allosteric activators. NG2-83 is a novel non-BZD agent that is a partial allosteric activator preferential for alpha3 subunit-containing GABA(A) receptor subtypes with significantly reduced intrinsic activity at GABA(A) receptor complexes containing alpha1, alpha2, and alpha5 subunits. As alpha3 subunits have been implicated, in part, in the anxiolytic effects of BZDs, it was of interest to determine if NG2-83's receptor preference and partial agonism would produce a desirable anxiolytic vs. side profile relative to classical BZDs. NG2-83 (0.001–0.1 mg/kg, i.v.) and the non-selective BZD triazolam (0.001–0.03 mg/kg, i.v.) were evaluated in a primate model predictive of the anxiolytic effects of BZDs. Four rhesus monkeys pressed response levers, which resulted in food delivery in the absence (non-suppressed responding) and presence (suppressed responding) of response-contingent electric shock. NG2-83 and triazolam were highly potent and fully efficacious in producing anxiolytic-like activity as measured by dose-related increases in rates of suppressed

responding (minimum effective dose, m.e.d.=0.003 mg/kg). At doses >3-fold above the anxiolytic m.e.d., triazolam produced behavioral impairment assessed by decreased rates of non-suppressed responding. Strikingly, NG2-83, did not produce behavioral impairment even at a dose 33-fold above its m.e.d. In summary, the results with NG2-83 in this model indicate that preferential activation of alpha3-containing GABA(A) receptors can mediate robust anxiolytic activity. The improved separation between anxiolysis and behavioral impairment relative to a classical BZD may be attributable to NG2-83's alpha3 selectivity and/or its profile as a partial allosteric activator. Supported by Neurogen, Corp.; NIH grants DA11792 and RR00168.

**REFERENCES:**

1. Rowlett JK, Platt DM, Lelas S, Atack JR, Dawson GR: Different GABAA receptor subtypes mediate the anxiolytic, abuse-related, and motor effects of benzodiazepine-like drugs in primates. Proc Natl Acad Sci USA 2005; 102: 915-920.
2. Rowlett JK, Lelas S, Tornatzky W, Licata SC: Anti-conflict effects of benzodiazepines in rhesus monkeys: Relationship with therapeutic doses in humans and role of GABAA recep tors. Psychopharmacology 2006; 184: 201-211.

**NR3-138**

## EFFICACY AND SAFETY OF EXTENDED RELEASE QUETIAPINE FUMARATE (QUETIAPINE XR) MONOTHERAPY IN PATIENTS WITH GENERALIZED ANXIETY DISORDER (GAD)

*Mark Joyce, M.D. CNS Healthcare-Jacksonville, 6867 Southpoint Drive North, Suite 101, Jacksonville, FL 32216, Arifulla Khan, M.D., Sarah Atkinson, M.D., Ivan Eggens, M.D., Ph.D., Irina Baldytcheva, Ph.D., Martin Brecher, M.D., D.M.Sc., M.B.A*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to demonstrate a knowledge and understanding of the efficacy and safety of once-daily extended release quetiapine fumarate (quetiapine XR) in patients with generalized anxiety disorder. They should, also, have become familiar with results of a double-blind, randomized, placebo-controlled study of quetiapine XR in this patient population.

**SUMMARY:**

Objective: GAD is a highly prevalent condition1 and is one of the most frequent anxiety disorders seen in primary care2. This study (D1488C00009) evaluated the efficacy, safety and tolerability of once-daily extended release quetiapine fumarate (quetiapine XR) as monotherapy in patients with GAD. Methods: 10 week (8-week active treatment, randomized phase; two-week post-treatment drug-discontinuation/tapering phase) multicentre, double-blind, placebo-controlled, parallel-group study (D1448C00009). Primary endpoint: change from baseline to Week 8 in HAM-A total score. Secondary endpoints included response (=/>50% reduction from randomization in HAM-A score) and remission (HAM-A total score =/<7). Adverse events (AEs) were recorded throughout the study. Results: 951 patients were randomized: quetiapine XR 50mg/day (n=234); 150mg/day (n=241); 300mg/day (n=241); placebo (n=235). HAM-A total score mean change from baseline (overall baseline mean 24.6) to Week 8 was significantly greater for 50mg/day (-13.3, p<0.001), and 150mg/day (-13.5, p<0.001) but not 300mg/day (-11.7, p=0.24) vs placebo (-11.1). Significant change from placebo (-5.3) in HAM-A total score was seen at Week 1 for 50mg/day (-6.8, p=0.001), 150mg/day (-7.5, p<0.001), and 300mg/day (-6.5, p<0.01). HAM-A response was significantly higher for 50mg/day (60.3%, p<0.05), 150 mg/day (61.5%, p<0.05) but not for 300mg/day (54.9%, p=0.37) vs placebo (50.7%). HAM-A remission was significantly higher for 150mg/day vs placebo (37.2% vs 27.6%, p<0.05) and was 36.1% (p=0.08) and 28.6% (p=0.96), for 50mg/day and 300mg/day doses, respectively. Most common AEs (>10%) were dry mouth, somnolence, sedation, dizziness, headache and fatigue. The incidence of serious AEs was low (<2.5%) in all groups. Conclusion: Quetiapine XR (50 and 150mg/day) monotherapy is effective and was generally well tolerated in patients with GAD, with symptom improvement observed from Week 1 and at Week 8.

Research sponsored by AstraZeneca.

**REFERENCES:**

1. Kessler RC, Berglund P, Demler O, Jin R, Merikangas KR, Walters EE: Lifetime prevalence and age-of-onset distribu tions of DSM-IV disorders in the National Comorbidity Sur vey Replication. Arch Gen Psychiatry 2005; 62:593-602
2. Ansseau M, Fischler B, Dierick M, Mignon A, Leyman S: Prevalence and impact of generalized anxiety disorder and major depression in primary care in Belgium and Luxemburg: the GADIS study. Eur Psychiatry 2005; 20:229-235

**NR3-139**

## A COMPARISON OF INSIGHT IN BODY DYSMORPHIC DISORDER AND OBSESSIVE COMPULSIVE DISORDER

*Katharine A Phillips, M.D. Butler Hospital, 345 Blackstone Blvd.,, Providence, RI 02906, Anthony Pinto, Ph.D., Meredith Coles, Ph.D., Jane L. Eisen, M.D., William Menard, B.A., Steven A. Rasmussen, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize and identify differences in insight in body dysmorphic disorder and obsessive-compulsive disorder, which have important implications for patient care.

**SUMMARY:**

Introduction: Studies have found that body dysmorphic disorder (BDD) and OCD have similarities as well as some differences, including poorer insight in BDD than in OCD. However, research on this topic is limited. To our knowledge, only one prior study has examined various domains of insight. In addition, sample ascertainment methods of some prior studies potentially limit the generalizability of the results. Methods: Subjects were obtained from two very similar longitudinal studies, one focused on OCD and one on BDD, conducted at the same site. The Brown Assessment of Beliefs Scale (BABS) rated subjects' primary BDD-related belief (e.g., "My face looks deformed") or OCD-related belief (e.g., "If I don't keep checking the stove, the house will burn down"). The BABS is a reliable and valid 7-item semi-structured rater-administered scale which assesses current insight/delusionality. Results: BDD subjects (n=68) had higher mean BABS scores than

OCD subjects (n=211), indicating poorer insight (p<.001). A significantly higher proportion of BDD subjects than OCD subjects had beliefs that were classified as delusional (32.4% vs 2.4%, p<.001). BDD subjects had significantly poorer insight on all 7 BABS items (e.g., conviction that the belief is true, recognition that the belief has a psychiatric/psychological cause) (p<.01 to p<.001). BABS total score was significantly correlated with disorder severity (for OCD: r=.46, p<.001, with Y-BOCS score; for BDD: r=.53, p<.001, with BDD-YBOCS score). Hierarchical regression analyses, which examined a number of clinical and demographic variables, found that disorder severity was the only significant predictor of insight, accounting for at least 20% of the variance in insight in both disorders. Conclusion: Patients with BDD have poorer insight and are more likely to be delusional than patients with OCD. Greater illness severity is associated with poorer insight but does not fully account for the variance in insight.

**REFERENCES:**


1. Phillips KA, Kaye W: The relationship of body dysmorphic disorder and eating disorders to obsessive compulsive disor der. CNS Spectr 2007; 12:347-358.
2. Eisen JL, Phillips KA, Coles ME, Rasmussen SA: Insight in obsessive compulsive disorder and body dysmorphic disorder. Compr Psychiatry 2004; 45:10-15.


**NR3-140**

## DOUBLE-BLIND STUDY OF EXTENDED RELEASE QUETIAPINE FUMARATE (QUETIAPINE XR) MONOTHERAPY FOR MAINTENANCE TREATMENT OF GENERALIZED ANXIETY DISORDER


*Katzman Martin, M.D. START Clinic for Mood and the Anxiety Disorders900 - 790 Bay St. Toronto Ontario M5G 1N8Canada, Olga Brawman-Mintzer, M.D., Efren Reyes, M.D,. Bengt Olausson, M.D., Ph.D., Sherry Liu, Ph.D., Martin Brecher, M.D., DMSc., M.B.A*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to demonstrate knowledge and understanding of the efficacy and safety of once-daily extended release quetiapine fumarate (quetiapine XR) as a monotherapy in the maintenance treatment of patients with GAD.

**SUMMARY:**


Objective: Generalized anxiety disorder (GAD) is a chronic, highly prevalent disorder1 associated with low rates of remission.2 This study (D1448C00012) evaluated extended release quetiapine fumarate (quetiapine XR) once-daily monotherapy for maintenance therapy of GAD.
Methods: A time-to event (maximum 52-weeks), double-blind, randomized-withdrawal, parallel-group, placebo-controlled study of quetiapine XR monotherapy following open-label stabilization for a minimum of 12 weeks. Patients received quetiapine XR: 4-8-week open-label; 12-18-week stabilization. Eligible patients (HAM-A =/<12; MADRS =/<16; CGI-S =/<3) were randomized to quetiapine XR or placebo at last open-label visit dose, that subsequently could be adjusted to 50, 150 or 300mg/day as clinically indicated. Primary objective: to evaluate the efficacy of quetiapine XR vs placebo in increasing time from randomization to an anxiety event according to predefined criteria. Secondary variables included HAM-A and CGI-S. Adverse events (AEs) were recorded throughout the study. Results: 433 patients were randomized to double-blind treatment: quetiapine XR (216); placebo (217). The risk of an event was significantly reduced for quetiapine XR vs placebo (implying increased time to the event): Hazard Ratio=0.19 (0.12, 0.31); p<0.0001. Twenty-two (10.2%) quetiapine XR- and 84 (38.9%) placebo-treated patients experienced an anxiety event; LS mean change from randomization to study exit was -0.14 vs 1.90 for HAM-A and -0.03 vs 0.26 for CGI-S for quetiapine XR vs placebo; p<0.001. The most common AEs (>10% in placebo group) during the randomized phase were headache, nausea and insomnia. The incidence of serious AEs (randomized phase) was low (<2%) in both groups. Conclusion: Quetiapine XR monotherapy was generally well tolerated and significantly reduced the risk of relapse of anxiety events in long-term treatment of patients with GAD.



Research sponsored by AstraZeneca.


**REFERENCES:**


1. Kessler RC, Berglund P, Demler O, Jin R, Merikangas KR, Walters EE: Lifetime prevalence and age-of-onset distribu tions of *DSM-IV* disorders in the National Comorbidity Sur vey Replication. Arch Gen Psychiatry 2005; 62:593-602
2. Keller MB: The long-term clinical course of generalized anxi ety disorder. J Clin Psychiatry 2002; 63 Suppl 8:11-16


**NR3-141**

## THE IMPACT OF HOARDING ON THE QUALITY OF LIFE OF PATIENTS WITH OBSESSIVE-COMPULSIVE DISORDER


*Leonardo F Fontenelle, M.D. R Otavio Carneiro 93 601 Icarai, Niterói, Brazil 24230-190, Isabela D. Soares, Ph.D., Bernard Rangé, Ph.D., Angélica M. Prazeres, Ph.D., Manuela C. Borges, Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize that (i) hoarding is linked to a different pattern of quality of life among patients with obsessive-compulsive disorder (OCD) and (ii) the severity of comorbid psychiatric symptoms, but not of OCD itself, explains the impairment in most aspects of the quality of life of these patients

**SUMMARY:**


OBJECTIVE: The aim of this study is to evaluate the impact of hoarding and other obsessive-compulsive symptoms on different aspects of the quality of life of patients with OCD according to the Short-Form Health Survey-36 (SF-36).
METHODS: We evaluated 53 patients with OCD and 53 age- and sex-matched individuals from the community with a socio-demographic questionnaire, the Structured Clinical Interview for the Diagnosis of *DSM-IV*, the SF-36, the Saving Inventory-Revised, the Obsessive-Compulsive Inventory-Revised, the Beck Depression Inventory, and the Beck Anxiety Inventory. A series of stepwise linear regression analyses were performed with the SF-36 dimensions as dependent variables and the socio-demographic and clinical features as independent ones.
RESULTS: Patients with OCD displayed significantly lower levels of quality of life in all dimensions measured by the SF-36, with the exception of pain. A model that included hoarding, depressive symptoms, and employment status predicted 62% of the variance of the social aspects of OCD patients' quality

of life. A series of models that included depressive, but not obsessive-compulsive symptoms, explained the variance of all but one SF-36 dimension (i.e. limitation due to physical aspects). CONCLUSIONS: Our findings suggest that hoarding is linked to a different pattern of quality of life among patients with OCD and that the severity of comorbid psychiatric symptoms, but not of OCD itself, explains the impairment in most aspects of the quality of life of these individuals.

**REFERENCES:**


1. Stengler-Wenzke K, Kroll M, Riedel-Heller S, Matschinger H, Angermeyer MC. Quality of life in obsessive-compulsive disorder: the different impact of obsessions and compulsions. Psychopathology. 2007;40(5):282-9.
2. Masellis M, Rector NA, Richter MA. Quality of life in OCD: differential impact of obsessions, compulsions, and depres sion comorbidity. Can J Psychiatry. 2003; 48(2):72-7.


**NR3-142**

**GENERAL ANXIETY DISORDER: BURDEN OF ILLNESS ACROSS US AND EU**


*Marisha Palm, Adelphi Group Products Adelphi MillGrimshaw Lane BollingtonSK10 5JB, United Kingdom , J. Piercy, B.Sc., M.Sc., Julie Locklear Pharm.D., M.B.A*


**EDUCATIONAL OBJECTIVE:**

At the end of this poster presentation, the participant should be able to understand the relative burden of illness of general anxiety disorder, including impact on functionality and areas of unmet need.

**SUMMARY:**


Purpose: To evaluate real-world prescribing patterns, burden of disease and unmet needs in the treatment of general anxiety disorder (GAD) across Europe (EU) and the United States (US). Methods: Adelphi's Neuroses Disease Specific Program is a point in time study of 374 physicians recording information from 1055 patients receiving therapy for the treatment of GAD. The Program was carried out in five European countries (UK, France, Germany, Spain and Italy) and the United States in 2005. Results: Patient characteristics for the EU and US respectively were: mean age 47 (±15) and 47 (±14) and proportion female 66% and 69%. The average number of symptoms reported by GAD patients was 18.8 (±9.8) in the EU and 16.5 (±8.2) in the US. When asked to rate how much their lifestyle is affected by current symptoms on a scale of 1 (not affected) to 10 (not able to continue with normal activities at all), the average score for EU and US was 6.0 (±2.2) and 6.1 (±2.4) respectively. The percentage of patients working full time was 55% (EU) and 51% (US). The average number of days work/school/study missed in the previous 3 months due to symptoms was 8.5 (±16.2) and 5.2 (±15.0) in EU and US, respectively. The majority of patients (53% EU, 65% US) report receiving 1 or more medications prior to their current treatment. Lack of efficacy and sedation were the two most popular reasons for medication change across the EU and US. In terms of treatment satisfaction, patients reported least satisfaction with speed of medication effect. Conclusions: Data from this large US and European survey suggests that GAD significantly impacts patients' functionality and ability to work/perform daily activities. Evidence from patients indicates that there are unmet needs related to onset of action for medications to treat symptoms of GAD. Support for this research was provided by AstraZeneca Pharmaceuticals LP.


**REFERENCES:**


1. Grant BF, Hasin DS, Stinson FS, Dawson DA, Patricia Chou S, June Ruan W, Huang B. Co-occurrence of 12-month mood and anxiety disorders and personality disorders in the US: results from the national epidemiologic survey on alcohol and related conditions. J Psychiatr Res. 2005a;39(1):1-9.
2. Kessler RC, Andrade LH, Bijl RV, Offord DR, Demler OV, Stein DJ. The effects of comorbidity on the onset and per sistence of generalized anxiety disorder in the ICPE surveys. International Consortium in Psychiatric Epidemiology. Psy chol Med. 2002a;32(7):1213-1225.


**NR3-143**

**TOLERABILITY OF EXTENDED RELEASE FLUVOXAMINE IN PATIENTS WITH SAD AND OCD.**


*Michael A Trabold, Pharm.D. 3180 Porter Drive, Palo Alto, CA 94304, Chinglin Lai, Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the side effect profile specific to extended release fluvoxamine in patients with SAD and OCD.

**SUMMARY:**


Introduction: Fluvoxamine is a selective serotonin reuptake inhibitor (SSRI) approved for the treatment of obsessive-compulsive disorder (OCD). An extended-release formulation of fluvoxamine has been developed for the treatment of OCD and social anxiety disorder (SAD). While currently available SSRIs show efficacy in the treatment of OCD and SAD, their tolerability is limited by side effects such as weight gain, sexual dysfunction, and nausea. Finding well-tolerated medications may improve treatment adherence and thus improve patient outcomes.

Hypothesis: Extended-release fluvoxamine shows a favorable tolerability profile.

Methods: Data from three Phase III pivotal trials (n = 403 treated, n = 400 placebo) were pooled and analyzed for the incidence of the common side effects of sexual dysfunction and nausea. In addition, the time course and severity of nausea adverse events were analyzed. The effect of extended-release fluvoxamine on subject body weight was measured pre- and post-treatment.

Results: Extended-release fluvoxamine exhibited a weight-neutral profile, with no statistically significant weight change. Nausea was mild in severity and transient; discontinuation due to nausea peaked within the first 20 days and rapidly declined thereafter. Incidence of sexual adverse events was low across these three studies, less then 1% of patients treated with extended-released fluvoxamine discontinued therapy due to any single sexual adverse event.

Conclusions: Analysis of these three studies demonstrates that extended-release fluvoxamine has a weight-neutral profile, and is associated with transient and mild nausea, and a low incidence of sexual adverse events.

Discussion: Extended-release fluvoxamine could offer a new and important treatment option for patients with OCD and SAD. All three studies were sponsored by Solvay Pharmaceuticals.


**REFERENCES:**

1. Hollander E, Koran LM, Goodman WK, Greist JH, Ninan PT, Yang H, et al. A double-blind, placebo-controlled study of the efficacy and safety of controlled-release fluvoxamine in patients with obsessive-compulsive disorder. J Clin Psych 2003; 64(6):640-7.
2. Davidson J, Yaryura-Tobias J, DuPont R, Stallings L, Barbato LM, van der Hoop RG, et al. Fluvoxamine-controlled release formulation for the treatment of generalized social anxiety disorder. Journal of clinical psychopharmacology. 2004 Apr;24(2):118-25.

**NR3-144**

## INSOMNIA AND GENERALIZED ANXIETY DISORDER: IMPACT ON CLINICAL PRESENTATION AND RESPONSE TO PREGABALIN

*Michael Van Ameringen, M.D. Anxiety Disorders ClinicMcMaster University Medical Centre-HHS, 1200 Main Street West, Hamilton, Canada L8N 3Z5, T. Kevin Murphy, Ph.D., Francine Mendel, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the prevalence of insomnia as a part of the constellation of symptoms associated with GAD. Additionally, the participant should be able to appreciate the importance of efficaciously treating insomnia as a component of treating GAD.

**SUMMARY:**

Objective: Insomnia is a common clinical feature of generalized anxiety disorder (GAD), but also may occur as an adverse event in up to 25% of GAD patients treated with SSRI and SNRI therapy. This retrospective analysis evaluated the prevalence of insomnia in a treatment sample of GAD patients, and its impact on response to treatment with pregabalin (PGB). Methods: Data were pooled from six double-blind, placebo-controlled, 4-6 week trials of outpatients with DSM-IV GAD with a minimum HAM-A total score >=18. PGB treatment response was analyzed for three fixed-dosage groups, 150 mg/d, 300-450 mg/d, and 600 mg/d. A high insomnia subgroup was defined by a baseline 3-item HAM-D insomnia factor score >=4 (max score=6). Results: At baseline, 482 patients (31% of total; 59.1% female) met criteria for inclusion in the high insomnia subgroup, while 1073 patients were in the low insomnia subgroup. At baseline, the mean HAM-A score was 1-point higher for the high insomnia subgroup. For the high insomnia subgroup, treatment with PGB resulted in significantly greater improvement in HAM-A total score at LOCF-endpoint for PGB-150 mg (-10.3 +/- 1.01), PGB-300/450 mg (-12.4 +/- 0.88), PGB-600 mg (-11.6 +/- 0.72) versus placebo (-8.4 +/- 0.66; P<0.0001 for all comparisons). Endpoint HAM-A improvement was also significant in the low insomnia subgroup at the P<0.0001 level for all 3 doses. For the high insomnia subgroup, there were significantly more patients who were insomnia responders (reduction to minimal-to-no levels of insomnia) on pregabalin (75.2% for all doses combined) compared to placebo 61.5%; P<0.005). Treatment-emergent insomnia occurred in very few patients on PGB (4.7% for all doses combined) and on placebo (5.4%). Conclusion: In GAD patients presenting with severe insomnia, PGB was effective improving overall anxiety symptoms, as well as reducing insomnia. Treatment-emergent insomnia did not occur as an adverse event secondary to PGB. Study funded by Pfizer.

**REFERENCES:**

1. Montgomery SA: Pregabalin for the treatment of generalised anxiety disorder: Expert Opin Pharmacother 2006;7:2139-54.
2. Gore M, Brandenburg NA, Dukes E, Hoffman DL, Tai K-S, Stacey B: Pain severity in diabetic peripheral neuropathy is associated with patient functioning, symptom levels of anxiety and depression, and sleep. J Pain Symptom Manage. 2005;30:374-385.

**NR3-145**

## IMPROVEMENT OF ANXIETY SYMPTOMS IN PATIENTS WITH MAJOR DEPRESSIVE DISORDER TREATED WITH DESVENLAFAXINE: A POOLED ANALYSIS

*Saeeduddin Ahmed, M.D. E-6209Global Medical Affairs, Wyeth 500 Arcola Road, Collegeville, PA 19426, CollegevillePA 19426, Albena Patroneva, MD, Jay Graepel, PhD, Bruno Pitrosky, PhD*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to; 1)Understand measures used in the assessment of anxiety symptoms in patients with depression; and 2) Evaluate the efficacy of DVS in the treatment of anxiety symptoms associated with depression

**SUMMARY:**

Objective: To evaluate the efficacy of desvenlafaxine succinate (DVS) in the treatment of anxiety symptoms in patients with major depressive disorder (MDD).
Methods: Data from 5 randomized, double-blind, placebo-controlled, 8-week trials in outpatients with DSM-IV MDD were pooled. Patients with primary anxiety disorders were excluded. Eligible patients were randomized to fixed doses of DVS (50, 100, 200, or 400 mg/d; n=1342) or placebo (n=631). The efficacy outcomes for this analysis were scores on the 17-item Hamilton Rating Scale for Depression (HAM-D17) Anxiety subscale (sum of psychic and somatic anxiety items) and Covi Anxiety scale (measured in 4 of the 5 trials). Final on-therapy data were analyzed using analysis of covariance; the adjusted mean changes from baseline are reported here.
Results: Improvement was significantly greater from baseline for DVS vs placebo on the HAM-D17 Anxiety subscale in the pooled data set (-3.5 vs -2.8; P<0.001) and the 50 mg (-3.9 vs -3.2; P<0.001), 100 mg (-3.6 vs -2.9; P<0.001), 200 mg (-3.2 vs -2.7; P=0.007), and 400 mg (-3.2 vs -2.7; P=0.011) dose groups. Significantly greater improvement from baseline was also found for DVS compared with placebo on the Covi Anxiety total score for the pooled data set (-1.4 vs -1.0.; P<0.001) and the 50 mg (-1.6 vs -1.1; P<0.001), 100 mg (-1.4 vs -1.0; P<0.001), and 200 mg (-1.3 vs -0.9; P=0.015) dose groups.
Conclusion: In this analysis, DVS effectively improved anxiety symptoms in patients with MDD across a wide range of doses.
Research supported by Wyeth Research.

**REFERENCES:**

1. DeMartinis NA, Yeung PP, Entsuah R, Monley AL. A double-blind, placebo-controlled study of the efficacy and safety of desvenlafaxine succinate in the treatment of major depressive disorder. J Clin Pyschiatry 2007; 68:677-688
2) Lipman RS: Differentiating anxiety and depression in anxiety disorders: use of rating scales. Psychopharmacol Bull 1982; 18(4):69–77

**NR3-146**

## ASSOCIATION OF AGORAPHOBIA, NOCTURNAL ATTACKS AND RESPIRATORY SUBTYPE OF PANIC DISORDER (PD) WITH PROGESTERONE RECEPTOR (PGR) GENE POLYMORPHISM

*Sebnem Pirildar, M.D. Ege University Medical School Psychiatry Department, 35100 Bornova-Izmir Turkey, Bayraktar Erhan, M.D., Berdeli Afig, M.D., Kucuk Onur, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to know about genetics and panic disorder and also progesterone receptor genetic polymorphism in subtypes of panic disorder, agoraphobia and nocturnal panic.

**SUMMARY:**

IntroductionStudies propose a genetic contribution to the pathogenesis of panic disorder. Prompted by evidence supporting the role of progesterone in the pathophysiology of PD G331A polymorphism, PROGINS Alu gene polymorphism in the progesterone receptor were investigated in 86 PD patients and 90 control subjects. Exclusion criteria were having a psychotic disorder, bipolar disorder, obssessive compulsive disorder, substance abuse, neurological disorder, asthma and pregnancy.

It is hypothesized that progesterone receptor gene polymorphism may contribute to the risk of panic disorder with respiratory subtype, nocturnal attacks and agorophobia. Method Individuals with PD were divided into two groups on the basis of their symptom profile, according to Briggs (1993). Sixty-six of 86 PD patients (76,7%) were respiratory subtype. Using *DSM-IV* criteria we found that 51 patients (59,30%) had agorophobia and 43 patients (50%) had nocturnal panic attacks. The polymorphism in the promotor region of PGR gene was detected by the direct DNA sequencing method. ResultsThe association between G331A polymorphism and panic disorder in both sexes was nearly statistically significant (p= 0.053; OR= 0,479, CI=0,228-1,005). There was an association between PROGINS Alu polymorphism and female PD patients (p=0.038; OR=2,27; CI=1,047-4,93). PROGINS Alu polymorphism was also associated with respiratory subtype PD( p=0.037; OR=2,273; CI=1,047-4,933). The results of our study revealed an association between agorophobia and G331A (p=0.042) and also PROGINS Alu progesterone receptor polymorphism (p=0.031).

It appears reasonable to suggest that progesterone gene polymorphism might be a risk of panic disorder. The progesterone receptor gene polymorphism may also contribute to respiratory subtype of PD and also to agoraphobia in PD patients.

**REFERENCES:**

1. Briggs AC, Stretch DD, Brandon S: Subtyping of panic disor der by symptom profile. Br J Psychiatry 1993;163: 201-209.
2. Horwarth HE, Adams P, Wickramaratne P, Pine D, Wiesmann MM: Panic disorder with smoothering symptoms: evidence for increased risk in first degree relatives. Depression Anxiety 1997;15: 69-74.

**NR3-147**

## CLINICAL DIFFERENCES BETWEEN EARLY- AND LATE-ONSET SOCIAL PHOBIA IN KOREANS

*Se-won Lim, M.D. Department of psychiatry, Kangbuk Samsung Hospital, 108, Pyung-dong, Chongro-gu, Seoul, Korea, 110-746, Han-Yong Chung, M.D., Na-Hyun Kim, M.D., Eun-Ji Kim, M.D., Kang-Seob Oh, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to identify clinical difference between early and late onset social phobia in Koreans.

**SUMMARY:**

Objectives: It is suggested that the clinical manifestation of social phobia(SP) can be different among cultures. However, there are little studies about SP in Asian populations. The aims of this study were to elucidate the clinical differences between early- and late-onset social phobia in Koreans. Methods: Outpatients(225 total) with MINI International Neuropsychiatric interview confirmed SP requested to complete the Anxiety Sensitivity Index(ASI), the Trait form of the State-Trait Anxiety Inventory(STAI-T), Retrospective Self-Report of Inhibition(RSRI), Beck Depression Inventory(BDI) and the Liebowitz Social Anxiety Scale(LSAS) as part of their assessment. We divided the patients into two groups based on the age at the onset of social phobia: (1) early onset (N=124), when they were up to 18 years old at the onset, and (2) late onset (N=101), when that were older than >18 years at the onset. Results: Early-onset patients were more likely to be generalized type of SP [?2=6.62, df=1, p=0.010; OR, odds ratio (95% CI, confidence interval)=2.01 (1.18–3.44)]. With regard to the psychometric profiles, the early-onset patients showed a higher score in RSRI(t=3.29, p=0.001) and LSAS(t=2.08, p=0.039). However, anxiety sensitivity(t=1.20, p=0.23), trait anxiety (t=0.74, p=0.46), and depression (t=0.17, p=0.88) did not differ between the two groups. Conclusions: There were several distinct clinical differences between early- and late-onset SP among Koreans. Early onset SP patients were more likely to be generalized subtype and exhibited more severe symptoms. The results of our study correspond well with previous studies which performed to the western people.

**REFERENCES:**

1. Phenomenology and epidemiology of social phobia.Int Clin Psychopharmacol. 1997 Oct;12 Suppl 6:S23-6.
2. Features of the offensive subtype of Taijin-Kyofu-Sho in US and Korean patients with DSM-IV social anxiety disorder. Depress Anxiety. 2007 Mar 5.

**NR3-148**

## DOES EARLY IMPROVEMENT PREDICT END-POINT RESPONSE: AN ANALYSIS OF DATA FROM A STUDY OF PREGABALIN AND VENLAFAXINE-XR IN GENERALIZED ANXIETY DISORDER

*Suzanne Giordano, Ph.D. Pfizer Inc235 East 42nd Street, New York, NY10017, T. Kevin Murphy, Ph.D., Francine Mandel, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the importance of early identification of non-response to pharmacotherapy in highly anxious patients, and to better understand the potential predictive value of early signs of improvement.

**SUMMARY:**
Objective: To evaluate whether early improvement on the HAM-A (>=20%) or the CGI-Severity scale (>=1-point) predicts endpoint response for either pregabalin (PGB) or venlafaxine-XR (VXR) in patients with GAD, and to determine which early improvement criterion provides the highest sensitivity and specificity for predicting eventual response.
Methods: This secondary analysis was based on data from a double-blind trial in which adults who met *DSM-IV* criteria for GAD were randomized to 8-weeks of flexible-dose treatment with PGB (300-600 mg/d; N=121; baseline HAM-A=27.6), VXR (75-225 mg/d: N=125; HAM-A=27.4), or placebo (PBO; N=128; HAM-A=26.8).Results: A significantly higher proportion of patients achieved >=20% improvement in HAM-A by Day 7 on PGB (62.5%) compared to both VXR (47.3%) and PBO (44.6%; P<0.05 for both comparisons). Similarly, a significantly higher proportion of patients achieved a 1-point or greater improvement on the CGI-S by Day 7 on PGB (57.1%) compared to both VXR (37.8%) and PBO (28.1%; P<0.01 for both comparisons). Among patients treated with PGB, 68.6% of endpoint responders could be correctly identified at Week 1 based on a 20% HAM-A improvement criterion (sensitivity, 68.6%; specificity, 47.6%), and 73.4% could be identified based on CGI-S criteria (sensitivity, 64.4%; specificity, 56.4%). For VXR, 66.7% of endpoint responders could be correctly identified by Week 1 based on the 20% HAM-A criterion (sensitivity, 62.1%; specificity, 71.4%), and 82.4% could be identified based on the CGI-S criterion (sensitivity, 42.4%; specificity, 89.1%). A receiver-operator curve (ROC) analysis will be presented that graphically displays the predictive value of various early improvement criteria.Conclusions: The use of ROC analyses to examine early improvement as a predictor of final response may help clinician decision-making about the need for alternative treatments in patients with GAD.
Funded by Pfizer Inc.
**REFERENCES:**
1. Pollack MH, Rapaport MH, Fayyad R, Otto MW, Nierenberg AA, Clary CM: Early improvement predicts endpoint remis sion status in sertraline and placebo treatments of panic disor der. J Psychiatr Res 2002;36:229-36.
2. Pollack MH: Unmet needs in the treatment of anxiety disor ders. Psychopharmacol Bull 2004;38:31-7.

**NR3-149**

## EFFICACY OF PREGABALIN AND VENLAFAXINE-XR IN GENERALIZED ANXIETY DISORDER: RESULTS OF A DOUBLE-BLIND, PLACEBO-CONTROLLED 8-WEEK TRIAL

*T. Kevin Murphy, Ph.D. Pfizer Inc, 235 East 42nd St, New York NY 10017, G Nivoli, M.D., A Petralia, M.D., F Mandel, Ph.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to more clearly understand the differences in speed of onset of anxiolytic activity and overall efficacy between pregabalin and venlafaxine-XR.

**SUMMARY:**
Objective: To evaluate the comparative speed of onset of anxiolytic activity, and the overall efficacy of pregabalin (PGB) and venlafaxine-XR (VXR) in patients with GAD.
Methods: In this double-blind trial, adult outpatients who met DSM-IV criteria for GAD were randomized to 8-weeks of flexible-dose treatment with PGB (300-600 mg/d), VXR (75-225 mg/d), or placebo (PBO). The primary outcome was endpoint change in HAM-A total score. Patients with major depression, or a baseline HAM-D >=15, were excluded.
Results: The intent-to-treat sample consisted of 121 patients on PGB (baseline HAM-A, 27.6 +/- 0.4; baseline CGI-Severity, 4.74 +/- 0.7), 125 patients on VXR (baseline HAM-A, 27.4 +/- 0.4; CGI-S, 4.78 +/- 0.7), and 128 patients on PBO (baseline HAM-A, 26.8 +/- 0.4; CGI-S, 4.66 +/- 0.7). Treatment with PGB was associated with a significantly greater LS-mean change in HAM-A total score at LOCF-endpoint vs PBO (-14.5 +/- 0.9 vs -11.7 +/- 0.9; P=0.028). Treatment with VXR was not significant vs PBO at endpoint (-12.0 +/- 0.9; -11.7 +/- 0.9; P=0.968). Treatment with PGB showed an early onset of improvement, with significantly greater LS-mean change in HAM-A by day 4 vs both PBO (-5.3 +/- 0.5 vs -3.4 +/- 0.5, P=0.008) and VXR (-2.9 +/- 0.5; P=0.0012). The proportion of patients reporting any severe adverse event was similar for PGB (9.1%) and PBO (7.8%), but somewhat higher for VXR (20.0%). Premature discontinuation due to adverse events was higher on both PGB (12.4%) and VXR (17.6%) compared with PBO (5.5%).
Conclusions: Pregabalin was a safe and effective treatment of GAD, with a significantly earlier onset of anxiolytic activity than venlafaxine-XR. The magnitude of endpoint HAM-A improvement on venlafaxine-XR was comparable to what has been reported in previous trials. The failure of venlafaxine-XR to demonstrate significant efficacy versus placebo appears to be attributable to a relatively high placebo response in the current study.
Study funded by Pfizer Inc.
**REFERENCES:**
1. Montgomery SA: Pregabalin for the treatment of generalised anxiety disorder. Expert Opin Pharmacother 2006;7:2139-54
2. Thase ME: Treatment of anxiety disorders with venlafaxine XR. Expert Rev Neurother 2006;6:269-82

**NR3-150**

## THE BRAZILIAN OBSESSIVE-COMPULSIVE SPECTRUM DISORDERS RESEARCH CONSORTIUM (CTOC): OBJECTIVES AND IMPLEMENTATION

*Ygor Ferrão, M.D. Braziliam Research Consortium on Obsessive-Compulsive Spectrum Disorders.Rua Padre Chagas,185/403 Porto Alegre,RS, Brazil CEP:90570-080, Maria Conceição do Rosário, Ph.D., Maria Alice de Mathis, M.Sc., Christina H. Gonzalez, Ph.D., Ricardo C. Torresan, M.D., Andréia L.Rafin, M.Sc., Eduardo Perin, M.D., Helena Prado, Psy.D., Sandro S. Santos, M.D., Helen Copque, Psy.D., Samantha Santos, M.D., Luciana Gropo, Psy.D., Cristiana Machado, Psy.D., Angélica M. Prazeres, Psy.D., Manuela Borges, Psy.D., Albina Torres, Ph.D., Aristides Cordioli, Ph.D., Kátia Petribú, Ph.D., Leonardo F. Fontenelle, Ph.D., Eurípedes C. Miguel, Ph.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to identify the main sociodemographic, clinical and therapeutical features of the obsessive-compulsive patients from Brazil. The participant should also be able to recognize how a research consortium is conducted on a multicenter and

collaborative system.

**SUMMARY:**

Introduction: The Brazilian Obsessive-Compulsive Spectrum Disorders Research Consortium (CTOC) includes 7 sites from 6 Brazilian cities and its interests include collaborative research spanning over all areas of OCD: phenotype; genetics; neuropsychology; neuroimaging and therapeutics. The main objectives of this paper are: to present the implementation of the CTOC and the initial sociodemographic and clinical results. Methods: 458 patients meeting DSM-IV criteria for OCD were evaluated with the following instruments: Structured Clinical Interview for DSM-IV; Yale-Brown Obsessive–Compulsive Scale (Y-BOCS); Dimensional YBOCS (DY-BOCS); Yale Global Tic Severity Scale; Beck Depression and Anxiety Inventories; University of São Paulo Sensory Phenomena Scale; Brown Assessment of Beliefs Scale; Social Evaluation Scale; Trauma History Questionarie; Post Traumatic Stress Disorder Checklist; and Peritraumatic Dissociative Experiences Questionnaire. Results: 54% were female and 84.9% were Caucasian. The mean age was 34.6(+12.5) years, with compulsion starting earlier (13.7, +8.5) than obsessions 14.2(+8.5); 71% of the subjects had previously used an antiobsessive medication, and 64.3% had done some kind of psychotherapy. The most common OC symptoms were: symmetry (88.0%), contamination-washing symptoms (71.8%) and aggression (65.9%). The mean YBOCS score was 24.3(+7.8) while the DYBOCS score was 20.2(+6.2). At least 66.6% of the patients presented sensory phenomena and 34% presented Tics. The most frequent psychiatric comorbidities were Major Depression(70.3%), Generalized Anxiety Disorder(33.6%), Social Phobia(28.4%) and Simple Phobias(27.1%). Conclusion: The CTOC initiative was able to gather relevant data from a large number of OCD patients from different parts of Brazil, with a very comprehensive assessment battery. These data have heuristic value for etiological, clinical, genetic and treatment studies, in an effort to better understand the OCD heterogeneity.

**REFERENCES:**

1. Torres AR; Prince MJ; Bebbington PE; Bhugra D; Brugha TS; Farrell M; Jenkins R; Lewis G; Meltzer H; Singleton N. Obsessive-compulsive disorder: prevalence, comorbid ity, impact, and help-seeking in the British National Psychi atric Morbidity Survey of 2000. Am J Psychia try;163(11):1978-85, 2006 Nov.
2. Miguel EC; Leckman JF; Rauch S; do Rosario-Campos MC; Hounie AG; Mercadante MT; Chacon P; Pauls DL. Obses sive-compulsive disorder phenotypes: implications for genetic studies. Mol Psychiatry;10(3):258-75, 2005 Mar.

## NEW RESEARCH POSTER SESSION 4

## TUESDAY, MAY 6, 2008 12:00 P.M. – 2:00 P.M. WEST LOBBY, LEVEL ONE, WASHINGTON CONVENTION CENTER

### NR4-001

### DO LONG ACTING FORMULATIONS OF SECOND GENERATION ANTIPSYCHOTIC DRUGS HAVE AN IMPACT ON EVENT RELATED POTENTIALS (ERPS) IN SCHIZOPHRENIA?

*Albert B Boxus, M.D. Unité Anne-Marie Javouhey. ASS AUDOISE SOCIALE ET MEDICALE, LIMOUX , France 11300,*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to evaluate the cognitive impact of antipsychotic drugs in schizophrenia patients and the benefits of the long acting treatment.

**SUMMARY:**

Objective: In a previous study*, we showed that clinical improvement with SGA in schizophrenia may be mediated through cognitive change indexed by P300 and P50 suppression. To our knowledge, there is no data available on the effect of long acting formulations of SGA on ERPS. The aim of this study is to investigate the potential effect of these drugs on ERPS in schizophrenia. Method: Eight schizophrenia patients who had been enrolled in the previous study (Albert Boxus, Poster 448, APA 2007 San Diego), were transitioned from their previous SGA to risperidone long-acting injection (RLAI) every 2 weeks. Clinical and electrophysiological evaluations were performed before the start of treatment (T1), after remission under SGA (T2) and after at least 12 weeks under RLAI (T3). Psychopathology was measured by the Positive and Negative Syndrome Scale (PANSS) and Brief Psychiatric Rating Scale (BPRS). Résult: The mean follow-up of these 8 individuals (7 males, 1 female, age=32.4±8.7y ) was 6 months. After RLAI, P300 latency was improved, but not significantly. We observed a significant increase in P300 amplitude before (T1) and after treatment (T2, $p<0.05$ and T3, $p<0.03$). PANSS and BPRS decreased significantly from T1 to T2 ($p<0.0001$) and from T2 to T3 ($p<0.005$).

| | T1 | T2 | T3 |
|---|---|---|---|
| P300 latency (ms) | 321.6±27.3 | 313.3±25.0 | 306.1±9.7 |
| P300 amplitude (μv) | 8.2±3.1 | 12.6±3.8 | 11.9±2.4 |
| P50 suppression deficit | 0/8 | 2/8 | 3/8 |
| PANSS | 101.3±10.7 | 45.9±7.9 | 34.0±5.7 |
| BPRS | 86.5±11.3 | 35.5±6.5 | 19.9±3.3 |

Conclusion: As shown in previous studies, RLAI is able to improve the clinical condition of patients already stabilized on SGA. These results suggest that it can be mediated through cognitive change indexed by P300 and P50 suppression in schizophrenia.

**REFERENCES:**

1. Alteration of event related potentials in siblings discordant for schizophrenia. Schizophrenia research.2000 Jan 21;41(2)325-34.
2. Application of Electroencephalography to the Study of Cognitive and Brain Functions in Schizophrenia: Schizophre nia Bulletin March15, 2007.

### NR4-002

### EFFECTIVENESS OF ONCE-DAILY EXTENDED RELEASE QUETIAPINE FUMARATE (QUETIAPINE XR) FOR EXCITABILITY, HOSTILITY AND AGGRESSION IN SCHIZOPHRENIA

*Amir Kalali, M.D. 10201 Wateridge Circle, San Diego, CA 92121, S. Charles Schulz, M.D., Rene S. Kahn, M.D., Didier Meulien, M.D., Martin Brecher, M.D., DMSc., MBA., Ola Svens-*

*son, M.D., Ph.D., Henrik M Andersson, MSc*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to able to demonstrate understanding of the efficacy and safety of once-daily extended release quetiapine fumarate (quetiapine XR) in the treatment of symptoms of excitability, hostility and aggression in patients with acute exacerbations of schizophrenia, as demonstrated by the post hoc analysis of data from a randomized, double-blind, placebo-controlled study.

**SUMMARY:**

Objective:Acute exacerbations of schizophrenia require prompt clinical attention and appropriate treatment1. The effect of quetiapine XR on symptoms of excitability, hostility and aggression in patients with acute schizophrenia was evaluated in a post hoc analysis of a 6-week, randomized, double-blind, placebo-controlled study2.

Methods:Patients (n=588) were randomly assigned to: once-daily quetiapine XR 400 mg/day, 600 mg/day, or 800 mg/day; twice-daily quetiapine immediate release (IR) 400 mg/day; or placebo. PANSS scores were assessed at baseline and up to Week 6; primary endpoint was change in PANSS total score from baseline until Week 6. We report the treatment effects on PANSS aggression/hostility cluster scores, as well as post hoc-analysis results of effects on PANSS-excitement component (PANSS-EC) scores and relevant individual items from the PANSS scale. Data were analyzed using ANCOVA.

Results:Mean baseline scores were 11.0-11.6 (aggression/hostility cluster) and 14.2-14.6 (PANSS-EC). At Day 42, there were statistically significant reductions versus placebo with all doses of quetiapine XR for the aggression/hostility cluster scores. Changes were: -3.0, -4.1, and -3.8 for quetiapine XR 400, 600 and 800 mg/day, respectively; -3.2 for quetiapine IR; -1.8 for placebo. Reductions in PANSS-EC scores from baseline to Day 42 were significantly greater in all treatment groups versus placebo (-3.91, -5.33, -4.84, -4.11 and -2.55, respectively). Improvements were significantly greater than with placebo for the following PANSS-EC items: P4 (excitement) and G8 (uncooperativeness) in all active treatment groups; P7 (hostility) with quetiapine XR 600 and 800 mg/day and quetiapine IR; and G4 (tension) and G14 (poor impulse control) with quetiapine XR 600 and 800 mg/day.

Conclusions:Quetiapine XR is effective in relieving symptoms of excitability, aggression and hostility in patients with acute schizophrenia.

This study (D1444C00132) was sponsored by AstraZeneca.

**REFERENCES:**

1. Arango C, Bobes J: Managing acute exacerbations of schizo phrenia: focus on quetiapine. Hum Psychopharmacol 2005; 20:237-241
2. Kahn RS, Schulz SC, Palazov VD, Reyes EB, Brecher M, Svensson O, Andersson HM, Meulien D, on behalf of the Study 132 investigators: Efficacy and tolerability of once-dai ly extended release quetiapine fumarate in acute schizophre nia: a randomized, double-blind, placebo-controlled study. J Clin Psychiatry 2007; 68:832-842

**NR4-003**

## PHARMACOKINETICS OF LONG-ACTING INJECTABLE RISPERIDONE INJECTED IN DELTOID MUSCLE COMPARED TO GLUTEAL MUSCLE INJECTION IN SUBJECTS WITH SCHIZOPHRENIA

*An Thyssen, Ph.D. Johnson & Johnson Pharmaceutical Research & DevelopmentTurnhoutseweg 30B-2340 Beerse, Belgium,B-2340, Xiaoping Ning, M.D., Virginie Herben, Ph.D., Sarah Rusch, MSc., Stuart Kushner, M.D., Vivek Kusumakar, M.D., Erik Mannaert, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand that deltoid and gluteal administration of long-acting injectable risperidone, an antipsychotic agent for the treatment of schizophrenia, are bioequivalent with respect to peak and total plasma exposure.

**SUMMARY:**

Introduction: Long-acting injectable (LAI) risperidone is approved for treatment of schizophrenia via gluteal muscle (GM) administration. Deltoid muscle (DM) may provide a more accessible injection site. This study compared the pharmacokinetics (PK) of LAI risperidone following DM and GM injection.

Methods: In a single-dose 2-way crossover Phase 1 study, stable chronic schizophrenia subjects were randomized to 1 of 2 Panels and 1 of 2 sequences within Panel and received LAI risperidone injections into GM (25 mg in Panel I, 50 mg in Panel II) and DM (37.5 mg in Panel I, 50 mg in Panel II), separated by an 85-day washout period. Blood samples were collected predose and up to 85 days postdose in each treatment period. Plasma PK parameters of risperidone, 9-hydroxy-risperidone and the active antipsychotic fraction (sum of risperidone and 9-hydroxy-risperidone) were estimated using non-compartmental analysis. Estimated DM/GM ratios of mean PK parameters (Cmax, AUC) and their 90% confidence intervals (CI) were calculated. Bioequivalence was concluded if 90% CI were within 80–125% limits. Safety and tolerability were assessed.

Results: 170 subjects were enrolled, 135 completed both treatments. Bioequivalence was demonstrated between DM and GM after a single dose injection of 50 mg LAI risperidone. After dose-normalization, bioequivalence was demonstrated for 37.5 mg DM vs. 25 mg GM. Median time to peak concentrations and terminal half-lives of active antipsychotic fraction and risperidone were ~30 and 2–4 days, respectively, for each injection site and dose. Graphical and statistical analysis showed dose-proportional PK for DM of 37.5 and 50 mg LAI risperidone and for GM of 25 and 50 mg LAI risperidone. LAI risperidone was safe and well tolerated, regardless of injection site or dose.

Conclusion: DM and GM LAI risperidone injections are bioequivalent administration routes with respect to peak and total plasma exposure. DM injection was well tolerated. Funded by J&J PRD.

**REFERENCES:**

1. Kane JM: Long-acting injectable risperidone: efficacy and safety of the first long-acting atypical antipsychotic. Am J Psychiatry 2003; 160:1125-1132.
2. Fleischhacker W: Treatment of schizophrenia with long-act ing injectable risperidone: a 12 month evaluation of the first long-acting 2nd generation antipsychotic. J Clin Psychiatry 2003; 64:1250-1257

**NR4-004**

**TOLERABILITY AND SAFETY OF LONG-ACTING INJECTABLE RISPERIDONE IN CHRONIC SCHIZOPHRENIA SUBJECTS USING DELTOID MUSCLE AS AN ALTERNATIVE INJECTION SITE**

*An Thyssen, Ph.D. Johnson & Johnson Pharmaceutical Research & Development, Turnhoutseweg 30B-2340 Beerse, Belgium B-2340, Xiaoping Ning, MD., An Thyssen, Ph.D., Jorge Quiroz, MD., Stuart Kushner, M.D., Sarah Rusch, M.Sc., Virginie Herben, Ph.D., Wendy Shore, Ph.D., Iain Hooper, Ph.D., Vivek Kusumakar, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand that deltoid muscle injection of long-acting injectable risperidone is associated with a favorable tolerability and safety profile, similar to the approved gluteal muscle injection; and that deltoid muscle might provide a more accessible injection site for this risperidone formulation.

**SUMMARY:**

Introduction: Long-acting injectable (LAI) risperidone is approved for treatment of schizophrenia via gluteal muscle (GM) administration. The deltoid muscle (DM) may provide a more accessible injection site. Tolerability and safety of LAI risperidone were assessed following single and multiple DM injections.Methods: Two studies were conducted in stable chronic schizophrenia subjects receiving DM injection. Study 1: single-dose, randomized, 2-way crossover study; LAI risperidone injections into GM (Panel I: 25 mg; Panel II: 50 mg) and DM (Panel I: 37.5 mg; Panel II: 50 mg) separated by 85-day washout period. Study 2: multiple-dose study; 4 sequential DM injections of LAI risperidone (37.5 or 50 mg) at 2-week intervals. Tolerability and safety were assessed: treatment-emergent adverse events (TEAEs), injection site reactions, physical examination and clinical laboratory testing.
Results: In Study 1 (n=170), safety and tolerability were similar regardless of injection site or dose: 64% subjects experienced >=1 TEAE (GM: 48%, DM: 49%), 5% serious TEAEs (GM: 3%, DM: 3%) and 1% discontinued due to TEAEs (GM: 1%, DM: 1%). Injection-site tolerability was similar between GM (25 and 50 mg) and DM (37.5 and 50 mg) groups for TEAEs of injection-site pain (1% vs. 1%), irritation (1% vs. 1%) and phlebitis (0% vs. 1%). In Study 2 (n=53), 96% subjects received >=2 DM injections and 83% completed the study: 40% subjects experienced >=1 TEAE, 4% experienced a serious TEAE and 4% discontinued due to TEAEs. TEAEs of injection-site pain and injection-site reaction were reported by 7.5 and 2% of subjects, respectively, and were of mild intensity. Injection-site reaction scores increased slightly 2 hrs post-injection, but returned to normal by next injection. There were no discontinuations due to injection-site reactions in either study.
Conclusion: LAI risperidone after DM injection was well tolerated, with a similar safety and tolerability profile to GM injection. Funded by J&J PRD

**REFERENCES:**

1. Kane JM: Long-acting injectable risperidone: efficacy and safety of the first long-acting atypical antipsychotic. Am J Psychiatry 2003; 160:1125-1132
2. Fleischhacker W: Treatment of schizophrenia with long-acting injectable risperidone: a 12 month evaluation of the first long-acting 2nd generation antipsychotic. J Clin Psychiatry 2003; 64:1250-1257

**NR4-005**

WITHDRAWN

Marder SR, Weinberger DR: Remission in schizophrenia: proposed criteria and rationale for consensus. Am J Psychia try 2005; 162(3):441-9.

**NR4-006**

## RECOVERY FROM SCHIZOPHRENIA: FACTORS ASSOCIATED TO FUNCTIONAL OUTCOME IN PATIENTS ON SYMPTOMATIC REMISSION IN A 1-YEAR EPIDEMIOLOGICAL STUDY

*Antonio Ciudad, M.D. Lilly Clinical Research Laboratories, Alcobendas, Spain 28108, Luis San, M.D., Ph.D., Julio Bobes, M.D., Ph.D., Enrique Alvarez, M.D., Ph.D., Maria J. Garcia-Polavieja, Stat.D., Inmaculada Gilaberte, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize some sociodemographic and clinical factors that were associated to recovery, defined as symptomatic remission plus adequate functioning (AF), after 1-year in outpatients with schizophrenia that fulfilled severity criteria for symptomatic remission at baseline.

**SUMMARY:**

Introduction/Objectives: Functional attainments are objective outcome indicators of recovery from serious mental illness (1). Authors aimed to investigate the correlates of a definition of recovery (symptomatic remission plus adequate functioning, AF) after 1 year in a cohort of outpatients with schizophrenia recruited in Spain who were on symptomatic remission at baseline. Methods: From a group of 452 outpatients with schizophrenia (DSM IV-TR) meeting Andreasen's severity remission criteria based on the SAPS and SANS scales (2), 376 could be reevaluated after 1 year in a research diagnostic assessment including the GAF, MADRS and PAS scales, the drug Attitude Inventory (DAI-10), the SF-12 Questionnaire and the GEOPTE Scale of Social Cognition for Psychosis. Logistic regression analyses were performed to explore the correlates of recovery defined as symptomatic remission plus AF (GAF score >=80) at endpoint. Results: 338 out of 376 patients (89.9%) maintained symptomatic remission; of which 102 (30.2%) fulfilled the recovery definition. None patient loosing symptomatic remission showed AF at endpoint. Significant ($p<0.05$) correlates of recovery at endpoint were: better premorbid adjustment (OR=1.39 per each 0.1-point better PAS score), duration of untreated psychosis (DUP) (OR=2.28 for being <3 months vs. >1 year), pharmacotherapy (OR=4.72 for receiving a single first generation antipsychotic vs. combined second and first ), good treatment compliance (OR=1.09 per each 1-point better DAI-10 score), and improvement of depressive symptoms and social cognition (ORs=1.06 and 1.09 per each point improved in MADRS and GEOPTE scores from baseline, respectively). Discussion: The association between DUP, premorbid adjustment and treatment compliance with recovery has been corroborated in this investigation. Interestingly, improvements of depressive symptoms and social cognition have been also identified as correlates of recovery.
Research funded by Eli Lilly and Co.

**REFERENCES:**

1. Farkas M: The vision of recovery today: what it is and what it means for services. World Psychiatry 2007; 6(2):4-10.
2. Andreasen NC, Carpenter WT, Jr., Kane JM, Lasser RA,

**NR4-007**

## ASENAPINE EFFECTS ON INDIVIDUAL YOUNG MANIA RATING SCALE ITEMS IN BIPOLAR DISORDER PATIENTS: A POOLED ANALYSIS

*Arjen van Willigenburg, Organon, a part of Schering-Plough Corporation 56 Livingston Ave, Roseland, NJ 07068, Jun Zhao, John Panagides*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) describe the utility and individual items of the Young Mania Rating Scale used in the assessing mania in patients with bipolar disorder; and 2) describe the clinical efficacy of asenapine on specific Young Mania Rating Scale items in patients with bipolar mania.

**SUMMARY:**

Objective: Asenapine is a novel psychopharmacologic agent being developed for schizophrenia and bipolar disorder. We describe the results of a Young Mania Rating Scale (YMRS) item analysis using pooled data from 2 clinical trials in patients with bipolar I disorder.

Methods: In two 3-week trials (Ares 7501004 and 7501005), patients were randomized to flexible-dose asenapine (10 mg BID on day 1, option to titrate to 5 mg BID on day 2; n=379), placebo (n=202), or olanzapine (15 mg QD on day 1, option to titrate to 5–20 mg QD on day 2; n=396, to verify assay sensitivity). The primary efficacy endpoint was change from baseline in YMRS total score on day 21. An exploratory post hoc analysis of the 11 YMRS items was performed using pooled data from these trials. Last observations were carried forward for missing data.

Results: Asenapine and olanzapine separated from placebo in both studies. Asenapine demonstrated superior efficacy to placebo in both studies on day 21 (both $P<0.05$), with pooled mean ± SD changes from baseline of –11.1±11.2 for asenapine vs –6.6±11.1 for placebo. LS mean ± SE changes from baseline on day 21 were significantly greater on all 11 YMRS items (asenapine,–0.4±0.04 to –1.8±0.10; placebo,–0.2±0.06 to –1.2±0.14; all $P<0.01$ vs placebo). Early advantage with asenapine (on day 2) was seen on 6 items: disruptive-aggressive behavior, content, irritability, elevated mood, sleep, and speech (all $P<0.05$ vs placebo). Significant improvements were observed on days 4–14 in all remaining items: language-thought disorder, appearance, insight, increased motor activity-energy, and sexual interest. Conclusions: This exploratory analysis showed that in patients with bipolar mania treated with asenapine, improved YMRS total score at day 21 resulted from reductions in all 11 YMRS item scores. Rapid onset of clinical improvement might be associated with reduced scores on a subset of YMRS items. This research was supported by Organon, a part of Schering-Plough Corp.

**REFERENCES:**

1. Berk M, Ng F, Wang WV, et al: The empirical redefinition of the psychometric criteria for remission in bipolar disorder. J Affect Disord 2007 [EPub ahead of print].
2. Patel NC, Patrick DM, Youngstrom EA, Strakowski SM, Del

bello MP: Response and remission in adolescent mania: signal detection analyses of the young mania rating scale. J Am Acad Child Adolesc Psychiatry. 2007; 46:628-635.

**NR4-008**

## DO ANTIPSYCHOTICS LIMIT DISABILITY? A PROSPECTIVE NATURALISTIC COMPARATIVE STUDY IN A COMMUNITY SETTING

*Basappa K Venkatesh, M.B.B.S Project OfficerDepartment of PsychopharmacologyNational Institute of Mental Health & Neurosciences, BangaloreIndia 560029, Jagadisha Thirthalli, M.D., Magadi N. Naveen, M.D., Ganesh Venkatasubramanian, M.D., Udupi Arunachala, D.P.M., Kengeri V. Kishore Kumar, D.P.M., Bangalore N. Gangadhar, M.D*

**EDUCATIONAL OBJECTIVE:**

At the end of this presentation the attendees would learn that in schizophrenia patients: 1) regular antipsychotic treatment is associated with lesser disability; 2) initiation of antipsychotic treatment results in reduction of disability even in those who had remained untreated for several years, and 3) continued non-treatment results in continued disability.

**SUMMARY:**

Introduction: Antipsychotics are effective in treating symptoms of schizophrenia and in preventing relapse. Evidence for their effectiveness in limiting disability is sparse. Methods: We identified schizophrenia patients who were either receiving antipsychotic treatment or living without treatment in a rural community in South India. Diagnosis was confirmed using Mini International Neuropsychiatric Interview (MINI). Indian Disability Evaluation and Assessment Scale, IDEAS (1) was used to assess their disability at baseline and after 6 months. IDEAS assesses patients' disability in self care, communication, inter-personal relationships and work, each on a scale of 0 (no disability) to 4 (profound disability). Of the 217 consenting patients 131 completed 6-months follow-up at the time of writing this report; the remaining are being followed up. These fell into three groups naturalistically: patients in group A (n=38) were receiving antipsychotics at both baseline and follow-up; those in group B (n=22), were off antipsychotics at both baseline and follow-up (as they refused treatment) and those in group C (n=71), were not on antipsychotics at baseline but received antipsychotics during the follow up. The groups were similar in socio-demographic variables. Results: At the baseline group A had significantly less total disability scores (4.82 +/- 3.7) than group B (8.41 +/- 3.7) and group C (8.7 +/- 3.6) ($p<0.05$). At follow-up there was no significant difference in disability scores between group A (2.7 +/- 3.1) and group C (4.1 +/-3.5); both had significantly less disability scores than group B (7.3 +/- 3.4). There was a significant group X occasion effect, suggesting that the drop in disability score was significant in group C ($F=8.79$; $p<0.01$). Conclusion: Disability decreases in schizophrenia patients who receive antipsychotics and remains unchanged in those who continue to refuse them. This refutes the argument that antipsychotics do more harm than good (2).

**REFERENCES:**

1. Indian Psychiatric Society: IDEAS (Indian Disability Evalu ation and Assessment Scale) – A Scale for Measuring and Quantifying Disability in Mental Disorders. Chennai, Indian Psychiatric Society, 2002.
2. Whitaker R: The case against antipsychotic drugs: a 50-year record of doing more harm than good. Med Hypotheses 2004;62:5-13.

**NR4-009**

## RISPERIDONE AND POLYPHARMACY IN THE TREATMENT OF ACUTE MANIC AND MIXED EPISODES IN BIPOLAR DISORDERS

*Bernd Ibach, M.D. Medical & Scientific AffairsJanssen-Cilag GmbH, Raiffeisenstrasse 841470 Neuss, Germany Nina Klose, M.D., Heinz Grunze, M.D.*

**EDUCATIONAL OBJECTIVE:**

The educational objectives of this presentation include to demonstrate the therapeutic benefit of the second generation antipsychotic risperidone in the treatment of exacerbated mania under clinical practice conditions. Moreover, a real life insight into the practice of highly prevalent polypharmacy will be offered. At the conclusion of this presentation the participient should be able to evaluate the option of mania treatment with risperidone in clinical routine as well as the drawbacks and opportunities of polypharmacy.

**SUMMARY:**

Objective: Risperidone has shown to be effective and generally well tolerated in treatment of patients with acute manic episodes in bipolar disorder given as monotherapy or in combination in controlled trials. This non-interventional study served to add evidence for therapeutic benefit of risperidone in a clinical routine setting and highlights the practice of polypharmacy. Methods: Post hoc analysis of a prospective, open-label, 2 week, multi-center, non-interventional trial performed in Germany (RIS-BIM-4001). Inpatients with a diagnosis of acute manic or mixed episode and a baseline score =20 in the YMRS were eligible for enrollment. In all patients treatment with risperidone was initiated. Evaluation based on intention to treat analysis (ITT). Results: For ITT population (n=251) the mean daily dose of risperidone at endpoint was 4.5±1.5mg/day. Mean YMRS total score improved significantly from baseline to endpoint (33.6±8.5 to 14.6±8.8) as well as MADRS-(13.1±5.8 to 7.2±5.3) and mean BPRS total score (13.5±5.1 to 7.4±3.6). 16 (8%) of the 199 patients evaluated at day 14 received risperidone monotherapy. 72 (36.2%) had risperidone combined with one, 73 (36.7%) with two, 37 (18.6%) with three and 1 (0.5%) was treated with four additional drugs. The most frequent concomitant psychotropic medications were mood stabilizers in 139 (69.9%) patients. 112 (56.3%) were treated with hypnotics/sedatives, 76 (38.2%) with additional antipsychotics and 6 (3%) with antidepressants. 185 adverse events were documented in 39.8% patients. Most frequent were EPS (6.4%). 7 SAE in 4 patients were documented; none have been judged to be related to risperidone. Conclusions: Oral risperidone treatment was associated with a fast onset of action and clinically relevant improvement of psychopathology. In acute treatment setting polypharmacy is highly prevalent with a significant proportion of co-administrated antipsychotics. Finding the right efficacious drug remains an area to explore.

**REFERENCES:**

1. Smulevich AB et al: Acute and continuation risperidone monotherapy in bipolar mania: a 3-week placebo-controlled trial followed by a 9-week double-blind trial of risperidone

and haloperidol. European Neuropharmacology 2005; 15:75-84.
2. Seemueller F et al: The safety and tolerability of atypical antipsychotics in bipolar disorder. Expert Opin Drug Saf 2005; 4(5):849-868.

**NR4-010**

**INTERIM-ANALYSIS OF A LONG-TERM TREATMENT ADHERENCE STUDY WITH LAIR AND ORAL SECOND GENERATION ANTIPSYCHOTICS IN PATIENTS WITH SCHIZOPHRENIA**

*Bernd Ibach, M.D. Medical & Scientific AffairsJanssen-Cilag GmbHRaiffeisenstrasse 841470, Neuss, Germany, Andreas Schreiner, M.D.*

**EDUCATIONAL OBJECTIVE:**

The educational objectives of this presentation include to demonstrate the long term therapeutic benefit of long acting injectable risperidone (LAIR) in schizophrenia under clinical practice conditions compared to oral second generation antipsychotics (SGA). At the conclusion of this presentation the participient should be able to recognize that LAIR is an effective treatment option in case of impaired compliance but also for younger schizophrenic patients with short disease duration.

**SUMMARY:**

Objectives: This two-year naturalistic study investigates adherence to therapy, tolerability and functionality of patients diagnosed with schizophrenia (ICD 10) and short disease duration under treatment with long acting injectable risperidone (LAIR) and oral second generation antipsychotics (SGA). Methods: Scheduled interim analysis of 230 patients (ITT population; baseline to endpoint). 113 patients started treatment with LAIR, 117 patients with one of six oral SGA (14 Amisulpride, 25 Aripiprazole, 20 Olanzapin, 21 Quetiapine, 18 Risperidone, 19 Ziprasidone). Mean age was 34.4 for LAIR and 34.3 years for oral SGA cohort. Mean duration of schizophrenia (78.8% paranoid; 7.1% hebephrenic; 8.0% undifferentiated) was 2.8 years (SD 1.8) for LAIR and 2.4 (SD 1.5) for oral SGA. Results: There were strong baseline differences between LAIR and oral SGA cohort with regard to reasons for starting treatment (non-compliance 46.9% vs 17.1%), lack of efficacy (positive symptoms) 32.7 vs. 23.1% and illness severity (PANSS total 95.2 vs 87.8). Retention rates and mean study duration in the LAIR vs. oral SGA cohort amount to 42% vs 36%, p=0.48 and a median of 549 vs. 458 days. PANNS scores improved significantly (LAIR 21.6 vs oral SGA 18.7; p<0.000). EPS score improved with no significant differences observed between cohorts. Most common treatment emergent adverse events (LAIR/oral SGA) contained weight increase (13.3/14.5%), fatigue (6.2/12.8%), agitation (4.4/6.0) and psychosis (5.3/5.1%). Conclusion: This interim analysis of a non-interventional naturalistic study confirms that lack of compliance in patients with a diagnosis of schizophrenia is still the major reason to be treated with LAIR as an SGA depot formulation. There is additional evidence for benefit of young patients with a short treatment duration. Moreover, there is a numerical superiority for LAIR in terms of a higher retention rate (D=91 days), however lacking statistical significance.

**REFERENCES:**

1. Leucht et al., Am J Psychiatry 2003 160:1203-1222.
2. Simpson et al,. J Clin Psychiatry 2006 67:1194-1203.

**NR4-011**

**TREATMENT OF FIRST-EPISODE PSYCHOSIS: EFFICACY AND TOLERABILITY OF A LONG-ACTING TYPICAL ANTIPSYCHOTIC**

*Bonga B Chiliza, M.B.B.S Department of Psychiatry University of Stellenbosch, Tygerberg, South Africa 7505, Renata Schoeman, MMed., Piet Oosthuizen, D.Med., Dana Niehaus, D.Med., Liezl Koen, M.Med., Robin Emsley, D.Med.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to treat first-episode psychosis patients with another type of antipsychotic.

**SUMMARY:**

Objective: To examine treatment efficacy and tolerability in first-episode psychosis patients treated with a long-acting typical antipsychotic. Method: We are conducting a prospective, longitudinal study of patients with first-episode psychosis treated with flupenthixol decanoate, a long-acting typical antipsychotic, according to a fixed protocol over 12 to 24 months. In this report, we discuss the preliminary results over a three month period in the first 20 patients included in our study. Clinical variables were measured using the Positive and Negative Syndrome Scale (PANSS), the Clinical Global Impression Severity Scale (CGI-S), the Calgary Depression Scale for Schizophrenia (CDSS) and the Extrapyramidal Symptom Rating Scale (ESRS). Results: The mean PANSS total scores reduced by 41.14% from 103.60 (SD 19.86) at baseline to 59.65 at three months. The mean CGI-S scores reduced from 5 (SD 4.04) at baseline to 3 (0.81) at three months. The CDSS scores reduced from 4.4 (SD 4.04) at baseline to 0.85 (SD 2.03) at three months. The mean ESRS scores were 9.85 (SD 6.45) at baseline and 8.05 (SD 8.08) at three months. The highest mean ESRS scores was 13.95 (SD 8.72) at four weeks. The mean weight and body mass index at baseline were 59.80 kg (SD 11.48) and 22.40 (SD 4.73) respectively. The mean weight and body mass index at three months were 63.83 kg (SD 11.53) and 23.86 (SD 4.54). Conclusion: Overall the treatment of first-episode psychosis patients with flupenthixol decanoate is effective and fairly well tolerated.

**REFERENCES:**

1. Emsley RA, Oosthuizen PP, Joubert AF, Hawkridge SM, Stein DJ. Treatment of schizophrenia in low-income coun tries. Int J Neuropsychopharmacol. 1999 Dec;2(4):321-325.
2. Oosthuizen P, Emsley R, Jadri Turner H, Keyter N. A randomized, controlled comparison of the efficacy and toler ability of low and high doses of haloperidol in the treatment of first-episode psychosis. Int J Neuropsychopharmacol. 2004 Jun;7(2):125-31.

**NR4-012**

**PREDICTING RESPONSE TO RISPERIDONE TREATMENT THROUGH IDENTIFICATION OF EARLY-ONSET OF ANTIPSYCHOTIC DRUG ACTION IN SCHIZOPHRENIA**

*Bruce J. Kinon, M.D. Lilly Corporate Center, Indianapolis, IN 46285, Virginia Stauffer, Pharm.D., Haya Ascher-Svanum, Ph.D.,*

*Oladapo Tomori, M.D., Sara Kollack-Walker, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to gain an understanding of the time course of responses to antipsychotic drug therapy, and the clinical ramifications associated with early response or non-response to treatment.

**SUMMARY:**

Objectives: The primary objective was to assess, in a prospective manner, whether early response/non-response to a second generation antipsychotic (SGA) within the first 2 weeks of treatment predicts subsequent response/non-response following 10 weeks of therapy with the same drug. The secondary objective was to examine the utility of switching to an alternative SGA for those patients who failed to show an early response to the initial therapy. Methods: This randomized, double-blind, flexible-dosed, 12-week study planned to enroll 600 patients diagnosed with schizophrenia or schizoaffective disorders. All patients were initially assigned to risperidone therapy due to the anticipated patent expiry of risperidone in June 2008 in the US. Availability of risperidone in generic form may lead to the initiation of step therapy in which patients may need to fail first on generic risperidone prior to access to other branded antipsychotics. Early response was defined as at least minimal improvement on PANSS total score from baseline to 2 weeks. Early responders to risperidone continued with risperidone therapy, whereas early non-responders to risperidone were randomized (1:1) in a double-blind manner to either continue on risperidone 2-6 mg/day or switch to olanzapine 10-20 mg/day for an additional 10 weeks of therapy. Results: The full dataset is not yet available. However, we anticipate presenting the results from this study at APA. What is clear at present is that early non-response to risperidone was observed in 72.4% of the patients while early response was observed in 27.6%. These findings are consistent with previous post-hoc analyses using other antipsychotic drugs. Conclusion: This prospective study will provide data for the first time to assess the validity of the early onset of response hypothesis in the treatment of schizophrenia patients with atypical antipsychotic medications.

**REFERENCES:**


1. Agid O, Kapur S, Arenovich T, Zipursky RB. Delayed-on set hypothesis of antipsychotic action: a hypothesis tested and rejected. Arch Gen Psychiatry 2003; 60(12), 1228-1235.
2. Correll CU, Malhotra AK, Kaushik S, McMeniman M, Kane JM. Early prediction of antipsychotic response in schizophre nia. Am J Psychiatry 2003; 160(11), 2063-2065.


**NR4-013**

## DOUBLE-BLIND COMPARISON OF ZIPRASIDONE AND RISPERIDONE IN THE TREATMENT OF CHINESE PATIENTS WITH ACUTE EXACERBATION OF SCHIZOPHRENIA


*Bruce Parsons, Pfizer Global Pharmaceuticals (PGP)Pfizer Inc235 East 42nd Street, New York, NY 10017-5755, Hongyan Zhang, Liang Shu, Huafang Li, Niufan Gu, Gang Wang, Yongzhen Weng, Shiping Xie, Xinbao Zhang, Ting Li, Cui Ma, Wei Yu, Manjula Schou, Andrea Malcolm*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to describe differences in the safety profile of atypical antipsychotic agents and recognize the equivalent efficacy of risperidone and ziprasidone in a Chinese patient cohort.

**SUMMARY:**


Introduction: Few trials compare the efficacy of atypical antipsychotics in Chinese patients with schizophrenia, although cytochrome P450 variants1 and dopamine-receptor polymorphisms may affect efficacy, safety and tolerability.2 This study addressed this need.

Methods: Inpatients (aged 18–65 years) with schizophrenia, and a PANSS total score >60 were randomized to 6 weeks of double-blind treatment with flexible doses of ziprasidone (ZIP; 40–80 mg bid) or risperidone (RIS; 1–3 mg bid). The primary efficacy measure was the PANSS total score. Other measures included the Brief Psychiatric Rating Scale (BPRS), spontaneously reported adverse events (AEs), movement disorders, laboratory tests, electrocardiography, vital signs, and weight. Results: 118 patients received ZIP (mean [± SD] dose, 118.5 ± 18.1 mg/d) and 121 patients received RIS (3.8 ± 0.8 mg/d). Improvement to week 6 in PANSS score was the same for both ZIP (–35.6 [95% CI, –32.6 to –38.6]) and RIS (–37.1 [95% CI, –34.4 to –39.9]). Significant improvement was observed for ZIP and RIS groups, respectively, on PANSS positive (–10.2 ± 0.6; –11.5 ± 0.6; $p < 0.001$ vs baseline), PANSS negative (–7.0 ± 0.5; –7.8 ± 0.5; $p < 0.001$) subscales, and BPRS (–16.1 ± 1.0; –18.4 ± 1.0; $p < 0.001$). Prolactin levels increased only for subjects on RIS (least squares mean change 61.1 ng/mL: $p < 0.001$). More subjects reported weight gain (= 7% ) in the RIS group (15%) than in the ZIP group (4%). 102 (86%) subjects on ZIP and 97 (80%) subjects on RIS had treatment-emergent AEs, mostly mild to moderate. 9 ZIP and 2 RIS subjects permanently discontinued from the study due to treatment-related AEs. ZIP and RIS were comparable on movement disorder scales. Conclusion: ZIP was as effective as RIS at treating acute schizophrenia, as shown by PANSS scores. ZIP was less likely than RIS to cause significant weight gain or to increase prolactin levels, consistent with studies in Western countries. This study was supported by Pfizer Inc.


**REFERENCES:**


1. Bradford LD. CYP2D6 allele frequency in European Cauca sians, Asians, Africans and their descendants. Pharmacoge nomics 2002; 3:229–243.
2. Frackiewicz EJ, Sramek JJ, Herrera JM, Kurtz NM, Cutler NR. Ethnicity and antipsychotic response. Ann Pharmacother 1997; 31:1360–1369.


**NR4-014**

## CORRELATING FUNCTIONAL DOMAINS AND SYMPTOM CLUSTERS IN SCHIZOPHRENIA


*Bruce Simonson, 1125 Trenton-Harbourton Road, Titusville, NJ 08560, Wayne Macfadden, M.D., Tom Haskins, Ph.D., Cynthia Bossie, Ph.D., Young Zhu, Ph.D., Larry Alphs, M.D., Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to recognize and understand the relationship between the Personal and Social Performance scale and clinical measures in patients with schizophrenia.

**SUMMARY:**


Introduction: Meaningful measures of functioning are important

in determining the effectiveness of treatment for patients with schizophrenia. The Personal and Social Performance (PSP) scale is a validated, clinician-rated measure of patient functioning; how its domains correlate to other clinical measures has not been established. This analysis explored the relationship between PSP domains, measures of symptomatology and demographics in patients with schizophrenia. Methods: A post-hoc analysis of baseline data from an open-label, rater-blinded multicenter study of patients randomized to risperidone long-acting injectable or aripiprazole for up to 2 years. Correlational and categorical analyses compared PSP total score and its four domain scores (socially useful activities, personal & social relationships, self-care, disturbing & aggressive behaviors) to the Positive and Negative Syndrome Scale (PANSS) factor scores (Marder et al, 1997), onset of illness and demographics. Results: 355 evaluable subjects were included in this baseline analysis. Data did not suggest a significant relationship between PSP domain scores and age, gender or onset of illness. Each PSP domain score correlated with several PANSS factors: "socially useful activities" with "positive" (0.323; P<0.0001), "negative" (0.405; P<0.0001) and "disorganized thoughts" (0.489; P<0.0001); "personal & social relations" with "negative" (0.501; P<0.0001) and "disorganized thoughts" (0.454; P<0.0001); "self care" with "negative" (0.344; P<0.0001) and "disorganized thoughts" (0.450; P<0.0001); and "disturbing & aggressive behavior" with "positive" (0.300; P<0.0001), "disorganized thoughts" (0.309; P<0.0001) and "uncontrolled hostility/excitement" (0.598; P<0.0001). Conclusion: For the first time, functioning domains measured by the PSP have been shown to correlate with clinical measures of symptomatology used for treating schizophrenia. Supported by Ortho-McNeil Janssen Scientific Affairs, L.L.C.

**REFERENCES:**

1. Marder SR, Davis JM, Chouinard G: The effects of risperi done on the five dimensions of schizophrenia derived by fac tor analysis: combined results of the North American trials. J Clin Psychiatry 1997; 58:538-546.
2. Morosini PL, Magliano L, Brambilla L, Ugolini S, Pioli R: Development, reliability and acceptability of a new version of the *DSM-IV* Social and Occupational Functioning Assess ment Scale (SOFAS) to assess routine social functioning. Acta Psychiatr Scand 2000; 101:323–329.

**NR4-015**

## A DOUBLE-BLIND, PLACEBO-CONTROLLED TRIAL OF PALIPERIDONE ER AND QUETIAPINE IN PATIENTS WITH A RECENT ACUTE EXACERBATION OF SCHIZOPHRENIA

*Carla Canuso, M.D. 1125 Trenton-Harbourton Road, Titusville, NJ 08560, Jennifer Carothers, M.B.A., Sc.D., Brian Dirks, M.D., Young Zhu, Ph.D., Colette Kosik-Gonzalez, M.A.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be aware of the role of paliperidone extended-release (ER) compared with quetiapine in treating patients with a recent acute exacerbation of schizophrenia requiring hospitalization.

**SUMMARY:**

Introduction: An important treatment goal for schizophrenia patients with a recent exacerbation requiring hospitalization is rapid symptom control. This study compared paliperidone extended-release (ER) and quetiapine monotherapy in these patients.

Methods: An international, 6-week, double-blind study randomized recently exacerbated inpatients with schizophrenia to paliperidone ER, quetiapine or placebo. A 2-week monotherapy phase was followed by a 4-week additive-therapy phase. Target doses: 9 or 12 mg/day paliperidone ER and 600 or 800 mg/day quetiapine. Outcomes: Positive and Negative Syndrome Scale (PANSS), adverse events (AEs) and several secondary measures. Primary endpoint: PANSS total change score at monotherapy endpoint for paliperidone ER vs quetiapine. Results: 399 patients were randomized; 78% on paliperidone ER, 67% on quetiapine and 64% on placebo completed. There was significant improvement with paliperidone ER vs quetiapine in mean[SE] PANSS total change score from day 5 (–11.4[1.1] vs –8.2[1.1]; P=0.011) through the 2-week monotherapy endpoint (–23.4[1.8] vs –17.1[1.8]; P<0.001). Paliperidone ER but not quetiapine showed significantly greater improvement vs placebo on PANSS total score. At 6-week study endpoint, paliperidone ER showed significant improvement vs quetiapine in mean[SE] PANSS total change score (–31.2[1.9] vs –26.6[1.9]; P=0.023). Data will also be presented on secondary efficacy endpoints. Most common AEs at monotherapy endpoint for paliperidone ER, quetiapine and placebo, respectively, were tremor (14%, 5%, 8%), somnolence (9%, 12%, 1%), insomnia (10%, 9%, 11%) and headache (12%, 8%, 14%). Discontinuations due to AEs at 6-week study endpoint were 4%, 10% and 6% for paliperidone ER, quetiapine and placebo, respectively.

Conclusion: Paliperidone ER exhibited greater short-term efficacy than quetiapine for a recent exacerbation of schizophrenia requiring hospitalization. Supported by Ortho-McNeil Janssen Scientific Affairs, LLP

**REFERENCES:**

1. Potkin SG, Gharabawi GM, Greenspan AJ, Mahmoud R, Kusik-Gonzalez C, Rupnow MF, Bossie CA, Davidson M, Burtea V, Zhu Y, Trivedi JK: A double-blind comparison of risperidone, quetiapine and placebo in patients with schizo phrenia experiencing an acute exacerbation requiring hospi talization. Schizophr Res 2006; 85(1-3):254-265.
2. Davidson M, Emsley R, Kramer M, Ford L, Pan G, Lim P, Ferdekens M: Efficacy, safety and early response of paliperi done extended-release tablets (paliperidone ER): results of a 6-week, randomized, placebo-controlled study. Schizophr Res 2007; 93(1-3):117-130.

**NR4-016**

## COMBINATION OF NEW ANTIPSYCHOTICS IN THE TREATMENT-RESISTANT SCHIZOPHRENIC. APPROACHES TO THE CONCEPT OF POLYPHARMACY

*Carlos C Mur de Víu, M.D. Fundación Jiménez Díaz Autonomous University of Madrid Avda. Reyes Católicos, 2, Madrid-Spain 28040, Javier Quintero Gutiérrez del Alamo, M.D., Ph.D., Javier Correas Lauffer, M.D., Juan de Dios Molina, M.D., Antonio Ceverino, M.D., Ph.D., Enrique Baca-Garcia, M.D., Ph.D., Jose Luis Gonzalez de Rivera, M.D.,Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this poster presentation, the participant

should be able to recognise and describe the concept of resistant schizophrenia, studying how this concept has changed and modified our expectations in the treatment of this illness.

**SUMMARY:**
Background: Antipsychotic combination therapy in schizophrenia is nowadays widely used,whereas switching antipsychotics used to be more common. The more we understand the aetiology of resistances in schizophrenia,the more effective will be the treatment. The trends in the rate and type of antipsychotic medications have changed: combining antipsychotics with a different receptor-blockade profile have shown a higher efficacy than merely optimizing D2 occupancy,reducing the resistances. Quetiapine is the most frecuently prescribed in combination. Methods: The trial which supports this hypothesis is an observational and prospective clinical trial,studying the effectiveness and tolerance of the combination of two antipsychotics. 30 resistant patients (n =30) were examined 4 times(first consult,and 1,3 and 6 months later). The design criteria includes the PANSS scale,Calgary Depression Scale,Q-LES Questionnaire,BPRS and CGI scales,SCL-90 R and the Simpson-Angus Scale for akathisia. Also neuropsychological evaluation,labs and EKG.Comparison between the association of amisulpride and quetiapine was compared with other two samples of classical combinations: a sample of 30 patients treated with risperidone and clozapine, and another sample of 30 treated with quetiapine and flufenazine. These samples were compared using Chi-square and ANOVA analysis. Results: Combination of amisulpride and quetiapine has had an excellent tolerance in 22 cases,with no side effects reported except mild akathisia. Efectiveness is proved with a significant decline in BPRS scores. 58% of patients have a 20-30% decline in PANSS score. Quality of life has improved in 62% of cases,with a significant difference at the 6 months follow-up ($x2=4.7, df=1, p<0.05$). Conclusions: Combination of new antipsychotics with different receptor blockade profile is useful in the treatment-resistant schizophrenia. The concept of “resistance” is needed to be re-defined.

**REFERENCES:**

1. Bolonna AA, Kerwin RW. Partial agonism and schizophrenia. Br J Psychiatry 186:7-10, 2005.
2. Palfreymann MG, Hook DJ, Klimczak LJ, Brockman JA, Evans DM, Altar CA. Novel directions in antipsychotic target identification using gene arrays. Curr Drug Targets- CNS Neurol Disord 1: 227-238, 2002.

**NR4-017**

## PSYCHOEDUCATIONAL WEIGHT GAIN INTERVENTION: A BRAZILIAN NATIONAL MULTICENTRIC STUDY FOR SCHIZOPHRENIA AND SEVERE MENTAL DISORDERS PATIENTS

*Cecília Attux, M.D. Rua Borges Lagoa 564 cj 23, São Paulo, Brazil 04038000, Larissa C. Martini, O.T.R., Célia M. Araújo,P. E., Ana Maria Roma, R.D., Emiliana McMullan, Psy.D., Fernanda A. Pimentel, O.T.R., Daniela F. Canguçu, O.T.R., Patrícia L. Castro, Psy.D., Brisa Baptista, R.D., Maria das Graças M. Camargo, Psy.D., Rodrigo A. Bressan, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to recognize the importance of non pharmacological interventions on weight gain and that new researches are necessary on this area.

**SUMMARY:**
Background: Weight gain and metabolic syndrome are serious health concerns for schizophrenia and other severe mental illness patients because they increase the risk of cardiovascular diseases. The primary objective of the study was to evaluate the effectiveness of the intervention in a national multicentric study, comparing weight and BMI (body mass index). Blood pressure, waist circumference and physical activity levels changes before and after the intervention were also evaluated. Methods: The intervention includes thirteen weekly 1-hour group sessions discussing topics, such as healthy diet, lifestyle, physical activity, psychoeducation and self-esteem with patients and their relatives. Groups are enrolled by a mental health professional trained and supervised by our team. Patiens were assessed before and after the intervention. Results: Thirty-eight mental health services were enrolled on the study, and 444 patients were enrolled. 329 (74.1%) patients finished the study. Patients lost on average 0.76 kg (SD: 3.45,p=.000) and BMI decreased .26 kg/m² (SD:1.39, p=.001). Waist measures and blood pressure levels presented small but significant decreases. 279 (84.8%) patients maintained (± 2kg) or lost weight. Physical activity increased after the intervention (Mc Nemar, p=.000). Before intervention 184 (53.6%) patients were practicing any kind of activity, and after 255 (72.9%) were doing physical activity. Conclusions: The intervention showed positive outcomes on weight gain, BMI, blood pressure, waist and hip circumferences in a short-term evaluation. A randomized controlled trial with this intervention has already started and is expected to have even larger effect sizes since patients in the waiting list tend to gain weight. Supported by Eli Lilly.

**REFERENCES:**

1. Attux C, Araújo CM, Roma, AM, Mateus M, Campagna L, Canguçu D, Bressan RA. Brazilian Wellness Program: results from first year.Int J Neuropsychopharmacol 2006; 9 (suppl 1):S156.
2. Casey DE, Haupt DW, Newcomer JW, Henderson DC, Sernyak MJ, Davidson M et al.. Antipsychotic induced weight gain and metabolic abnormalities: implications for increased mortality in patients with schizophrenia. J Clin Psychiatry 2004; 65 Suppl 7:4-18.

**NR4-018**

## INSIGHT AND COGNITION IN SCHIZOPHRENIA

*Cherrie A Galletly, Ph.D. Discipline of Psychiatry, School of Medicine, University of Adelaide.Suite 13, The Adelaide Clinic Consulting Suites 33 Park Tce Gilberton, Suite 13, Australia 5081, Aaron L. Neaves, B.HealthSci, Linley A. Denson, B.A, DipAppPsych., M.Psych., Ph.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to critically evaluate the assessment of cognitive impairment in schizophrenia using objective and self-report measures.

**SUMMARY:**
Aim: of the present study was to investigate whether patients with schizophrenia display insight into their cognitive deficits and whether their perception of impairment influences their

attitude to cognitive-enhancing treatments. Introduction: Cognitive impairment is common in schizophrenia, and is a major determinant of functional disability. This association has led to considerable interest in cognitive-enhancing therapeutics, with the overall aim of improving outcome. In addition to cognitive impairment, individuals with schizophrenia typically lack insight, and this is a common barrier to treatment and rehabilitation. Given the emergence of cognition as a critical treatment target in schizophrenia it is important to understand whether individuals with schizophrenia display an awareness of their cognitive deficits, and an appreciation of the need for treatment. Method: Self-reports of cognitive functioning from 30 patients with schizophrenia or schizoaffective disorder, assessed using the Schizophrenia Cognition Rating Scale, were compared with their objective neuropsychological test performance assessed using the Brief Assessment of Cognition in Schizophrenia. Patients' attitudes toward cognitive remediation therapy were also evaluated. Results: There was no correlation between patients' self-reported cognitive function and objective neuropsychological assessments. Although patients' perception of their cognitive function was inaccurate, it was significantly related to their willingness to participate in cognitive remediation. Conclusions: Patients with schizophrenia are not able to accurately appreciate the extent or nature of their cognitive deficits. Patients with a more severe perception of impairment, regardless of objective severity, are more willing to engage in cognitive remediation programs.

Disclosure: Professor Galletly's travel to the APA was funded by Astra Zeneca.

**REFERENCES:**

1. Keefe RS, Poe M, Walker, TM, Kang JW, Harvey PD: The Schizophrenia Cognition Rating Scale: an interview-based assessment and its relationship to cognition, real-world func tioning, and functional capacity. American Journal of Psy chiatry 2006; 163, 426-432.
2. Medalia A, Lim R: W. Self-awareness of cognitive function ing in schizophrenia. Schizophrenia Research 2004; 71, 331-338.

**NR4-019**

## DOSING OF SGAS IN PATIENTS WITH SCHIZOPHRENIA: SECULAR TRENDS FOR MONOTHERAPY AND COMBINATION TREATMENT WITH OTHER PSYCHOTROPIC AGENTS

*Chi-Chang Chen, Ph.D. Bristol-Myers Squibb Company777 Scudders Mill Road, Plainsboro, NJ 08536-1615, Leslie Citrome, M.D., M.P.H., Edward Kim, M.D., M.B.A., Zhenchao Guo, Ph.D., Quynh-Van Tran, Pharm.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to recognize: 1) dosing differences of second-generation antipsychotics when used in monotherapy and combination therapy in patients diagnosed with schizophrenia; and 2) the change in dosing patterns over time.

**SUMMARY:**

Purpose: This study examined dosing trends over time of SGAs used as monotherapy or in combination with other psychotropic agents. Methods: Prescription data for patients diagnosed with schizophrenia/schizoaffective disorder receiving first-line SGA (aripiprazole, olanzapine, quetiapine, risperidone or ziprasidone) from 1/1/03–12/31/06 were extracted from a large claims database (PharMetrics). Average daily doses for each SGA were determined by calendar year and treatment regimen. Dosing differences between regimens and changes over time were evaluated using a linear mixed model, adjusting for patient age, gender and physician specialty. Results: From 2003–2006 patient numbers per year ranged from 2977–3341. In 2006 mean daily monotherapy dose with aripiprazole, olanzapine, quetiapine, risperidone and ziprasidone were 21.5, 14.7, 359.5, 3.9 and 131.8 mg/d, respectively. Used in combination with other antipsychotics the respective mean daily doses were 17.8, 12.6, 326, 3.0 and 119.4 mg/d; in combination with mood stabilizers, doses were 20.9, 14.0, 403, 3.6 and 127.4 mg/d respectively. Dosing of aripiprazole was similar when used as monotherapy or in combination, and increased from 2003 to 2006 ($p<0.001$). Olanzapine and risperidone monotherapy doses were higher compared to combination therapy ($p<0.001$). Monotherapy dosing with olanzapine or risperidone decreased ($p<0.001$), but combination therapy dosing increased over time ($p<0.001$). Quetiapine combination therapy dosing was higher than monotherapy ($p=0.021$); dosing increases were observed with both regimens over time ($p<0.001$). Monotherapy ziprasidone dosing was higher than combination therapy ($p<0.001$); doses increased over time for both strategies ($p<0.001$). Conclusions: Except for aripiprazole and quetiapine, monotherapy SGA dosing is higher than SGA combination dosing. Doses increased from 2003 to 2006 in all SGAs except olanzapine and risperidone monotherapy. Supported by Bristol-Myers Squibb and Otsuka.

**REFERENCES:**

1. Citrome L, Jaffe A, Levine J. Datapoints: The ups and downs of dosing second-generation antipsychotics. Psychiatr Serv 2007;58:11.
2. Kreyenbuhl JA, Valenstein M, McCarthy JF et al: Long-term antipsychotic polypharmacy in the VA health system: patient characteristics and treatment patterns. Psychiatr Serv 2007;58:489-495.

**NR4-020**

## CHANGE IN EMPLOYMENT STATUS OVER 52 WEEKS IN PATIENTS WITH SCHIZOPHRENIA

*Chris Kozma, Ph.D. 112 Fox Hollow Circle, West Columbia, SC 29170, Riad Dirani, Ph.D., Lian Mao, Ph.D., Joan Amatniek, M.D. Carla Canuso, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to discuss employment trends in treated patients with schizophrenia.

**SUMMARY:**

Introduction: This post-hoc analysis aimed to evaluate change in employment status over time in patients with schizophrenia. Methods: Data were from three, 52-week, open-label extensions of the double-blind pivotal trials of paliperidone extended-release (ER). Employment status was measured at baseline of the open-label phase and change was measured at 4-week intervals. Patients were included if they were in the open-label intent-to-treat population, had a baseline and at least one postbaseline visit and had valid dates in the productivity data.

Employment categories included full-time; part-time; casual; sheltered work; unemployed, but seeking work; unemployed, but not seeking work; retired; housewife or dependent husband and student. Change in employment status from baseline to postbaseline (last visit) was assessed using McNemar's test. Results: Of the 1077 patients enrolled in the open-label extensions, 1012 (94.0%) met inclusion criteria. The average age was 37.7 (SD 10.9) and 59.1% were male. At baseline, the largest percentage of patients was "unemployed, but not seeking work" (56.8%), followed by "retired" (14.9%) and "unemployed, but seeking work" (11.7%). At baseline, 10% of patients had some level of employment while 18.8% were employed at the last observation (P<0.0001). At the last visit, the percentages of patients who were "unemployed, but not seeking work" and "unemployed, but seeking work" were 50.3% and 9.8%, respectively. Approximately 4.5% more patients were employed full-time at their last visit as compared to baseline (P<0.0001). Conclusion: In this population of schizophrenia patients who were treated with paliperidone ER, the percentage of patients who were employed in the open-label phase increased over time. Such improvements in productivity can be an indicator of a positive outcome of schizophrenia treatment. Supported by Ortho-McNeil Janssen Scientific Affairs, L.L.C.

**REFERENCES:**

1. Kane J, Canas F, Kramer M, Ford L, Gassmann-Mayer C, Lim P, Eerdekens M: Treatment of schizophrenia with pali peridone extended-release tablets: a 6-week placebo-con trolled trial. Schizophrenia Research 2007; 90(1-3):147-161.
2. Kramer M, Simpson G, Maciulis V, Kushner S, Vijapurkar U, Lim P, Eerdekens M: Paliperidone extended-release tablets for prevention of symptom recurrence in patients with schizo phrenia: a randomized, double-blind, placebo-controlled study. J Clin Psychopharmacol. 2007; 27(1):6-14.

**NR4-021**

## BENEFITS OF SECOND GENERATION ANTIPSYCHOTIC DRUGS IN AUTISM SPECTRUM DISORDERS (ASD) ADULT PATIENTS

*Christine Palix, CHS LJ Gregory Avenue du Roussillon BP 22, THUIR Cedex, France 66301, Sylvie Baudry, Mireille Cabrol*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to analyse the prescriptions of antipsychotic drugs and to treat efficiently autism spectrum disease adult patients.

**SUMMARY:**

Background :Antipsychotic drugs are the most frequently prescribed psychoactive agent used in autism. Typical antipsychotics have been found to be useful in reducing motor stereotypies, hyperactivity, temper tantrums and improving social relatedness. Extrapyramidal side effects have limited the use of these drugs, resulting in the introduction of the atypical antipsychotics. The aim of this study was to investigate the evolution of the prescriptions in ASD adult patients. Methods: Fifty-four individuals (37 males and 17 females; mean age=35.6 [SD=10.4]) meeting CIM-10 criteria for ASD, were included in the study. We compared the prescriptions at 2 different periods: at their entrance in our service (T1) and in june 2007 (T2). Results: At the time of their admission, all patients were treated with first generation antipsychotics (FGA) ; then we quickly initiated a treatment with second generation antipsychotic (SGA). The average duration of treatment with SGA was 607 +/- 527 days ; the SGA prescribed were: risperidone (n=25), risperidone Long Acting Injection (n=20), olanzapine (n=5), clozapine (n=2), aripiprazole (n=2). The number of patients under antipsychotic monotherapy changed from 10 to 31 (p<0.05) and the number of FGA used decreased drastically.

| Nb FGA | T1 | T2 |
|---|---|---|
| 0 | - | 31 |
| 1 | 10 | 17 |
| 2 | 11 | 6 |
| 3 | 12 | - |
| 4 | 11 | - |
| 5 | 4 | - |
| 6 | 6 | - |

During the same period, co-prescriptions strongly decreased:

| Nb patients | T1 | T2 |
|---|---|---|
| Mood stabilizers | 22 | 6 |
| Anxiolytic | 41 | 20 |
| Antidepressants | 25 | 4 |
| Hypnotic | 29 | 4 |
| Antichol. drugs | 39 | 9 |

Conclusions:

FGA were commonly co-precribed despite clear evidence that such prescribing substantially increases the use of anticholinergic medications. SGA and especially risperidone in our experience may combine efficacy in ameliorating some autistic symptoms with a lower incidence of some adverse reactions. The low level of concomitant drug prescription in ASD adult patients treated with SGA may contribute to lower side effects and improve quality of life.

**REFERENCES:**

1. Stachnik JM, Nunn-Thompson C. Use of atypical antipsy chotics in the treatment of autistic disorder. Ann Pharmaco ther. 2007 Apr;41(4):626-34.
2. Jesner OS, Aref-Adib M, Coren E Risperidone for autism spectrum disorder. Cochrane Database Syst Rev. 2007 Jan 24;(1):CD005040.

**NR4-022**

## FOUR-WEEK ILOPERIDONE DEPOT INJECTABLE: SAFETY AND PHARMACOKINETIC PROFILE IN PATIENTS WITH SCHIZOPHRENIA AND SCHIZOAFFECTIVE DISORDER

*Christon Lorn Hill, Vanda Pharmaceuticals Inc., 9605 Medical Center Drive, RockvilleMD 20850, Deepak Phadke, Ph.D., Kristen M. Boyce*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to; 1) Recognize iloperidone depot as a potential future long-term treatment for patients with schizophrenia or schizoaffective disorder; and 2) Demonstrate understanding of the pharmacokinetics of iloperidone

**SUMMARY:**

Introduction: In the treatment of schizophrenia, long-term injectable formulations provide an option to patients and physicians to increase treatment compliance. This double-blind, placebo-controlled, parallel-group study evaluated the safety

and pharmacokinetics of a 28-day injectable depot formulation of iloperidone, a mixed D2/5-HT2 antagonist being developed for the treatment of schizophrenia. Methods: The study had 1 double-blind 28-day cycle and 2–6 optional open-label 28-day cycles. Different dose ranges (12–750 mg) were administered to adult patients with schizophrenia or schizoaffective disorder. Safety assessments included adverse events (AEs), laboratory evaluations, injection site reactions, vital signs, ECG, and ESRS. Results: Iloperidone depot showed sustained release over 28 days, with immediate release starting at day 1. Systemic exposure was generally dose proportional and compared with that of the oral formulation over a 28-day period. The safety population comprised 84 patients (iloperidone 64; placebo 20). A total of 59 iloperidone- and 19 placebo-treated patients completed a double-blind cycle; 34 patients continued into open-label cycles. The adverse event profile of 28-day injectable was similar to that of the oral formulation. No patient had QTc prolongation of clinical significance. Conclusions: These data suggest that oral dosing is not needed prior to the first injection as this formulation showed immediate release at day 1 and a sustained release over 28 days. Iloperidone depot appeared to be safe and well tolerated. This formulation may provide a future tool aiding treatment compliance among the schizophrenia population. Vanda Pharmaceuticals sponsored this study.

**REFERENCES:**


1. Corbett R, Griffiths L, Shipley JE, et al. Iloperidone: pre clinical profile and early clinical evaluation. CNS Drug Rev 1997;3:120-147
2. Sainati SM, Hubbard JW, Chi E, et al. Safety, tolerability, and effect of food on the pharmacokinetics of iloperidone (HP 873), a potential atypical antipsychotic. J Clin Pharmacol 1995;35:713-720


**NR4-023**

## EVALUATION OF EFFECTIVENESS MEASURES FOR PATIENTS WITH SCHIZOPHRENIA WHO INITIATED THERAPY WITH RISPERIDONE LONG-ACTING INJECTABLE


*Concetta Crivera, Pharm.D. Ortho-McNeil Janssen Scientific Affairs, LLC1125 Trenton-Harbourton Rd., Titusville, NJ 08560, Chris M. Kozma, Ph.D., Terra Slaton, M.S., Riad D. Dirani, Ph.D., Lian Mao, Ph.D., Stephen C. Rodriguez, M.S., Wayne Macfadden, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to identify schizophrenia effectiveness measures that might be expected to change and discuss potential patterns of change following initiation on risperidone long-acting injectable.

**SUMMARY:**


Introduction: The purpose of this study was to observe effectiveness outcomes in patients treated with risperidone long-acting injectable (RLAI) using data from an ongoing 2-year observational study in schizophrenia patients. Methods: This study used interim data from the Schizophrenia Outcomes Utilization Relapse and Clinical Evaluation (SOURCE) study, a 2-year observational study of patients initiated on RLAI. Effectiveness data were collected every 3 months for 2 years and included Clinical Global Impressions–Severity (CGI-S), Global Assessment of Functioning (GAF), Personal and Social Performance (PSP) scale, Strauss-Carpenter Levels of Functioning (LOF) scores, Short Form-36 (SF-36) and satisfaction with therapy. Data were analyzed using repeated measures models with age, gender and follow-up time as factors/covariates. Unstructured covariance matrix was used to model the correlations among repeated measurements within each patient. Results: At the time of this data extraction, 532 subjects were enrolled in the SOURCE database, with 302 having 1 year of data available, and 107 having 2 years of data available. For every effectiveness measure, with the exception of the physical summary score from the SF-36, all postbaseline means showed improvements over baseline (P<0. 001). The PSP, CGI-S and GAF all showed increases over the previous assessment through 9 months (P<0.05). The LOF showed increases over the previous assessment through 6 months. All improvements over baseline were maintained for the entire study period. Conclusion: Results of this open-label interim analysis suggests, patients initiating therapy on RLAI showed improvement in effectiveness measures within 3 months. Improvement was maintained over the 2-year study period.


**REFERENCES:**


1. Kane JM, Eerdekens M, Lindenmeyer JP, et al: Long-acting injectable risperidone: efficacy and safety of the first long-acting atypical antipsychotic. Am J Psychiatry 2003; 160:1125-1132.
2. Ehret MJ, Fuller MA: Long-acting injectable risperidone. Ann Pharmacother 2004; 38:2122-2127.


**NR4-024**

## LONG-TERM SAFETY OF ILOPERIDONE VERSUS HALOPERIDOL FOR PATIENTS WITH SCHIZOPHRENIA OR SCHIZOAFFECTIVE DISORDER


*Curt D Wolfgang, Ph.D. Vanda Pharmaceuticals Inc., 9605 Medical Center Drive, Rockville, MD 20850, Jennifer Hamilton, M.S., Michael Di Marino, M.A., Paolo Baroldi, M.D., Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) recognize the long-term safety issues related to current atypical antipsychotics used to treat schizophrenia and schizoaffective disorder; and 2) demonstrate an understanding of the long-term results for iloperidone as maintenance treatment for patients with schizophrenia or schizoaffective disorder.

**SUMMARY:**


Introduction: This analysis compared long-term safety of the mixed D2/5-HT2 antagonist iloperidone vs haloperidol in patients with schizophrenia or schizoaffective disorder. Haloperidol has an established long-term profile, making it a suitable comparator. Methods: Data were pooled from 3 prospective, multicenter, double-blind, parallel-group studies with 6-week double-blind and 46-week long-term double-blind phases. Patients were randomized to iloperidone 4-16 mg/day or haloperidol 5-20 mg/day. Patients were included in the long-term safety analysis if they completed the initial 6-week phase with >=20% reduction from baseline in PANSS-T score at weeks 4 and 6, had a CGI-I score <4, took at least 1 dose of study medication and had a safety assessment during the long-term phase. Results: Of 1634 patients entering and 1326 completing the 6-week phase, 489 (iloperidone

371; haloperidol 118) were included in the long-term safety analysis. Both iloperidone and haloperidol had 36.4% of patients discontinue in the long-term phase, including 3.8% and 7.6%, respectively, due to AEs. During this time, 73.3% of iloperidone and 68.6% of haloperidol patients had >=1 AE; the most common were insomnia (18.1%), anxiety (10.8%) and schizophrenia aggravated (8.9%) for iloperidone and insomnia (16.9%), akathisia (14.4%), tremor (12.7%) and muscle rigidity (12.7%) for haloperidol. ESRS improved for iloperidone and worsened for haloperidol at endpoint. Weight gain was 2.6 and 0.6 kg during the 6-week phase and an added 1.2 and 1.7 kg at endpoint for iloperidone and haloperidol, respectively. Both groups had minimal metabolic parameter changes. Mean changes in QTcF were 10.3 msec for iloperidone and 9.4 msec for haloperidol at endpoint. Conclusions: Iloperidone has a favorable long-term safety profile with respect to EPS/ akathisia, weight gain and metabolic parameters that may make it a suitable option as maintenance therapy for schizophrenia. Sponsored by Vanda Pharmaceuticals.

**REFERENCES:**


1. Kalkman HO, Subramanian N, Hoyer D. Extended radio ligand binding profile of iloperidone: a broad spectrum dopamine/ serotonin/norepinephrine receptor antagonist for the management of psychotic disorders. Neuropsychopharma cology 2001;25:904-914.
2. Lieberman JA, Stroup TS, McEvoy JP, et al. Effectiveness of antipsychotic drugs in patients with chronic schizophrenia. N Engl J Med 2005;353:1209-1223.


**NR4-025**

## REMISSION IN SCHIZOPHRENIA AND PATIENT-RELEVANT OUTCOMES: FINDINGS FROM THREE STUDIES


*Cynthia Bossie, Ph.D. 1125 Trenton-Harbourton Road, Titusville, NJ 08560, C.V. Damaraju, Ph.D., Young Zhu, Ph.D., John Prosser, Ph.D., M.B.A., Wayne Macfadden, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should understand the role of the duration component of remission criteria for schizophrenia (Andersen et al, 2005) on patient-relevant outcomes, as determined in patients receiving atypical antipsychotic treatments.

**SUMMARY:**


Introduction: Remission criteria in schizophrenia include symptom severity (absent-mild ratings on core symptoms) and duration (>=6 consecutive months). We hypothesized that the duration component is required for improvement in patient-relevant outcomes. Methods: Post-hoc analyses of three 1-year studies of schizophrenia patients assessed remission status by the Positive and Negative Syndrome Scale. Mutually exclusive populations were defined: meeting symptom severity and duration criteria (>=6 month remitters); meeting symptom severity but not duration criteria (severity remitters); never meeting symptom severity criteria (nonremitters). Measures; Short-Form Health Survey (SF-36) functioning domains (study 1, N=633), Strauss Carpenter Levels of Functioning (LOF) and/or Personal and Social Performance (PSP) scale (study 2, N=316; study 3, N=235). ANCOVA assessed change scores. Results: Study 1: >=6 month remitters improved significantly more on SF-36 domains of social functioning, role-emotional and role-physical than severity remitters (mean[SE] difference in change scores: 13.3[2.4];16.6[3.9];9.8[3.7], respectively) and nonremitters (17.9[2.4];16.9[3.9];14.2[3.7], respectively) (all P<0.01). Severity remitters showed no significant improvement vs nonremitters on these domains. Study 2: >=6 month remitters, but not severity remitters, improved significantly more than nonremitters on LOF domains of quality and quantity of useful work (mean[SE] difference in change scores:1.3[0.6]), frequency and quality of social contacts (1.2[0.4]) and fullness of life (0.4[0.1]) (all P<0.05). Studies 2 and 3: >=6 month remitters and severity remitters improved significantly more than nonremitters on PSP total score (P<0.05). However, >=6 month remitters improved significantly more than severity remitters (P<0.05). Conclusion: Results suggest remission for >=6 months is important for improvement in patient-relevant outcomes. Supported by Ortho-McNeil Janssen Scientific Affairs, LLC


**REFERENCES:**


1. Andreasen NC, Carpenter WT Jr, Kane JM, Lasser RA, Marder SR, Weinberger DR: Remission in schizophrenia: proposed criteria and 1.rationale for consensus. Am J Psy chiatry 2005; 162:441-449.
2. Lasser RA, Bossie CA, Gharabawi GM, Kane JM: Remission in schizophrenia: Results from a 1-year study of long-acting risperidone injection. Schizophr Res 2005; 77:215-227.


**NR4-026**

## THE RELATIONSHIP OF ZIPRASIDONE DOSE TO EFFICACY IN CLINICAL TRIALS OF SCHIZOPHRENIA AND SCHIZOAFFECTIVE DISORDER


*Daniel E Casey, M.D. 3181 SW Sam Jackson Park Road Portland, OR 97239, PortlandOR 97239, Elizabeth A. Pappadopulos, Ph.D., Charlotte Kremer, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) relate ziprasidone dose efficacy in the treatment of schizophrenia and schizoaffective disorder; and 2) gain skill at interpreting clinical trial results.

**SUMMARY:**


Introduction: Optimal dosing of psychotherapeutic agents is essential for symptom control. Dosing data reported in ziprasidone clinical trials may improve prescribing practices for schizophrenia.1,2 These findings suggest that doses at the higher end of the approved dose range (120–160 mg/d) are more effective. Methods: Data from 3 flexible-dose clinical studies of ziprasidone vs olanzapine (n = 136 ziprasidone, 133 olanzapine; duration 6 weeks), ziprasidone vs risperidone (n = 149 ziprasidone, 147 risperidone; duration 8 weeks), and ziprasidone vs aripiprazole (n = 125 ziprasidone, 128 aripiprazole; duration 4 weeks) in patients with acute schizophrenia or schizoaffective disorder were studied. The relationship between efficacy and dose was assessed by comparing drug dose levels and changes in PANSS or BPRSd scores of patients in the last observation carried forward (LOCF) group vs those completing the studies. Results: AT LOCF, subjects taking ziprasidone 130 mg/d showed a –19.0 change in PANSS compared with olanzapine 11.3 mg/d, –19.4. The doses of completers at week 6 were ziprasidone 139 mg/d (n=77), PANSS change –30.3 and

olanzapine 13 mg/d (n=89), PANSS change –28.0. In the 8-week study, doses of ziprasidone and risperidone at LOCF were 114. mg/d (PANSS change –19.2) and 7.4 mg/d (PANSS change –25.7). For completers, doses of ziprasidone (n=95) and risperidone (n=107) at 8 weeks were 129 mg/d (PANSS change –29.7) and 8.1 mg/d (PANSS change –32.4). In the 4-week study, doses of ziprasidone and aripiprazole at LOCF were 140 mg/d (BPRSd change –12.0) and 18.8 mg/d (PANSS change –13.9). For completers, doses of ziprasidone (n=86) and aripiprazole (n = 90) at 4 weeks were 139 mg/d (BPRSd change –13.3) and 25.7 mg/d (PANSS change –15.9). Conclusions: Consistent with previous reports, higher doses of atypical antipsychotics are associated with greater efficacy. Ziprasidone shows greatest effect when given at doses of at least 140 mg/d. Supported by Pfizer Inc.

**REFERENCES:**

1. Mullins CD, Shaya FT, Zito JM, Obeidat N, Naradzay J, Harrison DJ: Effect of initial ziprasidone dose on treatment persistence in schizophrenia. Schizophr Res 2006; 83:277–284.
2. Joyce AT, Harrison DJ, Loebel AD, Carter CT, Ollendorf DA: Effect of initial ziprasidone dose on length of therapy in schizophrenia. 3Schizophr Res 2006; 83:285–292.

**NR4-027**

## EFFICACY OF QUETIAPINE IN TERMS OF 'RESOLUTION' OF SYMPTOMS OF SCHIZOPHRENIA - RESULTS OF A NON-INTERVENTIONAL NATURALISTIC STUDY CONDUCTED IN GERMAN

*Daniela Reich-Erkelenz, M.A. Department of Psychiatry and PsychotherapyUniversity of Goettingenvon-Siebold-Strasse 5, Goettingen Germany D-37075, Peter Falkai, M.D, Thomas Wobrock, M.D., Peter Klein, Dipl. Math., Jürgen Köhler, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the end of this poster presentation the participants should be able to recognise quetiapine´s potential to achieve 'resolution' of symptoms of schizophrenia and to understand the importance of the management of negative symptoms in order to achieve resolution of symptoms and ultimately disease remission in schizophrenic patients

**SUMMARY:**

Introduction:
Recently Leucht and Kane (1) highlighted the importance of translating the results of clinical trials, i.e. response, remisson, stability and relapse into clinical practice. The authors stressed the importance of considering remission of schizophrenia instead of mere response.
In contrast to other psychiatric diseases the concept of 'remission' has not been well defined in schizophrenia. Recently a consensus meeting (2) defined symptomatic remission as the absence of eight key symptoms of schizophrenia, corresponding to eight symptoms of the positive and negative syndrome scale (PANSS): P1, P2, P3, N1, N4, N6, G5, G9. 'Resolution' is a score of ? 3 on each of these items as this score is the maximum score that does not interfere with normal psychosocial functioning. In this non-interventional study (NIS) conducted in Germany, the efficacy of quetiapine in patients with acute schizophrenia was assessed by estimating the degree of resolution over a 12 week treatment period.
Methods:Psychiatrists recorded baseline characteristics including ICD-10 diagnosis, PANSS-8 subscores, Clinical Global Impression (CGI) Severity of illness score. At 2, 4, 8 and 12 weeks of treatment with quetiapine, PANSS-8, CGI, physician and patient assessment of efficacy and tolerability were recorded. Adverse events were assessed at every visit. Associations between PANSS-8 single item scores at baseline and 'resolution' at final visit were calculated by using logistic regression.
Results:1058 patients with acute schizophrenia were included in this NIS. 165 patients had to be excluded from analysis due to incomplete or non plausible data. 35 patients discontinued the NIS prior to visit 5. Therefore 200 patients (18.9%) were treated as drop-outs. In this presentation only data of those 693 patients with all items of PANSS-8 completed at baseline and at visit 5 and having at least one PANSS-8 item ? 5 are considered. Resolution increased over time; after 12 weeks

**REFERENCES:**

1. Leucht S and Kane JM: Measurement of Response, Remis son, Stability, and Relapse in Schizophrenia: J Clin Psychia try 2006; 67: 1813-1814
2. Andreasen N , Carpenter WT, Kane JM et al.: Remission in Schizophrenia: Proposed Criteria and Rationale for Consen sus. Am J Psychiatry 2005;162: 441- 449

**NR4-028**

## COMPARISON OF REMISSION RATES AND TOLERABILITY IN EARLY EPISODE SCHIZOPHRENIA PATIENTS RECEIVING ARIPIPRAZOLE OR HALOPERIDOL (STUDIES 98-217/98-304)

*David Crandall, Ph.D. 777 Scudders Mill Rd, Plainsboro, NJ 08536, Sheila Assuncao-Talbott, M.D., Ph.D, James M Eudicone, M.S., Andrei Pikalov, M.D., Ph.D., Robert D McQuade, Ph.D., John M Kane, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to discuss the concept and assessment of symptomatic remission in schizophrenia as well as discuss the similarities and differences between remission rates in early episode schizophrenia patients receiving either aripiprazole or haloperidol.

**SUMMARY:**

Objective: Compare the remission rates in early diagnosed schizophrenia patients receiving either aripiprazole or haloperidol. Methods: Pooled data from two 52-week, randomized, double-blind, multicenter, comparative trials of aripiprazole and haloperidol in acutely ill patients with schizophrenia were analyzed. Symptomatic remission was calculated according to Remission in Schizophrenia Working Group (RSWG) criteria in early episode schizophrenia patients (early episode defined as patients 40 years of age or younger with duration of illness <=60 months). Results: Remission rates were significantly higher for early episode patients treated with aripiprazole compared with haloperidol (38% vs. 22%, respectively; p=0.003). Aripiprazole-treated patients achieved remission in a shorter time than haloperidol-treated patients, however this difference was not statistically significant between the two groups (log rank p=0.1, Hazard Ratio=1.4, 95%CI 0.9-2.1). Regardless of treatment arm,

remitters received significantly lower global clinical ratings than nonremitters ($p<0.0001$ for both treatments). Aripiprazole was associated with a significantly lower rate of discontinuations due to adverse events (AEs) than haloperidol (10.6% vs. 29.3%, respectively; $p<0.001$) as well as lower concomitant medication use for extrapyramidal symptoms (26% vs. 60%, respectively; $p<0.0001$). Conclusion: Acutely ill early episode schizophrenia patients treated with aripiprazole demonstrated a significantly higher rate of symptomatic remission compared with haloperidol-treated patients based on RSWG criteria. Aripiprazole also seemed to be better tolerated as shown by its lower discontinuation rates due to AEs and lower use of anticholinergics. Although more data are warranted, this preliminary post hoc analysis illustrates efficacy and tolerability of aripiprazole in early episode schizophrenia patients. Supported by Bristol-Myers Squibb and Otsuka.

**REFERENCES:**

1. Lieberman JA, Perkins DO, Jarskog LF: Neuroprotection: a therapeutic strategy to prevent deterioration associated with schizophrenia. CNS Spectr 2007;12(3 Suppl 4):1-13.
2. Waytt RJ: Early intervention for schizophrenia: can the course of the illness be altered? Biol Psychiatry 1995;38:1-3.

**NR4-029**

**PALIPERIDONE PALMITATE IN PREVENTION OF SYMPTOM RECURRENCE IN PATIENTS WITH SCHIZOPHRENIA: A RANDOMIZED, DOUBLE-BLIND, PLACEBO-CONTROLLED STUDY**

*David Hough, 1125 Trenton-Harbouton Road, Titusville, NJ 08560, Srihari Gopal, M.D., Ujjwala Vijapurkar, Ph.D., Pilar Lim, Ph.D, Margarita Morozova, M.D., Ph.D, Mariëlle Eerdekens, M.D., M.B.A.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to describe the effect of the new injectable antipsychotic, paliperidone palmitate, compared with placebo on preventing symptom recurrence in patients with schizophrenia, as well as describe dosing and tolerability.

**SUMMARY:**

Objective: Schizophrenia is a chronic disease characterized by frequent recurrence of psychotic symptoms (1) and a subsequent deterioration of functioning (2). We assessed efficacy and tolerability of an investigational, injectable antipsychotic, paliperidone palmitate (PP), in preventing symptom recurrence in adults with schizophrenia. Methods: Eligible patients with PANSS total scores <120 were transitioned from prior treatment to gluteal injections of PP during a 9-week (wk) open-label flexible-dose phase. The first 2 injections of 50 mg eq. were given 1 wk apart. Subsequent injections, which could be adjusted (25, 50, or 100mg eq.), occurred every 4 weeks. If total PANSS was <75 at wk 9, patients continued into the 24-wk maintenance phase. Patients clinically stable on a fixed dose for the last 12 wks were randomized 1:1 to continue on their PP dose or start placebo (pbo) in the double-blind phase of variable duration. Results: The preplanned interim analysis at 68 recurrence events included 312 patients: mean age=40 yrs, 55% men, 66% white, baseline PANSS (SD): pbo, 69.5 (16.89); PP, 69.3 (17.39). Time-to-recurrence (primary measure) favored PP ($p<0.0001$, log-rank test): median time-to-recurrence was 163 days for pbo and not estimable for PP. Based on the significant interim efficacy results, the study was stopped early. Treatment-emergent AE rates during double-blind phase (final analysis: N=408) were: 38% PP, 44% pbo. Weight increase and gastroenteritis (viral) occurred more frequently with PP difference of $^{3}$2% vs. pbo). Local injection-site tolerability was good. For PP treated patients (n=205), the investigators reported injection-site pain as usually absent (81%) or mild (18%) at double-blind endpoint, similar to pbo-treatment. Conclusion: Paliperidone palmitate treatment significantly delayed time-to-recurrence and was generally well-tolerated, both locally and systemically, in patients with schizophrenia. Study funded by J&J PRD.

**REFERENCES:**

1. Andreasen NC: Symptoms, signs, and diagnosis of schizo phrenia. Lancet 1995; 346:477-481.
2. Wyatt RJ: Neuroleptics and the natural course of schizophre nia. Schizophr Bull 1991; 17:325-351.

**NR4-030**

**WITHDRAWN**

**NR4-031**

## METABOLIC SYNDROME IN CHRONIC SCHIZOPHRENIC INPATIENTS: PREVALENCE AND RELATED FACTORS IN A SPANISH SAMPLE

*Eduardo E Paz, M.D. Hospital Psiquiátrico de Conxo Plaza Martin Herrera 2, Santiago de Compostela, Spain 15706, Ramón Ramos-Ríos, M.D., Manuel Arrojo-Romero, M.D., Rosario Codesido-Barcala, M.D., Fernando Carballal-Calvo, M.D., Alicia Crespí-Armenteros, M.D., Ramón Fernández- Pérez, M.D., José Luís Bouzón-Barreiro, M.D., Jorge Seoane-Prado, M.D., Ignacio Tortajada-Bonaselt, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the risk of obesity, glucose intolerance and lypodystrophies in schizophrenic patients treated with antipsychotics.

**SUMMARY:**

Objectives: To determine the prevalence of metabolic syndrome (MS) and analyze related risk factors to MS in a sample of Spanish schizophrenic patients. Methods: Cross-sectional observational study among schizophrenic inpatients of a psychiatric hospital (Hospital Psiquiátrico de Conxo, Santiago de Compostela, Spain). MS was defined according to the revised National Cholesterol Educative Program-Adult Treatment Panel III definition (ATP-III, 2005) based on the presence of 3 of the following abnormalities; elevated waist circumference (male = 102 cm; female = 88 cm) for Caucasians, elevated triglycerides =150 mg/dL or receiving drug treatment, decreased high-density lipoprotein cholesterol male <40 mg/dL, female <50 mg/dL or receiving drug treatment, elevated blood pressure =130/=85 mm Hg =130/=85 mm Hg or receiving drug treatment, elevated fasting plasma glucose =100 mg/dL or receiving drug treatment. Results: We recruited 183 Caucasian patients (66,1% males) with a mean of age of 55,8 years (SD=15,2). Prevalence of MS was 45,4%. MS was associated with older age, elevated body mass index (BMI) and long duration of disease. Conclusions: The metabolic syndrome was highly prevalent among treated patients with schizophrenia. Assessment of the presence and monitoring of the associated risks of the metabolic syndrome should be part of the clinical management of patients treated with antipsychotics.

**REFERENCES:**

1. Suvisaari JM, Saarni SI, Perälä J, Suvisaari JV, Härkänen T, Lönnqvist J, Reunanen A. Metabolic syndrome among per sons with schizophrenia and other psychotic disorders in a general population survey. J Clin Psychiatry 2007; 68(7):1045-55.
2. Newcomer JW. Metabolic considerations in the use of antipsychotic medications: a review of recent evidence. J Clin Psychiatry 2007; 68 Suppl 1:20-7.

**NR4-032**

## THE DEFICIT OF NEGATIVE EMOTIONAL INFORMATION PROCESSING IN SCHIZOPHRENIA: IN ALL PATIENTS?

*Eric Constant, M.D. Cliniques Universitaires Saint-LucAvenue Hippocrate 101200 Bruxelles, Belgium Julie Lancereau, Ph.D., Benoît Gillain, M.D., Benoît Delatte, M.D., Marc Ferauge, M.D., Raymond Bruyer, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) understand the mechanism of the deficit of negative emotional information processing in schizophrenia; and 2) understand why this characteristic is present in some, but not all, forms if schizophrenia.

**SUMMARY:**

INTRODUCTION: The exact nature of impairment in the processing of emotional information in schizophrenia is still debated. It has been suggested that patients with schizophrenia show deficits in immediate processing of negative emotional information without a negative bias, as usually observed in controls, when in a combined emotional situation (Seok, 2006). This would suggest a deficit in the immediate and hierarchical processing of negative emotional information. However, some authors suggest that schizophrenic patients with negative symptoms exhibit a generalized emotion-recognition deficit while those with paranoid positive symptoms can show a deficit in the recognition of negative emotions only (Mandal, 1999). METHODS: Eighteen paranoid schizophrenic patients in remission with a low level of negative symptoms and 18 control subjects matched for gender, age and sociocultural level were exposed to 108 pairs of pictures (selected from the International Affective Picture System) with different emotions (N=negative, P=positive, n=neutral) from 6 different combinations: N/N, P/P, n/n, P/N, P/n and N/n. The subjects responded by clicking on a right or left button in response to a negative or positive feeling toward the stimuli. RESULTS: A Group (2: Schizophrenia, Controls) x Combination (6: N/N, P/P, n/n, P/N, P/n and N/n) with repeated measures on the last factor conducted on the number of negative feeling revealed no significant main effects for Group ($F < 1$ ; NS) and a significant main effect for Combination ($F(5,85) = 209$ ; $p < .0001$); the responses to N/N, P/N and N/n combinations are negatively biased while the responses to n/n, P/P and P/n ones are positively biased. There is no interaction (Group x Combination: $F < 1$; NS). CONCLUSION: The deficit in the immediate and hierarchical processing of negative emotional information might not be present in all schizophrenic patients, particularly those with paranoid features in remission.

**REFERENCES:**

1. Seok JH, An SK, Lee E, Lee HS, Lee YJ, Jeon JH, Kim JJ :

Behavioral evidence of blunted and inappropriate affective responses in schizophrenia: Lack of a “negativity bias”. Psy chiatry research 2006;142:53-66.
2. Mandal MK, Jain A, Haque-Nizamie S, Weiss U, Schneider F : Generality and specificity of emotion-recognition deficit in schizophrenic patients with positive and negative symp toms. Psychiatry Research 1999;87:39-46.

**NR4-033**

## EARLY RESPONSE TO INTRAMUSCULAR ZIPRASIDONE AS A PREDICTOR OF END POINT RESPONSE TO ORAL ZIPRASIDONE

*Francine Mandel, Ph.D. 235 East 42nd Street, New York, NY 10017, Michael H. Allen, M.D., Ilise Lombardo, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to demonstrate an understanding of the relationship between a response to intramuscular ziprasidone or haloperidol and the likelihood of a later response to oral ziprasidone or haloperidol.

**SUMMARY:**

Background: Patients often receive intramuscular (IM) medication for agitation and are then transitioned to oral medication. It has been assumed that patients responding to a given IM treatment should continue on the same medication orally but this has not been demonstrated. Methods: In a 6-week, multicenter, single-blind, randomized, flexible-dose study, IM/oral ziprasidone was compared with IM/oral haloperidol in patients with schizophrenia or schizoaffective disorder.1,2 Subjects received either IM ziprasidone = 40 mg/d followed by oral ziprasidone 80–160 mg/d (n = 429) or IM haloperidol =10 mg/d followed by oral haloperidol 5–20 mg/d (n = 138); IM period was 2 days maximum. We calculated the percentage of IM responders (= 20% change in BPRS score from baseline to last IM) who were responders in the oral phase (= 30% change in BPRS score from baseline to last observation in the oral phase). Logistic regression was used to determine factors contributing to the prediction of oral phase response. Results: In total, 235 of 429 (54.8%) ziprasidone subjects and 77 of 138 (55.8%) haloperidol subjects responded to treatment at 6 weeks. 90 ziprasidone subjects (20.9%) were responders to IM treatment. Of these, 65 (72.2%) were oral responders at last observation (sensitivity, 27.7%; specificity, 87.1%). 17 haloperidol subjects (12.3%) were responders to IM treatment and 12 (70.6%) were responders at last observation (sensitivity, 15.6%; specificity, 91.8%). While there was no significant difference between the treatment groups ($p = 0.55$), there was a significant difference between the IM responders and nonresponders ($p < 0.0001$) with regard to prediction of oral phase response. Conclusion: A response to IM ziprasidone or haloperidol treatment is a significant predictor of a response to oral treatment. These findings support the clinical practice of continuing patients on the oral medication that was received in the IM form. This study was supported by Pfizer.

**REFERENCES:**

1. Brook S. A pilot study of intramuscular ziprasidone in the short-term treatment of patients with acute exacerbation of schizophrenia. Hum Psychopharmacol 2000; 15:521–524.
2. Preskorn SH. Pharmacokinetics and therapeutics of acute intramuscular ziprasidone. Clin Pharmacokinet 2005; 44:1117–1133.

**NR4-034**

## FUNCTIONAL PERFORMANCE IN PATIENTS WITH PSYCHOSIS MEASURED BY UPSA-B IN RELATION TO THEIR REMISSION STATUS

*Fredrik Hjärthag, M.S.C. Karlstad University Psychology DepartmentS-651 88 Karlstad, Sweden, Lars Helldin, M.D., Anna-Karin Olsson, B.S.C., Torsten Norlander, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize UPSA-B as a way of measuring functional performance in outpatients with psychosis diagnosis. The participant should also know about the two dimensions of the UPSA-B as well as how symptom remission status influences the outcome in these dimensions in our study.

**SUMMARY:**

Introduction: Both remission (1) and cognitive abilities (2) seem to be of importance for functional outcome of outpatients with psychosis. In daily life many cognitive and functional abilities are closely linked together, and a way of testing their real performance is by using the UPSA-B. Our hypothesis is that outpatients in remission differ from outpatients not in remission regarding their results on UPSA-B. Methods: In this study 49 patients with psychotic disorders were assessed with the UPSA-B test by an occupational therapist, and a nurse used the PANSS scale to extract the status of remission (26 patients were in remission and 23 were not). UPSA-B measures two main dimensions: economic skills and communication skills. Results: Mann-Whitney tests were conducted with remission status as the independent variable and UPSA-B economic sum, UPSA-B communication sum and UPSA-B total sum as dependent variables. Results show that there are significant differences in both the economic and the total scores, where patients in remission have the best results. In UPSA-B communication, patients in remission also have the best results, but the difference is not significant. Conclusions: Patients in remission have a better functional performance compared to patients not in remission. Discussion: One advantage of using the UPSA-B compared to other assessment tools for measuring functional outcome is that it´s not influenced by environmental factors. The result of the performance is an expression of the ability to solve issues related to everyday life, and not an expression of, for example, available jobs and sheltered living. However, in both the remission and non remission groups there is a substantial overlap in UPSA-B scores, which indicates that remission status and functional ability are two different dimensions rather than the UPSA-B score being secondary to remission status.
Supported by unrestricted grants from Janssen-Cilag AB, Sollentuna, Sweden.

**REFERENCES:**

1. Helldin L, Kane JM, Karilampi U, Norlander T, Archer T: Re mission in Prognosis of Functional Outcome: A New Dimen sion in the Treatment of Patients with Psychotic Disorder. Schizophrenia Research 2007; 93: 160-168.
2. Helldin L, Kane JM, Karilampi U, Norlander T, Archer T: Remission and Cognitive Ability in a Cohort of Patients with Schizophrenia. Journal of Psychiatric Research 2006; 40: 738-745.

**NR4-035**

## COST-EFFECTIVENESS OF ORALLY FISSOLVING OLANZAPINE TABLETS IN THE TREATMENT OF SCHIZOPHRENIA IN THE USA

*Haya Ascher-Svanum, Ph.D. Lilly Corporate Center, Indianapolis, IN 46285, Nicolas M. Furiak, M.S., Robert W Klein, M.S., Lee J. Smolen, B.S.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant will: 1) recognize the potential adherence advantage of using antipsychotics in orally dissolving tablets over standard oral tablets in the usual care of schizophrenia patients; and 2) become familiar with a cost-effectiveness model that examines the potential clinical and economic ramifications of improved adherence in the usual treatment of schizophrenia patients in the United States.

**SUMMARY:**

Objective: To assess the cost-effectiveness of olanzapine orally dissolving tablets (ODT) and olanzapine standard oral tablets (SOT) during the usual treatment of schizophrenia patients from a U.S. healthcare perspective. The model also compared olanzapine ODT with other antipsychotics in SOT and ODT formulations. Methods: Published medical literature, unpublished data, and a clinical expert panel were used to populate a 1-year micro-simulation model comparing olanzapine ODT with olanzapine SOT, and with other antipsychotics in SOT (risperidone, quetiapine, ziprasidone, aripiprazole and perphenazine) and ODT formulations (risperidone and aripiprazole). The model captures clinical and cost parameters including adherence levels, treatment discontinuation by reason, relapse with and without inpatient hospitalization, quality adjusted life years (QALYs), treatment-emergent adverse events, healthcare resource utilization and associated costs. Key results were annual direct cost per treatment and incremental cost-effectiveness values per one inpatient relapse avoided and per one QALY gained. Results: Based on model projections, olanzapine ODT therapy was slightly more costly ($9,674 vs. $9,602) but more effective in terms of a lower hospitalization rate (14% vs. 16%) and better QALY (0.78 vs. 0.75) than olanzapine SOT therapy, with favorable incremental cost per inpatient relapse avoided ($2,157) and QALY gained ($2,454). Olanzapine ODT was more cost-effective than olanzapine SOT and also more cost-effective compared to other comparators. Conclusions: The utilization of olanzapine ODT for the treatment of schizophrenia is predicted in this model to be more cost-effective than olanzapine in standard oral tablets and more cost-effective than other comparators in either orally dissolving tablet or standard tablet formulations. Funding provided by Eli Lilly and Company.

**REFERENCES:**

1. Kinon BJ, Hill AL, Liu H, Kollack-Walker S. Olanzapine orally disintegrating tablets in the treatment of acutely ill noncompliant patients with schizophrenia. Int J Neuropsycho pharmacol. 2003;6(2):97-102.
2. Czekalla J, Linder P, Wagner T, et al. Improvement of suicidal ideation and medication acceptance under treatment with orally disintegrating and coated olanzapine tablets – results from a prospective multi-center study of acutely ill psychiat ric inpatients. 3.Schizophrenia Research 2004;67 (Sup pl1):214.

**NR4-036**

## EFFICACY AND SAFETY OF THREE DOSES OF PALIPERIDONE PALMITATE, AN INVESTIGATIONAL LONG-ACTING INJECTABLE ANTIPSYCHOTIC, IN SCHIZOPHRENIA

*Henry A Nasrallah, M.D.231 Albert Sabin WayPO Box 670559Department of Psychiatry, Cincinnati, OH 45267-0559, Srihari Gopal, M.D., Jorge A. Quiroz,M.D., Cristiana Gassmann-Mayer, Pilar Lim Ph.D., Mariëlle Eerdekens, M.D., M.B.A., David Hough, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to describe the effect of the 3 fixed doses of the long-acting injectable investigational antipsychotic, paliperidone palmitate, compared with placebo, on measures of symptom control in patients with schizophrenia, as well as describe its safety and tolerability.

**SUMMARY:**

Background: Long-acting injectable antipsychotic formulations can improve treatment adherence and simplify the medication regime for patient and caregivers (1). Paliperidone palmitate (PP) is an investigational long-acting injectable formulation of the recently approved antipsychotic paliperidone for treatment of schizophrenia (2-4). This Phase III trial was designed to assess the efficacy, safety, and tolerability of paliperidone palmitate in adults with symptomatic schizophrenia. Methods: Consenting eligible patients were randomized (1:1:1:1) to paliperidone palmitate 25, 50, or 100mg eq. or placebo (pbo) in this multicenter, 13-wk trial. During the double-blind phase, a total of 4 gluteal injections were given: days 1 and 8, and then every 4 weeks (days 36, 64). The last study assessment was on day 92. Results: The ITT population (N=514; mean age = 41 years) was 67% men and 67% white. Mean baseline PANSS total score was 91 (SD: 12.0; range 70?120). All 3 PP groups showed significant (p?0.017) improvement vs. pbo in mean change in total PANSS score from baseline to endpoint (primary variable). More pbo-treated patients (35%) discontinued due to lack of efficacy vs. PP: 24% (25 mg eq; 50 mg eq); and 16% (100 mg eq). Treatment-emergent adverse events (AE) that occurred more frequently in PP treated patients (?3% difference between any active group and pbo) were agitation, somnolence, weight increase, dizziness, and dry mouth. Discontinuations due to AE occurred in 6% of pbo and 4% of overall PP groups. Serious AEs occurred in 18% of pbo and 12% of overall PP groups. Local injection-site tolerability was good: investigators reported injection-site pain during the study as absent (86-100%), mild (8-12%), or moderate/severe (0-2%) for PP-treated patients. Conclusion: All three doses of long-acting injectable paliperidone palmitate, vs. pbo, were efficacious, and well tolerated, both locally and systemically, in adults with symptomatic schizophrenia.

**REFERENCES:**

1. Kane JM: Review of treatments that can ameliorate nonadher ence in patients with schizophrenia. J Clin Psychiatry 2006; 67Suppl 5:9-14.
2. Davidson M, Emsley R, Kramer M, Ford L, Pan G, Lim P, Eerdekens M: Efficacy, safety and early response of paliperi

done extended-release tablets (paliperidone ER): Results of a 6-week, randomized, placebo-controlled study. Schizophr Res 2007; 93:117-130.

**NR4-037**

**WITHDRAWN**

**NR4-038**

## COGNITIVE EFFECTS OF GALANTAMINE IN SCHIZOPHRENIC PATIENTS WITH ATYPICAL ANTIPSYCHOTICS.

*Kang Joon Lee, M.D. 2240, Daewha-dong, Ilsan-gu, Gyeonggi-do, Goyang-si, South Korea 411-706,*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to learn about cognitive effects of 'positive allosteric modulation of nicotinic acetylcholine receptors' in schizophrenia. Galantamine would be expected to improve the efficiency of transduction of acetylcholine neurotransmitter at the alpha7 nicotinic receptor.

**SUMMARY:**

Objectives:Cognitive deficits have been consistently replicated in patients with schizophrenia.There is preliminary evidence that galantamine can improve cognitive functions and negative symptoms in schizophrenia.Positive allosteric modulation of nicotinic acetylcholine receptors makes galantamine particularly effective for adjuvant treatment of schizophrenia.The primary purpose of this study was to evaluate the efficacy of galantamine in schizophrenia for the treatment of cognitive impairments.
Methods:22 subjects with schizophrenia(according to DSM-IV) were included in Ilsanpaik hospital.The patients had been medicated on atypical antipsychotics. The starting dose of galantamine was 8mg daily, with the daily dose increasing at 2-week intervals to 16mg.The patients was assessed with computerized neurocognitive function tests of digit span,continuous performance test,finger tapping test.And MMSE and Scale for the Assessment of Negative Symptoms(SANS) were evaluated at baseline and at 8 week of galantamine treatment.
Results:The average age of the 22 subjects was 42.5+/-3.5 years.The mean digit span score was 4.2+/-0.9(forward),3.2+/-0.8(backward) at baseline and 4.4+/-1.0(forward), 3.3+/-0.9(backward) after therapy ($p>0.05$).The mean finger tapping test score was 33.2+/-8.3(right),30.4+/-7.9(left) at baseline and 34.3+/-9.0(right),31.3+/-8.2(left) after therapy($p>0.05$).The MMSE score was 22.3+/-3.4 at baseline and 23.0+/-3.7 after therapy($p>0.05$).There was no significant in working memory, motor speed and MMSE.But, there was significant improvement in continuous performance test of computerized neurocognitive function test and SANS($p<0.05$).
Conclusions:These results suggest that galantamine has selective effectiveness for aspects of attention and well tolerated in schizophrenic patients. Positive allosteric modulatory properties may have contributed to the observed improvement in negative symptoms in schizophrenic patients.

**REFERENCES:**

1. Schubert MH, Young KA, Hicks PB: Galantamine improves cognition in schizophrenic patients stabilized on risperidone. Biol psychiatry 2006;60(6):530-533.
2. Sharma T, Reed C, Aasen I, Kumari V. Cognitive effects of adjuvant 24-week rivastigmine treatment to antipsychotics in schizophrenia: a randomized, placebo-controlled, double-blind investigation. Schizophr Res 2006;85(1-3):73-83.

**NR4-039**

## ARIPIPRAZOLE IN THE TREATMENT OF SCHIZOAFFECTIVE DISORDER PATIENTS: A POOLED ANALYSIS FROM TWO RANDOMIZED, DOUBLE-BLIND, PLACEBO-CONTROLLED TRIALS

*Ira Glick, M.D. Departments of Psychiatry and Behavioral Sciences, and Psychopharmacology, Stanford University School of Medicine, 300 Pasteur Drive, Stanford, CA 94305, Raymond Mankoski, M.D., Ph.D., James M Eudicone, M.S., Quynh-Van Tran, Pharm.D., Andrei Pikalov, M.D., Ph.D., Sheila Assunção-Talbott, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to differentiate the clinical characteristics and treatment approaches of schizoaffective disorder when compared to schizophrenia. Participants will also be able to understand the efficacy, safety and tolerability of aripiprazole in this population with both psychotic and affective symptoms.

**SUMMARY:**

Objective: Evaluate the efficacy, safety, and tolerability of aripiprazole in patients with schizoaffective disorder. Methods: Post-hoc analysis was performed on a sub-sample of patients with DSM-IV diagnosed schizoaffective disorder who participated in two 4-week, multicenter, double-blind studies comparing aripiprazole (n=117) with placebo (n=54). Mixed model repeated measures (MMRM) was used to analyze the mean change from baseline in the Positive and Negative Syndrome Scale (PANSS) Total score and PANSS Positive, Negative, and General Psychopathology (GP) subscale scores. Effects sizes (ES) were also calculated. Safety and tolerability evaluations included adverse event profiles; assessment of extrapyramidal symptoms using the Simpson Angus Scale (SAS), Barnes Akathisia Rating Scale (BARS), and Abnormal Involuntary Movement Scale (AIMS); metabolic parameters; and serum prolactin levels. Results: More patients treated with aripiprazole completed the studies than those treated with placebo (58% vs. 43%). At Week 4, aripiprazole demonstrated statistically significant decreases compared to placebo on PANSS Total (–15.9 vs. –3.4, $p<0.05$; ES = 0.56), Positive (–4.6 vs. –1.0, $p<0.05$; ES = 0.56), and GP (–16.0 vs. –3.5, $p<0.05$; ES = 0.55) scores but not on the PANSS Negative subscale score (-3.7 vs. -1.2, p=NS; ES = 0.41). Discontinuation due to adverse events was lower for aripiprazole (11%) than placebo (24%). There were no statistically significant differences at endpoint between groups in the mean change from baseline in weight, glucose, total cholesterol, or on SAS, BARS, or AIMS scores. There was a statistically significant decrease in prolactin in patients treated with aripiprazole compared to placebo (-5.6 vs. -1.3, $p<0.0001$). Conclusion: Aripirazole is efficacious and well-tolerated in patients with schizoaffective disorder.

**REFERENCES:**

1. Benabarre A, Vieta E, Colom F, Martinez-Aran A, Reinares M, Gasto C: Bipolar disorder, schizoaffective disorder and schizophrenia: epidemiologic, clinical and prognostic differ ences. Eur Psychiatry 2001;16:167-172.
2. McElroy S, Keck PJ, Strakowski S: An overview of the treat ment of schizoaffective disorder. J Clin Psychiatry 1999;60:16-21.

**NR4-040**

## PATTERNS OF RESPONSE WITH PALIPERIDONE ER AND PLACEBO IN PATIENTS WITH SCHIZOPHRENIA

*Ira Glick, Ph.D. 401 Quarry Road, #2122, Stanford, CA 94305, Cynthia Bossie, Ph.D., Carla Canuso, M.D., Young Zhu, Ph.D., Hedy Chung, Pharm.D., Larry Alphs, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be aware of the methodology proposed by Quitkin et al and the characterization of the patterns of response to an atypical antipsychotic and placebo in patients with schizophrenia.

**SUMMARY:**

Introduction: The placebo effect is a widely recognized but poorly understood phenomenon confounding the study of treatment options in schizophrenia. This post-hoc analysis tested the hypothesis that placebo response in schizophrenia is early but nonpersistent, while response to paliperidone extended-release (ER) is persistent. Methods: Data were pooled from three 6-week, double-blind, placebo-controlled trials of paliperidone ER in adults with schizophrenia. Methodology proposed by Quitkin et al examined patterns of response (>=30% Positive and Negative Syndrome Scale [PANSS] total score reduction from baseline) in subjects receiving paliperidone ER (3-12 mg/d) or placebo. Timepoints were day 4 and weeks 1-6 (or endpoint). Response patterns were categorized by persistence (persistent=response at every timepoint from first response for >=2 timepoints; nonpersistent=other patterns) and onset (early=first response at day 4 to week 2; delayed=week 3 to endpoint). Results: Persistent response was achieved by 39.8% of paliperidone ER and 20.2% of placebo subjects ($P<0.001$). Persistent response was early in 23.5% receiving paliperidone ER and 14.2% receiving placebo, but delayed in 16.3% and 6.0%, respectively ($P<0.001$ for both). Nonpersistent response was observed in 16.9% of paliperidone ER and 18.1% of placebo subjects (P=0.631). Nonpersistent response was early in 12.7% receiving paliperidone ER and 14.2% receiving placebo, but delayed in 4.3% and 3.9%, respectively. There was no response in 37.1% of paliperidone ER and 58.6% of placebo subjects ($P<0.001$). First response at last timepoint could not be assessed for persistence (6.1% paliperidone ER and 3.0% placebo subjects; P=0.032). No apparent qualitative differences in response were seen with paliperidone ER or placebo as determined by PANSS scores. Conclusion: Persistent response (early and late) is more likely to occur with paliperidone ER than placebo. Supported by Ortho-McNeil Janssen Scientific Affairs, L.L.C.

**REFERENCES:**

1. Quitkin FM, Rabkin JG, Ross D, Stewart JW: Identification of true drug response to antidepressants. Use of pattern analy sis. Arch Gen Psychiatry 1984; 41:782-786.
2. Agid O, Kapur S, Arenovich T, Zipursky RB: Delayed-on set hypothesis of antipsychotic action: a hypothesis tested and rejected. Arch Gen Psychiatry 2003; 60:1228-1235.

**NR4-041**

## D-SERINE SERUM LEVELS IN SCHIZOPHRENIA: RELATION TO THE PSYCHOPATHOLOGY

*Jaromir Hons, M.D. Department of Psychiatry University HospitalHradec Kralove 500 11 Czech Republic, Jan Libiger, M.D., Ph.D., Rastislav Zirko, Mgr., Martina Ulrychova, Pharm.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) understand the NMDA receptor activation by excitatory amino acids; 2) recognize the role of glutamatergic neurotransmisson dysfunction in pathophysiology of schizophrenia; 3) summarize the results of clinical studies focused on the therapeutic effects of D-serine in schizophrenia; and 4) discuss the relevance of laboratory and clinical different subtypes identification for treatment response prediction in schizophrenia.

**SUMMARY:**

Introduction: D-serine acts as an endogenous co-agonist at the glycine modulatory site of the NMDA receptor. Significantly decreased D-serine serum levels were reported in the clinical studies in patients with schizophrenia in comparison to healthy control subjects. D-serine improved positive and negative symptoms in patients with schizophrenia treated with antipsychotics. We hypothesized that the serum level of D-serine might be associated with specific characteristics of psychopathology in schizophrenia. Methods: We enrolled fifty patients with schizophrenia into the study. Positive and Negative Syndrom Scale (PANSS) and The Scale for the Assessment of Negative Symptoms (SANS) were used to assess the symptoms of schizophrenia. D-serine serum levels were measured by High Performance Liquid Chromatography. Results: Lower average serum level of D-serine was found in the group of women (n=17, 2.78 ± 1.33 umol/l) as compared to the group of men (n=33, 3.56 ± 1.57 umol/l). This difference was not statistically significant (p>0.05; Two-Sample Test). D-serine serum levels were not associated with the PANSS and the SANS total and subscales scores in the population of fifty patients. We demonstrated only mild insignificant linear association of the PANSS score with D-serine serum level (r=0.20; Spearman Correlation Coefficient) in the group of men. The mild insignificant inverse correlation was found in the group of women between the total PANSS (r=-0.35) or SANS score (r=-0.30) and D-serine serum level. Conclusion: We assumed that various biochemical and clinical profiles could lead to identification of specific subtypes of schizophrenia. However, we did not find any significant association between serum D-serine and clinical symptoms in this study. D-serine serum levels had a strong trend to be lower among female patients with schizophrenia as compared to men. The role of gender in the glutamatergic dysfunction associated with schizophrenia deserves further attention.

**REFERENCES:**

1. Hashimoto K, Fukushima T, Shimizu E, Komatsu N, Watanabe H, Shinoda N, Nakazato M, Kumakiri C, Okada S, Hasegawa H, Imai K, Iyo M: Decreased serum levels of D-serine in patients with schizophrenia: evidence in support of the N-methyl-D-aspartate receptor hypofunction hypothe sis of schizophrenia. Arch Gen Psychiatry 2003; 60(6):572-576.
2. Tsai G, Yang P, Chung L, Lange N, Coyle JT: D-serine Added to Antipsychotics for the Treatment of Schizophrenia. Biol Psychiatry 1998; 44:1081-1089.

**NR4-042**

## CHANGES IN MENTAL HEALTH RESOURCE USE AFTER INITIATION OF PALIPERIDONE ER IN PATIENTS WITH SCHIZOPHRENIA

*Joan Amatniek, M.D. 1125 Trenton-Harbourton Road, Titusville, NJ 08560, Philip G. Janicak, M.D., Jasmanda H. Wu, Ph.D., M.P.H., Joan Amatniek, M.D., Lian Mao, Ph.D., Jacqueline Pesa, Ph.D., M.P.H., Jayme Trott, Pharm.D., Chris Kozma, Ph.D., Carla M. Canuso, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participants should learn that overall mental health resource use decreased in patients treated with paliperidone extended release (paliperidon ER) tablets, compared to their pretreatment use.

**SUMMARY:**

INTRODUCTION: Schizophrenia care produces a substantial economic burden. Interventions that reduce the need for resource use are of interest to clinicians and payers.
OBJECTIVE: To assess changes in mental health resource use following initiation of paliperidone extended-release tablets (paliperidone ER) in the three double-blind (DB) trials and their open-label extensions (OLE).
METHODS: A retrospective chart review generated data on resource use during the 12 months before and after the DB trials. Average number of inpatient and ambulatory care services in the pre- and post-periods was calculated, including use of bootstrap resampling methods to assess statistical significance of differences. Total person years were calculated for the pre- and post-periods to account for different lengths of observation. Separate analyses were also performed by country.
RESULTS: Patients (n=79) were from the United States (38.0%), Canada (19.0%) and Malaysia (43.0%). Mean (±SD) patient age was 38.0 (±10.4) years; and the majority were male (73.4%). Most (70.9%) patients received prior treatment with antipsychotics. During the OLE, the mean paliperidone ER treatment duration (±SD) was 226.4 (±142.3) days, and the mean dose was 11.5 (±2.2) mg. Overall, paliperidone ER patients used fewer resources after drug initiation (mean reduction per person year: days hospitalized =12.1, p=0.002; emergency room visits =0.3, p=0.038; psychiatric-related office visits =2.3, p<0.001; psychotherapy sessions =0.4, p=0.004). Subgroup analyses revealed that the greatest reduction in most resource categories was found in the US sites (e.g. mean reduction in days hospitalized per person year =19.7 in the US, 6.3 in Canada, and 7.1 in Malaysia).
CONCLUSION: In this post-hoc analysis, paliperidone ER was associated with a significant reduction in mental health resource use. Prospective studies are needed to confirm the findings.
The study was sponsored by Ortho-McNeil Janssen Scientific Affairs, LLC.

**REFERENCES:**

1. Kane J, Canas F, Kramer M, et al: Treatment of schizophrenia with paliperidone extended-release tablets: A 6-week placebo-controlled trial. Schizophrenia Research 2007; 90:147-161
2. Davidson M, Emsley R, Kramer M, et al: Efficacy, safety and early response of paliperidone extended-release tablets (pali peridone ER): Results of a 6-week, randomized, placebo-con trolled study. Schizophrenia Research 2007; 93:117–130

**NR4-043**

**PREDICTING HOSPITAL ADMISSION AND DISCHARGE WITH SYMPTOM AND FUNCTION SCORES IN PATIENTS WITH SCHIZOPHRENIA**

*Joan Amatniek, M.D. 1125 Trenton-Harbourton Road, Titusville, NJ 08560, Christopher Kozma, Ph.D., Riad Dirani, Ph.D., Lian Mao, Ph.D, Carla Canuso, M.D., Peter Weiden, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to discuss the relationship that symptoms and function have on hospital admission or discharge.

**SUMMARY:**

Introduction: This post-hoc analysis evaluated relationships between hospital admission and discharge, and changes in symptoms and functioning in patients with schizophrenia. Methods: Data were from 3, 52-week, open-label extensions of the double-blind pivotal trials of paliperidone extended-release (ER). Symptoms and patient function were measured every 4 weeks using the Positive and Negative Syndrome Scale (PANSS) and the Personal and Social Performance (PSP) scale. Open-label, intent-to-treat patients were included if they had at least one postbaseline PANSS and PSP measurement. Time until first hospitalization or discharge was evaluated using Cox regression. Independent models evaluated time-dependent measures for the PANSS (>=95, >=75-<95, <75) and PSP (>=71-100, <71->=31, <31). Covariates included age, gender, schizophrenia duration and study country. Results: Of the 1077 enrolled patients, 1028 (95.5%) met study criteria; 382 (37.2%) were hospitalized at open-label start. The hazard ratio for new hospitalization was 5.457 times greater (P< 0.0001) for patients in the PANSS >=95 group, and 2.316 times greater (P=0.0027) for patients in the >=75 to <95 group, compared to the <75 group (ie patients with least symptoms). When compared to patients with PSP >=71 to 100, the hazard ratio for hospitalization was 8.351 times greater (P=0.0001) for patients with the poorest functioning and 1.977 times greater (P=0.0295) for patients with PSP <71 to >=31. If hospitalized at baseline, the PANSS >=95 patients had a discharge hazard that was 54.5% lower than for the <75 patients (P<0.0001). The hazard ratio for discharge was 35.4% less (P= 0.0012) for the PANSS >=75 to <95 group. Other significant variables included schizophrenia duration and study country. Conclusion: Being more symptomatic or having poorer function is predictive of rehospitalization and is associated with a greater risk of not being discharged. Sponsored by Ortho-McNeil Janssen Scientific Affairs, LLC

**REFERENCES:**

1. Kane J, Canas F, Kramer M, Ford L, Gassmann-Mayer C, Lim P, Eerdekens M: Treatment of schizophrenia with pali peridone extended-release tablets: a 6-week placebo-con trolled trial. Schizophrenia Research 2007; 90(1-3):147-161
2. Kramer M, Simpson G, Maciulis V, Kushner S, Vijapurkar U, Lim P, Eerdekens M: Paliperidone extended-release tablets for prevention of symptom recurrence in patients with schizo phrenia: a randomized, double-blind, placebo-controlled study. J Clin Psychopharmacol. 2007; 27(1):6-14

**NR4-044**

**COST-UTILITY ANALYSIS OF ARIPIPRAZOLE AND HALOPERIDOL IN EARLY-EPISODE SCHIZOPHRENIA (STUDIES 31-98-217 AND 31-98-304)**

*Jay Bates, Ph.D. Bristol-Myers Squibb Company777 Scudders Mill Road, Plainsboro, NJ 08536-1615, John M Kane, M.D., Edward Kim, M.D., M.B.A., Hong J. Kan, Ph.D., Zhenchao Guo, Ph.D., Richard Whitehead, B.S.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to understand the comparative cost effectiveness of aripiprazole and haloperidol in early episode schizophrenia.

**SUMMARY:**

Introduction: The Clinical Antipsychotic Trial of Interventional Effectiveness (CATIE) study demonstrated no significant differences between SGAs and the FGA perphenazine in health utilities, although the study population was chronic (average duration of illness 14.5 years). This post-hoc analysis sought to compare the utility of the SGA aripiprazole with the FGA haloperidol in early-episode schizophrenia (EES), a subpopulation that may have different responsiveness to SGAs and FGAs. Methods: Data were pooled from two identical 52-week randomized active comparator trials (31-98-217 and 31-98-304) of aripiprazole 20–30 mg/day or haloperidol 7–10 mg/d. A subpopulation of EES patients from the efficacy sample was identified by: duration of illness <=5 years, and age at onset of illness <40 years. Utilities were derived from the Positive and Negative Syndrome Scale (PANSS) and adverse events, as described by Lenert et al. (2004), using the LOCF method. Treatment costs attributable to eight PANSS-derived health states were calculated based on Mohr et al. (2004) and converted to 2007 US dollars. Drug acquisition costs were based on wholesale list prices of the respective treatments. Results: Of 1294 patients in the efficacy sample, 362 met criteria for EES (239 aripiprazole, 123 haloperidol). Baseline patient characteristics were similar between treatment arms in the EES sample. Patients with EES on aripiprazole had significantly higher total utility scores compared with haloperidol (+10.65 QALD/year, p=0.04). Aripiprazole was associated with higher drug acquisition costs compared with haloperidol (+US$ 3,131/year), and lower non-medication treatment costs (–US$ 2,691/year). The treatment difference was $US 15,079/QALY. Conclusions: In early-episode schizophrenia, aripiprazole demonstrates superior utility compared with haloperidol, at a reasonable incremental cost. Supported by Bristol-Myers Squibb and Otsuka.

**REFERENCES:**

1. Mohr PE, Cheng CM, Claxton K et al: The heterogeneity of schizophrenia in disease states. Schizophr Res 2004;71:83-95.
2. Lenert LA, Sturley AP, Rapaport MH et al. Public p**referenc es** for health states with schizophrenia and a mapping func tion to estimate utilities from positive and negative symptom scale scores. Schizophr Res 2004;71:155-165.

**NR4-045**

**OUTCOME EVALUATION OF THE 'SOLUTIONS**

**FOR WELLNESS AND TEAM SOLUTIONS PROGRAM' IN PATIENTS WITH SEVERE MENTAL ILLNESS.**

*Jean-Pierre Lindenmayer, M.D. East 125th Street, Wards Island, NY 10035, Jean-Pierre Lindenmayer, M.D., Anzalee Khan, M.S., Debbie Wance, B.A., Rogelio Foster, M.D., Neta Maccabee, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to; 1) understandand and identify the importance of psychoeducational tools in mental illness; 2) identify psychoeducational interventions aimed at helping patients with persistent mental illness understand and manage their psychiatric and health related illnesses, and 3) recognize and list metabolic markers at risk in patients with mental illness.

**SUMMARY:**

Obesity is increasing in schizophrenics, in association with the use of atypical antipsychotics. In order to address these weight and metabolic issues, Manhattan Psychiatric Center (MPC) implemented the Solutions for Wellness Team Solutions Program (Partners for Excellence in Psychiatry, 2004), using psychoeducation in small weekly groups. Aims: 1 To assess improvements in knowledge about mental illness 2 To assess improvement in metabolic markers. METHODS: The main component is a series of workbooks taught by instructors that helps patients understand how to manage psychiatric and physical health with information on symptoms, medication, relapse, diet and health. This is a prospective study using knowledge questionnaires with 3 12-week psychoeducation group where patients progress from Level 1 to 3. Each patient receives 6 to 8 hours of weekly structured group using manualized psychoeducation materials. RESULTS: 590 patients took part in levels of the program. Average age of patients was 39.97 (6.34). Improvements were observed in knowledge on 9 of the 14 knowledge questionnaires: Smoking Cessation, Symptom Recognition/ Management, Understanding Treatment and Team, Understanding Symptoms, Anger Management, Medication Education, Career Development, Fitness and Exercise (p < .05). Patients showed a improvement in metabolic markers: glucose (mean 99.67 to 94.69, p = .05)) and weight (mean 205.4 to 198.69lbs, p = .04). Significant correlation was observed between weight and change in scores on Fitness and Exercise and between Nutrition and Health scores and glucose. CONCLUSIONS: Significant improvements in weight and glucose levels were observed pointing to an effect of psychoeducational approaches on health. This study adds to the scarce literature on development and implementation of psychoeducational interventions aimed at helping patients with mental illness understand and manage psychiatric and health illnesses.

**REFERENCES:**

1. Vreeland B, Minsky S, Yanos PT, Menza M, Gara M, Kim E, Toto AM, Allen L: Efficacy of the Team Solutions Program for Educating Patients About Illness Management and Treatment. Psychiatric Services 57:822–828, 2006.
2. Mueser KT, Bond GR, Drake, RE: Community-based treat ment of schizophrenia and other severe mental disorders: treatment. MedGenMed 3(1), 2001

**NR4-046**

**SAFETY AND TOLERABILITY OF ILOPERIDONE IN A PLACEBO- AND ZIPRASIDONE-CONTROLLED CLINICAL TRIAL FOR TREATMENT OF SCHIZOPHRENIA**

*Jennifer B Hamilton, M.S. Vanda Pharmaceuticals Inc., 9605 Medical Center Drive, Rockville, MD 20850, Leslie Citrome, M.D., M.P.H., Curt D. Wolfgang, Ph.D, Paolo Baroldi, M.D., Ph.*D

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, participants should be able to: 1) recognize the safety profile of iloperidone; and 2) discuss the safety of iloperidone relative to ziprasidone.

**SUMMARY:**

Introduction: The safety and tolerability profile of iloperidone, a mixed D2/5-HT2 antagonist being developed for the treatment of schizophrenia, was characterized in a phase III clinical trial. Methods: This was a randomized, double-blind, 28-day, multicenter, international study of iloperidone (24 mg/day), ziprasidone (160 mg/day), and placebo in adult inpatients with acute exacerbation of schizophrenia. Safety assessments included adverse events (AEs), Extrapyramidal Symptom Rating Scale (ESRS), Barnes Akathisia Scale (BAS), vital signs, electrocardiogram, and laboratory values. Results: The safety population comprised 597 patients (iloperidone=300, ziprasidone=150, placebo=147). The most common treatment-emergent AEs observed with iloperidone (show as iloperidone, ziprasidone, and placebo, respectively) were dizziness (17.0%, 13.3%, 7.5%), sedation (12.7%, 27.3%, 8.2%), and weight increase (11.3%, 4.7%, 2.0%). The most common treatment-emergent AEs observed with ziprasidone were sedation, dizziness, and extrapyramidal symptoms (3.3%, 9.3%, 2.0%). Mean weight increases at endpoint were 2.8, 1.1, and 0.5 kg for iloperidone, ziprasidone, and placebo, respectively. Iloperidone showed significant improvements at endpoint vs ziprasidone on 6 ESRS subscales (P<0.05). Rates of worsened BAS scores were similar between iloperidone and placebo but significantly higher with ziprasidone vs placebo (P=0.002). No patients had clinically significant changes in blood glucose, total cholesterol, or triglycerides. On electrocardiogram, mean QTcF interval increases from baseline were 11.4 and 11.3 msec at day 14 and 7.0 and 5.7 msec at day 28 for iloperidone and ziprasidone, respectively. Conclusions: Iloperidone 24 mg/day was well tolerated and showed favorable extrapyramidal, akathisia, and blood glucose and lipid profiles. QTcF interval prolongation showed possible adaptation over time. Vanda Pharmaceuticals sponsored this study.

**REFERENCES:**

1. Kelleher JP, Centorrino F, Albert MJ, Baldessarini RJ. Advances in atypical antipsychotics for the treatment of schizophrenia: new formulations and new agents. CNS Drugs 2002;16(4):249-261.
2. Jain KK. An assessment of iloperidone for the treatment of schizophrenia. Expert Opin Investig Drugs 2000;9(12):2935-2943.

**NR4-047**

**AN EXPLORATION OF COGNITIVE STRUCTURES**

**IN SCHIZOPHRENIA**

*Ji-hye Noh, M.A. Department of Psychiatry, Sungkyunkwan University School of Medicine, Samsung Medical Center, 50 Ilwon-Dong, Gangnam-Gu, Seoul, South Korea,135-710, Nara Kim, M.A., Ji-Hae Kim, Ph.D., Kyung Sue Hong, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the multifactorial structure and fundamental dimensions of cognitive functioning in schizophrenia patients.

**SUMMARY:**

Introduction: Neurocognitive batteries have been developed to detect the unique profile about cognitive impairments of schizophrenia. However, there has been no consensus about fundamental dimensions of cognitive structure. The goal of the present study was to identify a best-fitting cognitive structure. We considered six-factor model suggested by MATRICS(Measurement and Treatment Research to Improve Cognition in Schizophrenia) Committee and five nested models. Also, we evaluated the multifactorial model and the hierarchical model. Methods: The sample included 119 schizophrenia patients and 111 healthy control subjects. The neurocognitive battery composed comprehensive tests. Twenty-one variables are used to confirmatory factor analysis by maximum likelihood estimation. Group differences of factor scores were tested by MANCOVA with covariant such as age, sex and education. Results: The multifactorial-six-factor model with three pairs of correlated errors fitted better than other competing models(CFI=.916, GFI=.840, TLI=.895, RMSEA=.065). The loadings of all the observed variances on each cognitive domains were significant. All the factor scores were significantly lower in the patient group. More pronouncing deficit was observed in processing of information and verbal learning and memory. Conclusions: Confirmatory factor analysis supported a six-factor structure recommended by MATRICS. And we found that the multifactorial model provided a better fit to data than the hierarchical model. The separable cognitive deficits in schizophrenia have implications for further research on the nature of cognitive impairments as well as differential diagnosis and evaluation of treatment.

**REFERENCES:**

1. Nuechterlein KH, Barch DM, Gold JM, Goldberg TE, Green MF, Heaton RK: Identification of separable cognitive factors in schizophrenia. 2.Schizophr Res 2004; 72(1):29-39.
2. Gladsjo JA, McAdams LA, Palmer BW, Moore DJ, Jeste DV, Heaton RK: A six-factor model of cognition in schizophrenia and related 3.psychotic disorders: relationships with clin cal symptoms and functional capacity. Schizophr Bull 2004; 30(4):739-54.

**NR4-049**

**THE USE OF REMOTE CENTRALIZED RATERS VIA LIVE TWO-WAY VIDEO IN A MULTICENTER CLINICAL TRIAL FOR SCHIZOPHRENIA**

*Joan Shen, M.D. Pfizer, Inc.500 Arcola Road, Room A4163, Collegeville, PA 19426, Kenneth A. Kobak, Ph.D., Yonggang Zhao, Ph.D., Kathleen Murphy-Eberenz, Ph.D., Maureen Hayes, M.S.W, Madeline G. Alexander, Ph.D., John M. Kane, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the relative improvement of drug and placebo for patients with schizophrenia who are remotely assessed by a centralized rater via live two way video in a phase II clinical trial

**SUMMARY:**

BACKGROUND. Factors associated with clinician assessment, such as poor inter-rater reliability, poor interview quality, rating inflation, and expectancy bias, may play a role in the increasing rate of failed trials. The use of centralized raters (CR), a small group of highly skilled, tightly calibrated, and continuously monitored raters linked to the study sites through videoconferencing can address these issues by 1) reducing the sheer number of raters involved, 2) using rigorous calibration procedures not logistically feasible with a larger dispersed group of raters, and 3) blinding raters to visit and protocol to limit rating inflation, expectancy bias, and potential unblinding due to AE's. The current phase II study is the first RCT to use CR in a study of treatments for schizophrenia. METHOD Subjects (N=289) from 32 sites, with an acute exacerbation of schizophrenia were randomly assigned to 6 weeks of treatment with one of two doses of an investigational antipsychotic, olanzapine 15mg, or placebo. Subjects were evaluated weekly using the PANSS by a highly-trained CR (N=18) who was blinded to protocol and study visit. Data from the olanzapine (N=68) and placebo (N=68) arms were provided by the sponsor. RESULTS. The mean PANSS change was significantly greater with olanzapine (-15.2) than placebo (-4.43), p=.002. The significant difference between olanzapine and placebo was apparent at week 1. The effect size was .48. Internal consistency was high throughout the study. Scores at screening were normally distributed and not skewed toward the cutoff score. Only 2% of assessments (39/1993)experienced a temporary interruption because of technical issues, which were immediately resolved. CONCLUSION. Hospitalized patients with schizophrenia are willing and able to participate in clinical trials using remote interviews conducted via videoconference. This methodology shows enormous promise for use in clinical trials, even with acutely psychotic patients.

**REFERENCES:**

1. Kobak, K.A., Kane, J.M., Thase, M.E., Nierenberg, A.A. (2007). Why do clinical trials fail? The problem of measure ment error in clinical trials: Time to test new paradigms? Journal of Clinical Psychopharmacology, 27, 1-5..
2. Hyler SE, Gangure DP, Batchelder ST. Can telepsychiatry replace in-person psychiatric assessments? A review and meta-analysis of comparison studies. CNS Spectr. 2005;10(5):403-13.

**NR4-050**

**EXTRAPYRAMIDAL SYMPTOM AND AKATHISIA PROFILE OF ILOPERIDONE IN SCHIZOPHRENIA CLINICAL TRIALS**

*John Lauriello, M.D. Department of Psychiatry MSC09 5030 1, University of New Mexico, Albuquerque, NM 87131, Rosarelis Torres, Ph.D., Curt D. Wolfgang, Ph.D., John Feeney, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) demonstrate an understanding of the risk of extrapyramidal symptoms and akathisia with iloperidone; and

2) understand the differences and clinical implications between measurements of extrapyramidal symptoms and akathisia and their occurrence as adverse events.

**SUMMARY:**
Introduction: Antipsychotic induced akathisia and extrapyramidal symptoms (EPS) is physically uncomfortable and can influence functioning, quality of life, and treatment adherence. Iloperidone, a mixed D2/5-HT2 antagonist being developed for the treatment of schizophrenia, has been shown to have a low incidence of these effects. Akathisia and EPS were assessed in a pooled analysis of iloperidone clinical data. Methods: Nine phase II and III double-blind or open-label clinical trials of adults with schizophrenia were included in the analysis. Mean duration of iloperidone treatment was 27.8 days; maximum treatment duration was 2 years. Reports of EPS and akathisia as adverse events and changes from baseline in ESRS and BAS scores were evaluated. Results: The pooled safety analysis comprised 4838 patients: 1225 iloperidone (ILO) 4-8 mg/d; 1533 ILO 10-16 mg/d; 452 ILO 20-24 mg/d; 546 haloperidol (HAL) 5-20 mg/d; 311 risperidone (RIS) 4-8 mg/d; 184 ziprasidone (ZIP) 160 mg/d; and 587 placebo (PLA). Treatment-emergent EPS were reported in 18.0% (ILO 4-8 mg/d), 20.0% (ILO 10-16 mg/d), 15.9% (ILO 20-24 mg/d), 59.7% (HAL), 29.9% (RIS), 24.5% (ZIP) and 11.6% (PLA) of patients. Mean changes in overall ESRS from baseline to endpoint were -0.7 (ILO 4-8 mg/d), -0.8 (ILO 10-16 mg/d), -0.1 (ILO 20-24 mg/d), 1.3 (HAL), -0.4 (RIS), 0.2 (ZIP) and -0.3 (PLA). Treatment-emergent akathisia was reported in 4.2% (ILO 4-8 mg/d), 5.2% (ILO 10-16 mg/d), 3.3% (ILO 20-24 mg/d), 21.2% (HAL), 7.1% (RIS), 8.2% (ZIP) and 2.7% (PLA) of patients. Worsening in BAS scores at endpoint were reported in 10.1% (ILO 4-8 mg/d), 8.8% (ILO 10-16 mg/d), 3.7% (ILO 20-24 mg/d), 18.5% (HAL), 13.9% (RIS), 15.6% (ZIP) and 11.4% (PLA) of patients. Conclusions: These results indicate that iloperidone may have a lower propensity to cause EPS or akathisia than haloperidol, risperidone, or ziprasidone, thereby offering a favorable treatment option for schizophrenia. Vanda Pharmaceuticals sponsored this study.

**REFERENCES:**

1. Kalkman HO, Feuerbach D, Lotscher E, Schoeffter P. Func tional characterization of the novel antipsychotic iloperidone at human D2, D3, alpha 2C, 5-HT6, and 5-HT1A receptors. Life Sci 2003; 73:1151-1159.
2. Weiden PJ. EPS profiles: the atypical antipsychotics are not all the same. J Psychiatr Pract 2007; 13:13-24.

**NR4-051**

## EFFICACY AND SAFETY OF ASENAPINE IN PATIENTS WITH ACUTE SCHIZOPHRENIA

*John M. Kane, The Zucker Hillside Hospital75-59 263rd Street Kaufmann Bldg., Suite 103, Glen Oaks, NY 11004, Jun Zhao, Michael Cohen, John Panagides*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to: 1) discuss how asenapine compared with placebo in this trial of treatment of patients with acute schizophrenia; and 2) describe the adverse event profile of asenapine in patients with acute schizophrenia.

**SUMMARY:**
Objective: We assessed the efficacy and tolerability of asenapine, a novel psychopharmacologic agent being developed for treatment of schizophrenia and bipolar disorder, in patients with acute schizophrenia. Methods: In a double-blind trial, called the Hera 023 study, 458 patients were randomly assigned to 6 weeks of treatment with asenapine 5 or 10 mg BID, placebo, or haloperidol 4 mg BID (used to verify assay sensitivity). The primary efficacy endpoint was the change in Positive and Negative Syndrome Scale (PANSS) total score. PANSS total and subscale data were analyzed using a mixed model for repeated measures. Results: Least squares mean change from baseline to day 42 on PANSS total score was greater with asenapine 5 and 10 mg BID (-21.3 and –19.4, P=0.004 and P=0.038; P=0.008 and P=0.037 with Hochberg adjustment) and haloperidol (-20.0, P=0.02) than with placebo (-14.6). On secondary efficacy measures, significant changes (all P<0.05) were seen on PANSS positive subscale score for asenapine 5 and 10 mg BID (-7.5 and -6.9, vs -5.0 for placebo), PANSS negative subscale score for asenapine 5 mg BID (–4.5 vs –3.0 for placebo), and PANSS general psychopathology subscale score for asenapine 5 mg BID (–9.6 vs –6.8 for placebo). Treatment-related adverse events occurred in 44%, 52%, and 57% of patients treated with asenapine 5 and 10 mg BID and haloperidol, respectively, versus 41% with placebo. Across all treatment groups, incidence of clinically significant weight gain or loss was <5%. Incidence of hyperprolactinemia was 4%, 5%, and 10% with asenapine 5 and 10 mg BID and haloperidol, respectively, versus 2% with placebo. Rates of extrapyramidal symptoms (EPS) were 15%, 18%, and 34%, respectively, versus 10%. Conclusions: Asenapine was statistically superior to placebo in the treatment of acute schizophrenia, with a low incidence of weight gain, hyperprolactinemia, and EPS. This research was supported by Organon, a part of Schering-Plough Corporation, and Pfizer.

**REFERENCES:**

1. Potkin SG, Cohen M, Panagides J: Efficacy and tolerability of asenapine in acute schizophrenia: a placebo- and risperi done-controlled trial. J Clin Psychiatry 2007; 68:1492-1500.
2. Shahid M, Walker GB, Zorn SH, Wong EHF: Asenapine: a novel psychopharmacologic agent with a unique human receptor signature. J Psychopharmacol 2007; in press.

**NR4-052**

## ZIPRASIDONE TREATMENT EFFECTS ON WEIGHT AND LIPIDS IN PATIENTS WITH METABOLIC RISK

*John W. Newcomer, M.D. 660 S. Euclid Ave, St. Louis, MO 63110, Francine Mandel, Ph.D., Ilise Lombardo, M.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this presentation, the participant should be able to characterize favorable changes in weight and lipids that are observed during treatment of schizophrenia with ziprasidone.

**SUMMARY:**
Background: Coronary heart disease is the leading cause of mortality in schizophrenia, related to elevated prevalence of risk factors like obesity and dyslipidemia.1While some antipsychotics contribute to adverse changes in weight and

plasma lipids, ziprasidone has neutral metabolic effects that can lead to improvement in weight and lipids.2
Methods: Short-term (= 12 weeks), long-term (> 12 weeks), antipsychotic switch, and switch extension studies of ziprasidone in schizophrenia were analyzed to quantify clinically significant metabolic improvement during ziprasidone treatment, particularly in patients "at risk" at baseline. Improvement definitions: triglycerides at baseline = 150 mg/dL, at last observation carried forward (LOCF) end point < 150 mg/d; cholesterol at baseline = 200 mg/dL, at LOCF end point < 200 mg/dL; weight loss from baseline to LOCF end point of = 7%; body mass index (BMI) at baseline = 30, at LOCF end point < 30.Results: With these definitions, in short-term studies, 138 of 1084 (12.7%), 125 of 1053 (11.9%), 153 of 1811 (8.5%), and 26 of 1811 (1.4%) patients changed their risk status with clinically significant improvement in triglycerides, cholesterol, weight, and BMI, respectively. Improvements were maintained in long-term studies: 226 of 1533 (14.7%), 248 of 1531 (16.2%), 221 of 2028 (10.9%), and 98 of 2028 (4.8%) improved on the respective parameters.For the switch studies, 42 of 244 (17.2%), 46 of 244 (18.9%), 2 of 312 (0.64%), and 5 of 312 (1.6%) patients improved, with improvement maintained in study extensions, with 36 of 194 (18.6%), 43 of 194 (22.2%), 15 of 217 (6.9%), and 8 of 217 (3.7%) improved on the respective parameters. Conclusions: In short-term, long-term, switch, and switch extension studies of ziprasidone for the treatment of schizophrenia, ziprasidone treatment resulted in clinically significant improvements in triglycerides, cholesterol, weight, and BMI, even in "at risk" patients. This study was funded by Pfizer Inc.

**REFERENCES:**


1. Newcomer JW, Hennekens CH: Severe mental illness and risk of cardiovascular disease. JAMA. 2007; 298:1794-1796
2. Lieberman JA, Stroup TS, McEvoy JP, Swartz MS, Rosen heck RA, Perkins DO, Keefe RS, Davis SM, Davis CE, Leb owitz BD, Severe J, 3.Hsiao JK: Effectiveness of antipsychot ic drugs in patients with chronic schizophrenia. N Engl J Med 2005; 353:1209-1223


**NR4-053**

## POOLED ANALYSIS COMPARING NON-HIGH DENSITY LIPOPROTEIN IN PATIENTS WITH SCHIZOPHRENIA RANDOMIZED TO ARIPIPRAZOLE OR OLANZAPINE (CN138-002/003/047EXT)


*Jonathan M Meyer, M.D. Department of Psychiatry, University of California, 3350 La Jolla Village Dr. (116-A), San Diego,CA 92161, Trixia Anne Camacho, Pharm.D., Ross A. Baker, Ph.D, M.B.A., James Eudicone, M.S., Andrei Pikalov, M.D., Ph.D., Estelle Vester-Blokland, M.D., Robert D. McQuade, Ph.D., Gilbert L'Italien, Ph.D., John W. Newcomer, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to recognize the emerging attention surrounding the utilization of non-HDL cholesterol as reliable predictor of CVD risk, as well as the importance of assessing the metabolic imposition of long-term antipsychotic use.

**SUMMARY:**


Introduction: Cardiovascular disease (CVD) is the leading cause of death in patients with schizophrenia, related in part to underutilization of primary and secondary prevention (1). Given the absence of non-HDL cholesterol (non-HDL-C) data in antipsychotic studies coalesced with the growing interest in CVD risk prevention in patients with mental illness, we quantified the change in non-HDL-C, a significant predictor of CVD (2), in a pooled analysis of clinical trials assessing aripiprazole versus olanzapine. Methods: This is an exploratory pooled post hoc analysis of three clinical trials comparing olanzapine to aripiprazole in schizophrenia patients: one randomized, double-blind 26-week (CN138-002), one randomized, double-blind 52-week (CN138-003), and one 52-week open label trial (CN138-047ext). Non-HDL-C was calculated as Total Cholesterol minus HDL-C from data collected at weeks 6, 12, 26 and 52. Statistical comparisons were made using ANOVA with LOCF. Results: Compared with baseline, there was a significant decrease in mean non-HDL-C at all time points ($p<0.001$) in aripiprazole patients, while olanzapine patients experienced a significant increase in mean non-HDL-C at all time points ($p<0.001$). The mean change in non-HDL-C in aripiprazole versus olanzapine-treated patients was statistically significant as early as Week 6 (-16.1 mg/dL and +10.4 mg/dL, respectively) and was maintained at weeks 12, 26, and 52 ($p<0.001$, all time points). Conclusion: The early and sustained improvement in non-HDL-C for aripiprazole-treated patients versus the relative decline observed for olanzapine patients suggest that antipsychotic treatment can influence risk for CVD, with the direction of effects dependent on individual medication choice. These results further support the need to understand long-term health implications when initiating antipsychotic therapy. Supported by Bristol-Myers Squibb and Otsuka.


**REFERENCES:**


1. Newcomer JW and Hennekens, CH: Severe Mental Illness and Risk of Cardiovascular Disease. Journal of the American Medical Association 2007;298:1794-1796.
2. Liu J, Sempos CT, Donahue RP, Dorn J, Trevisan M, Grundy SM: Non-high-density lipoprotein and very-low-density lipo protein cholesterol and their 2.risk predictive values in coronary heart disease. American Journal of Cardiology 2006;98:1363-1368.


**NR4-054**

## LONG-TERM SYMPTOMATIC REMISSION OF SCHIZOPHRENIA WITH ONCE-DAILY EXTENDED RELEASE QUETIAPINE FUMARATE


*Joseph Peuskens, Department of Psychiatry, Universitair Psychiatrisch Centrum KU Leuven, campus Kortenberg, Belgium, Kortenberg, Belgium3070, Jitendra Kumar Trivedi, M.D., M.R.C.Psych(U.K.), F.A.P.A.(U.S.A.), Martin Brecher, M.D., DMSc., MBA., Ola Svensson, M.D., Ph.D., Frank Miller. M.D., Didier Meulien, M.D*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to demonstrate knowledge and understanding of the efficacy and safety of once-daily extended release quetiapine fumarate (quetiapine XR) for relapse prevention in clinically stable patients with schizophrenia. To understand the Andreasen remission criteria and how these were used in the analysis of results from a relapse prevention study of quetiapine XR in this

patient population.

**SUMMARY:**

Objective: A randomized, double-blind, placebo-controlled study showed that once-daily quetiapine XR (400–800mg/day) was effective in preventing relapse in clinically stable patients with schizophrenia1. The current analysis evaluated data from this study using the Andreasen remission criteria2.
Methods: Patients (n=327) were treated with open-label, flexible-dose, once-daily quetiapine XR (400, 600 or 800 mg/day) for a 16-week stabilization period. Following this, clinically stable patients were randomized to either continue (double-blinded) flexible-dose quetiapine XR or placebo. The primary endpoint was time from randomization to first schizophrenia relapse up to 1 year. Interim and final analyses were planned after 45, 60 and 90 relapse events. Remission rates as defined by PANSS total and subscale scores (ie PANSS =3 for items P1, G9, P3, P2, G5, N1, N4 and N6 for =6 months) and time to non-remission were evaluated post hoc for patients who were in remission during the stabilization period. Time from randomization to relapse and non-remission were analyzed using the Cox proportional hazards model.
Results: The study was terminated after the first interim analysis, as quetiapine XR (mean dose 669 mg/day; mean randomized-treatment period 4 months) was significantly superior to placebo for time to relapse: HR 0.16 (95% CI 0.08, 0.34; p<0.001). Using the time to non-remission analysis, the estimated remission rates 6 months after randomization were 76% for quetiapine XR and 52% for placebo. Time to non-remission was significantly shorter with placebo compared with quetiapine XR: HR 0.39 (95% CI 0.19, 0.81; p=0.009).
Conclusions: Once-daily quetiapine XR (400-800 mg/day) prevents relapse and is associated with sustained remission in patients with clinically stable schizophrenia. The authors would like to thank the Study 4 investigators for their participation in the study. The study (D1444C00004) was sponsored by AstraZeneca.

**REFERENCES:**

1. Peuskens J, Trivedi J, Malyarov S, Brecher M, Svensson O, Miller F, Persson I, Meulien D, on behalf of the Study D1444C00004 investigators. Prevention of schizophrenia relapse with extended release quetiapine fumarate dosed once daily: a randomized, placebo-controlled trial in clinically stable patients. Psychiatry (Edgemont) 2007; 4:34-50
2. Andreasen NC, Carpenter WT, Kane JM, Lasser RA, Marder SR, Weinberger DR. Remission in schizophrenia: proposed criteria and rationale for consensus. Am J Psychiatry 2005; 162:441-449

**NR4-055**

## SUBSTANCE ABUSE IN FIRST EPISODE PSYCHOSIS IN COLOMBIA

*Juan Fernando Cano, M.D. Carrera 69 #170-40, Bogota, Colombia 00000, Rodrigo Cordoba, M.D., Marco Fierro, M.D., Marcela Alzate, M.D., Marcela Rojas, M.D., Ana Olarte, Psy.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to identify the high prevalence of substance abuse in patients with first episode psychosis, and to recognize that with a proper management of substance abuse the prognosis of these patients won't be altered by this issue.

**SUMMARY:**

Introduction: First Episode Psychosis (FEP), in many times is the beginning of schizophrenia. Identifying risk factors involved in their results are becoming one important subject in psychiatry. Substance abuse consumption has been related to the onset and the course of FEP. Objective: Establish the relationship between Substance Abuse and FEP in patients attended in the psychiatric services in three reference clinics in Bogotá (Colombia) between February 1, 2004 and August 1, 2006. Method: Multicentric, analytic, prospective trial. Consecutives patients attended in three reference clinics in Bogotá (Colombia), diagnosed with FEP following the DSM-IV criteria, and excluding those with secondary psychosis, were assessed with PANSS and BPRS, and it was identified: socioeconomic and demographic features, and psychoactive substances use. The cohort was followed-up for one year, with weekly visits the first month, every two weeks for the second month, and then monthly. Results: 85 patients entered to the study. According to the Colombian Mental Health Study 2003, the one year prevalence of substance abuse and dependence for any substance is approximately 3,0 %. We found a 12 month prevalence of substance abuse for any substance in subjects with FEP of 53%. The most prevailing substance of abuse was Marihuana with a 44,7%, the second was alcohol with a 23,5%, and then bazuco, inhalants and cocaine clorhidrate. We also found the first substance of abuse in terms of age of onset with a mean of 13,33 years was alcohol, and then Marihuana. We found no relationship between the antecedent of substance abuse and the evolution of FEP, nor with any substance per se, neither with the number of substances of abuse in the subjects. Conclussions: The prevalence of substance abuse in patients with FEP is much higher than the prevalence reported in general population, but it seems that once the problem is assessed it has no relationship with the prognosis of the psychotic disorder.

**REFERENCES:**

1. Lambert M, Conus P, Lubman DI, Wade D, Yuen H, Moritz S, et al. The impact of substance use disorders on clinical out come in 643 patients with first-episode psychosis. Acta Psy chiatr Scand 2005 Aug;112(2):141-8.
2. Wade D, Harrigan S, Edwards J, Burgess PM, Whelan G, McGorry PD. Course of substance misuse and daily tobacco use in first-episode psychosis. Schizophr Res 2006 Jan 31;81(2-3):145-50.

**NR4-056**

## EVALUATION OF RISK FOR PSYCHIATRIC HOSPITALIZATIONS AND EXPENDITURES FOR ATYPICAL ANTIPSYCHOTICS IN A MEDICAID COHORT WITH SCHIZOPHRENIA

*Kafi Sanders, M.P.H. 235 East 42nd Street, New YorkNY 10017, Liisa Palmer, PhD, Leslie Montejano, B.A.,C.C.R.P., Greg Lenhart, M.S., James Harnett, Pharm.D.,M.S.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to identify the comparative real world risk for psychiatric hospitalizations and expenditures for patients diagnosed with schizophrenia who are receiving atypical antipsychotics in the

Medicaid setting.

**SUMMARY:**
OBJECTIVES: To evaluate the risk of psychiatric hospitalizations and expenditures across atypical antipsychotics in a Medicaid population with schizophrenia.
METHODS: The 2001–2005 Thomson MarketScan Medicaid Database was analyzed to evaluate 12-month risk for psychiatric (ICD-9: 290.xx-319.xx) hospitalizations as well as overall psychiatric expenditures across atypical antipsychotics in adult patients with schizophrenia (ICD-9: 295.xx). The treatment cohorts were matched using propensity scores as weights in multivariate models. A logistic regression model was used to evaluate psychiatric hospitalization rates while adjusting for differences in patient characteristics across atypical antipsychotic groups. Psychiatric expenditures were adjusted to December 2005 dollars and evaluated using a Generalized Linear Model.
RESULTS: A total of 34,918 patients were included in the analysis. The percentage of patients with a psychiatric hospitalization ranged from 8.1% (olanzapine) to 17.2% (aripiprazole). Compared to patients who received ziprasidone, the odds of a psychiatric hospitalization was comparable with olanzapine (0.94, p=0.53) and risperidone (1.10, p=0.33), but significantly higher for those receiving aripiprazole (2.22, p<0.0001) and quetiapine (1.62, p<0.0001). Overall psychiatric expenditures for ziprasidone ($9,098) were significantly lower than aripiprazole ($11,662, p<0.0001) and quetiapine ($11,481, p<0.0001) and comparable with olanzapine ($9,216, p=0.58) and risperidone ($9,097, p=1.00).
CONCLUSION: Consistent with prior retrospective cohort studies, this analysis indicates a comparable risk for psychiatric hospitalization with ziprasidone and olanzapine or risperidone in a Medicaid cohort with schizophrenia. Interestingly, ziprasidone was associated with a lower risk for psychiatric hospitalization and lower psychiatric expenditures compared with quetiapine and aripiprazole.
This poster is supported by Pfizer Inc.

**REFERENCES:**

1. Joyce AT, Harrison DJ, Loebel AD, Ollendorf DA.Impact of atypical antipsychotics on outcomes of care in schizophrenia. Am J Manag Care. 2005 Sep;11(8 Suppl):S254-61.
2. Gianfrancesco F, Wang RH, Pesa J, Rajagopalan K. Hospi talization risks in the treatment of schizophrenia in a Medic aid population: comparison of 2.antipsychotic medications.Int J Clin Pract. 2006 Nov;60(11):1419-24.

**NR4-057**

## EFFICACY AND TOLERABILITY OF SWITCHING FROM A PRIOR ANTIPSYCHOTIC TO ZIPRASIDONE IN PATIENTS WITH SCHIZOPHRENIA: AN INTERNATIONAL MULTICENTER STUDY

*Koksal Alptekin, M.D. Dokuz Eylul Universitesi Tip Fakultesi, Psikiyatri Anabilim Dali, Balcova Izmir, Turkey 35340, Onur N. Karayal, M.D., M.P.H, Jamal Hafez, M.D., Shlomo Brook, M.D., Cengiz Akkaya, M.D., Errikos Tzebelikos, M.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to evaluate improvements in efficacy or tolerability that result from a switch from olanzapine, risperidone, or haloperidol to ziprasidone in the treatment of adult outpatients with schizophrenia who are experiencing either suboptimal efficacy and/or tolerability issues.

**SUMMARY:**
Introduction: Some patients with schizophrenia switch medications due to lack of efficacy or intolerable side effects [1,2]; improvement in symptoms and side effects following a switch must be assessed. Methods: In a 12-week, open-label, baseline-controlled, flexible dose switch study, adult outpatients with schizophrenia experiencing suboptimal efficacy or tolerability problems were switched from haloperidol (n = 99), olanzapine (n = 82), or risperidone (n = 104) to ziprasidone (80–160 mg/d; dosed twice daily with food). The primary efficacy evaluation was the Brief Psychiatric Rating Scale (BPRS) score at week 12. Safety evaluations included change from baseline in movement disorders (Simpson-Angus Scale [SAS], Barnes Akathisia Scale [BAS], Abnormal Involuntary Movement Scale [AIMS]), body weight, prolactin, and fasting lipids levels. Statistical tests were either 1-sided, noninferiority comparisons with correction for multiple comparisons (0.025/3 significance level), for the primary efficacy end point, or 2-sided (0.05 significance level), for secondary end points.
Results: BPRS scores improved significantly compared with all 3 preswitch medications at week 12. Mean change from baseline (SD) for patients switched from haloperidol, olanzapine, or risperidone was –11.3 (16.3), –6.3 (14.2), and –9.9 (13.2), respectively ($p < 0.0001$ vs baseline). Movement disorders, measured by SAS, BAS, and AIMS, improved significantly for subjects switched from haloperidol or risperidone. Change in weight (kg ± SD) from baseline was 0.4 ± 3.97, –2.0 ± 3.99 ($p < 0.001$), and –0.6 ± 3.21 for subjects switched from haloperidol, olanzapine, or risperidone, respectively.
Conclusions: Patients switched to ziprasidone demonstrated improvement in symptoms and movement disorders, with a neutral effect on weight. Ziprasidone is an appropriate switch option for patients experiencing suboptimal efficacy or poor tolerability with their current treatment. This study was funded by Pfizer Inc.

**REFERENCES:**

1. McEvoy JP, Lieberman JA, Stroup TS, Davis SM, Meltzer HY, Rosenheck RA, Swartz MS, Perkins DO, Keefe RS, Da vis CE, Severe J, Hsiao JK; CATIE Investigators: Effective ness of clozapine versus olanzapine, quetiapine, and risperi done in patients with chronic schizophrenia who did not re spond to prior atypical antipsychotic treatment. Am J Psychia try 2006; 163:600–610.
2. Weiden PJ, Simpson GM, Potkin SG, O'Sullivan RL: Ef fectiveness of switching to ziprasidone for stable but symp tomatic outpatients with schizophrenia. J Clin Psychiatry 2003; 64:580–588.

**NR4-058**

## COST-UTILITY ANALYSIS OF SWITCHING ANTIPSYCHOTIC TO QUETIAPINE XR DUE TO INSUFFICIENT EFFICACY OR TOLERABILITY IN PATIENTS WITH SCHIZOPHRENIA

*Krister Järbrink, Ph.D. Health Economics & Outcomes Research, AstraZeneca R&D Mölndal, Sweden S-431 83, Noemi Kreif, M.A., Agnes Benedict, M.Sc., Julie Locklear Pharm.D.,*

*M.B.A*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to evaluate the benefits of switching antipsychotic medication due to insufficient efficacy or tolerability in terms of quality adjusted life years (QALYs) gained for patients with schizophrenia and relate utilities gained to the increased cost for the medication

**SUMMARY:**

Introduction: Given the increase in available antipsychotic treatments for schizophrenia, one aspect worth exploring is the value of treatment choice in terms of quality adjusted life years (QALYs) and how this relates to the cost of the medication.
Methods: The sample analyzed was collected from a 12-week study (1) and consists of data from patients with schizophrenia (n=474) who switched to extended release quetiapine fumarate (quetiapine XR) from any antipsychotic due to insufficient efficacy or tolerability. Patients were assigned utilities based on their PANSS scores, the presence of adverse events and by applying the methods of Lenert et al. (2). QALY gains were calculated assuming a linear change of utility between two consecutive visits. Apart from complete case analysis, the "last-observation-carried-forward" method addressed missing data, and some manual classification was used to mitigate gaps in the classification. Results: Patients in the complete case analysis (n=279) increased their average utility by 0.115 corresponding to a QALY gain of 0.0207. For the total sample, including 104 manually classified patients and 107 drop-outs, average utility increased by 0.09, resulting in a QALY gain of 0.0170. Incremental costs were calculated using US drug costs and by comparing hypothetical (assuming patients stay on previous treatment) and actual treatment cost. The additional cost for antipsychotics for a QALY gained for the total sample during the 12-week trial was 57,000 USD.
Conclusion: Findings demonstrate that patients with schizophrenia who switch antipsychotic to quetiapine XR due to insufficient efficacy and tolerability make considerable QALY gains. The incremental cost for an additional QALY is likely considerably less than 57,000 USD, as such a cost would need to consider improvements in health related quality of life during a longer time horizon as well as other costs than the cost for antipsychotics. Supported by AstraZeneca Pharmaceuticals.

**REFERENCES:**

1. Ganesan S, Agambaram V, Randeree F, Eggens I, Huizar K, Meulien D. Switching from other antipsychotics to once-daily extended release quetiapine fumarate in patients with schizo phrenia. Current Medical Research and Opinion, in press.
2. Lenert LA, Sturley AP, Rapaport MH, Chavez S, Mohr PE, Rupnow M. Public p**references** for health states with schizophrenia and a mapping function to estimate utilities from positive and negative symptom scale scores. Schizo phrenia Research 2004; 71:155-65.

**NR4-059**

## THE DISTINCT NEURAL MECHANISMS OF THE POSITIVE SYMPTOMS, NEGATIVE SYMPTOMS AND COGNITIVE SYMPTOMS OF THE SCHIZOPHRENIA IN VARIOUS SOCIAL SITUATIONS

*Kyung Min Park , Unju-ro, Kangnamgu, Seoul, Korea, Yungdong Sevenrance Hospital, Seoul Korea 135-720, Kim JJ, M.D.,* Ph.D.

**EDUCATIONAL OBJECTIVE:**

The participants should be able to recognize that the patients with schizophrenia show various clinical symptoms by distinct neural mechanism in various social situations. The positive symptoms are aggravated in negative emotional situations through increased anterior temporal activities. The negative and cognitive symtoms are prominent in positive social situations through decreased mental imagering and in ambiguous social situations through dereased hippocampal and cerebellar activities

**SUMMARY:**

Background: The neural mechanisms of various symptoms of schizophrenia in actual social situations are not clear, so the neural correlates of the social impairment of schizophrena need to be elucidated.
Methods: While the patients with schizophrenia and the healthy controls experience the narrative scripts, we investigated the interactions among emotional, semantic and lingual processing. Also, we investigated the correlations between the activities of these regions and the scores of PANSS.
Results: The patients showed increased activation in the anterior temporal lobe during the anger processing, decreased activation in the right premotor area, right supplementary motor area, left primary motor area, left precuneus, and the right visual cortex during the happiness processing, and decreased activation in the right hippocampus and the right cerebellum during the semantic ambiguity processing. And also, the changes in the activities of these regions are correlated with the scores of some expected PANSS items.
Conclusions and Discussion: The increased activation of anterior temporal lobe during the anger processing is related to the neural mechanism of positive symptoms such as thought disorder. the reduced activation of the brain regions related to mental imagery during the happiness processing is related to the neural mechanism of the negative symptoms such as emotional withdrawal, social withdrawal and anhedonia. In addition, The reduced activations of the right hippocampus and the right cerebellum are related to the neural mechanism of the cognitive symptoms.

**REFERENCES:**

1. Shenton ME, Kikinis R, Jolesz FA, Pollak SD, LeMay M, Wible CG, Hokama H, Martin J, Metcalf D, Coleman M, et al. Abnormalities of the left temporal lobe and thought disor der in schizophrenia. A quantitative magnetic resonance maging study. The New England journal of medicine. 1992;327(9):604-612.
2. Kosslyn SM, Ganis G, Thompson WL. Neural foundations of imagery. Nature reviews. 2001;2(9):635-642.

**NR4-060**

## EMOTIONAL PROCESSING IN SCHIZOPHRENIA: THE ROLE OF ABSTRACT REASONING IN ESTABLISHING AND REMEMBERING EMOTIONAL LINKS

*Lana Marija Ilankovic, M.S.C. Clinic for Psychiatry, Department for Clinical Psychology and Phychophisiology, Nussbaumstr. 7, 80336, Munich, Germany, Kristina Fast, Ph.D., Nikola*

*Ilankovic, Ph.D., Joseph Kambeitz, Bs.C., Rolf Engel, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the importance of abstaract reasoning for the efficient emotional processing. They should learn how impairment of different psycological functions can account for misinterpering the events in schizophrenia and consider it when treating the patients.

**SUMMARY:**

Introduction. Although numerous studies reported abnormalities in emotional processing in schizophrenia, underlying factors that may account for the deficits in patients' performance on measures of emotion perception are not well understood. Most of the studies on emotional processing in schizophrenia have used facial affect recognition paradigms whereas we introduced a cognitive task that requires more complex social and emotional judgments. We are interested to see how the ability to compare and match stimuli of different emotional valence is related to symptomatology of the disorder and cognitive abilities in schizophrenic patients. Methods. 15 patients with schizophrenia and 15 control subjects were shown two pictures simultaneously, with negative, positive and neutral emotional content. Afterwards, subjects were asked to match the pictures according to their valence and then performed surprise recognition memory test. In addition, several neuropsychological test were administered. Results 1. The group of patients was significantly less accurate than the group of controls, when comparing two items, especially when positive or neutral pictures were combined with pictures of negative valence 2.The patients performed significantly worse in recognizing the novel picture combinations (significantly reduced percent of correct rejections), across all the combination categories.3.The group of patients had significantly lower scores on Halstead Category Test and Similarities (HAWIE-R), relative to controls. Conclusions 1.The patients exhibited a negative bias when evaluating incongruent picture pairs, especially those containing neutral pictures, that are more flexible for interpretations 2. Additionally, they have shown impaired abstract-flexibility and concept learning. It may be the case, that not only impaired affect recognition but also deficits in abstract reasoning could be could be "central" for patients' misinterpreting banal events as significant.

**REFERENCES:**

1. Addinton, J., Addington D., (1998). Facial affect recogni tion and information processing in schizophrenia and bipolar disorder. Schizophrenia research, 32, 171-181. Hall, J., Har ris, J., McKirdy, J., Johnstone, E., Lawrie, S. (2006). Emo tional memory in schizophrenia. Neuropsychologia 45, 1152-1159.
2. Kohler,C.G., Bilker,W.,Hagendoom,M., et al (2000). Emotion recognition deficit in schizophrenia: association with symptomatology and cognition. Biological Psychiatry,48,127-136.
3. Lang, P.J., Bradley, M.M., Cuthbert, B.N. (1997).Interna tional Affective Picture System. Gainesville, FL:NIMH Center for the study of Emotion and Attention. Schneider, F., Gur, R.C., Koch, K., Backes, V., Amunts, K., Shah, J., Bilker, W., Gur, R.E., Habel, U. (2006).Impairment in the Specific ity of Emotion Processing. American Journal of Psychiatry 163, 442-447.

**NR4-061**

**PHASE I STUDY OF RGH-188 IN SCHIZOPHRENIC PATIENTS**

*Larry Ereshefsky, Pharm.D. California Clinical Trials1560 E Chevy Chase Dr Suite 140, GlendaleCA 91206, Allyson Gage, Ph.D., Bei Yu, Jun Shi, Margit Kapás, György Andor, György Németh, István laszlovszky, Guy Bolton*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand the pharmacokinetics of RGH-188 and evaluate its tolerability profile in schizophrenic patients.

**SUMMARY:**

Background: RGH-188 is a novel atypical antipsychotic with potent dopamine D3 / D2 receptor antagonist / partial agonist activity.

Methods: In this single-center, double-blind trial with escalating, multiple oral doses, patients (18-55 years) with *DSM-IV-TR* schizophrenia (PANSS Positive Subscale Score <= 21) were randomized within each of 8 cohorts to RGH-188 (0.5 mg/day to 12.5 mg/day) or placebo. The cohorts varied with regard to dosing schedule and treatment duration. Pharmacokinetic (PK) sampling occurred through 37 days of double-blind dosing.

Results: Doses up to 12.5 mg/day were well tolerated. Treatment was completed by 12 (75%) of 16 placebo patients and 27 (59%) of 46 RGH-188 patients. Adverse events led to discontinuation of 3 (19%) placebo and 5 (11%) RGH-188 patients. There was no evidence of a nonlinear relationship between the increase in systemic exposure (Cmax and AUC0-24) of RGH-188 or its desmethyl and didesmethyl metabolites and the increases in doses. The mean T½ for RGH-188 was approximately 2 to 5 days over a dose range of 1.5 mg to 12.5 mg. Systemic exposure to the desmethyl and didesmethyl RGH-188 was relatively low compared with the parent drug, RGH-188, on the first day of dosing; however, on the last day of dosing with the 12.5mg dose systemic exposure to didesmethyl RGH-188 relative to the parent drug was approximately three- and six-fold greater in terms of AUC0-24 and AUC0-168, respectively, indicating that this metabolite has a slower elimination half-life.

Conclusion: Pharmacokinetics of RGH-188 was not different in patients and healthy volunteers. Supported by Gedeon Richter Plc and Forest Laboratories, Inc.

**REFERENCES:**

1.Joyce JN, Millan MJ: Dopamine D3 receptor antagonists as therapeutic agents. Drug Discov Today 2005; 10:917-925.
2. Raggi MA, Mandrioli R, Sabbioni C, Pucci V. Atypical anti psychotics: pharmacokinetics, therapeutic drug monitor ing and pharmacological interactions. Curr Med Chem 2004; 11:279-296.

**NR4-062**

**COMPARATIVE ANALYSIS OF COGNITIVE FUNCTION IN SCHIZOPHRENIA WITH AND WITHOUT OBSESSIVE COMPULSIVE SYMPTOMS**

*Lee Myeung Jee, M.D. 127, Yul Mok-Dong, Choong-Ku, Incheon-*

*Korea 400-714, Chul Eung Kim, M.D., Ji Suk Jun, M.D., Jae Hyo Yang, M.D*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognized that obsessive compulsive disorder in schizophrenia may have a protective effect on some schizophrenic symptoms.

**SUMMARY:**

Introduction: While obsessive compulsive disorder (OCD) in schizophrenia is reported to protect against psychotic decompensation, it is also related to a poor clinical course, longer hospitalization, and greater cognitive deficit. Since cognitive function is a major predictor of social function, a study of the change in cognitive function in schizophrenia with OCD is important. Methods: We grouped 27 patients as either OC or non-OC based on the presence of OCD. The two groups completed the Yale-Brown Obsessive-Compulsive Scale, World Health Organization Quality of Life-Brief Scale, Global Assessment of Functioning Scale, Positive and Negative Symptom Scale, Clinical Global Impression, and Hamilton Depression Scale. The Intelligence Quotient (IQ) was tested using the Korean Wechsler Adult Intelligence Scale and the Memory Quotient (MQ) was tested using the Korean-Auditory Verbal Learning (AVLT) and Korean-Complex Figure Test. The Executive Intelligence Quotient (EIQ) was determined using the Stroop, verbal fluency, and Ruff figural fluency tests, and AVLT. Results: Ten of the twenty-seven patients had OCD, and there were no differences in demographic factors or clinical characteristics between the two groups. The OC-schizophrenia patients had higher IQ and their vocabulary, arithmetic, and block design scores were significantly higher. No difference was found in MQ. Although the EIQ did not differ between the two groups, the OC-schizophrenia patients performed better at the Stroop-interference and verbal fluency tests, which rely on executive function. Conclusion: Our findings indicate that patients with schizophrenia and OCD perform better in cognitive tests than patients with schizophrenia alone. Our results support previous reports that OCD in schizophrenia protects against psychotic decompensation.

**REFERENCES:**

1. Poyurovsky M: Obsessive-compulsive disorder in pa tients with first episode schizophrenia. Am J Psychiatry 1999;156:1998-2000.
2. Borkowska A: The frontal lobe neuropsychological tests in patients with schizophrenia and/ or obsessive-compulsive disorder. J .3.Neuropsychiatry Clin Neurosci 2003;15:359-362.

**NR4-065**

## AN EMPIRICAL EVALUATION OF THE ARIZONA SEXUAL EXPERIENCE SCALE IN PATIENTS WITH SCHIZOPHRENIA AND SCHIZOAFFECTIVE DISORDER

*Luciana L Nunes, M.D. Rua Bittencourt Sampaio, 268 Apto 174. Vila Mariana Cep, Sao Paulo, Brazil 04126060, Luiz Henrique Junqueira Dieckmann, M.D., Fernando Lacaz, M.D., Rodrigo Bressan, M.D., Ph.D., Jair Mari, M.D., Ph.D., Sandra Vargas Nunes, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session,the participant should be able to understand scales to measure sexual functioning as well as know the demographic and clinical characteristics of subjects from PROESQ (Schizophrenia Program from Federal University of São Paulo,Brazil).

**SUMMARY:**

Introduction: Sexual disfunctions can be reported in around 52,6% patients with schizophrenia.Since sexual disfunction are linked to quality life outcomes,there is a need for valid and reliable instruments to evaluate sexual dysfunction in this population. Objectives: 1) Examination of sensitivity, specificity and positive and negative predictive values of ASEX in patients with schizophrenia or schizoaffective disorder. Comparation with Gold Standard DGSFi(the only one translated and validated for this type of patients in Brazil).ASEX was translated to Portuguese language, retro-translated and a pilot test was done. 2) Asses demographic and clinical characteristics of patients and quality of life. Methods: A cross-sectional design with data from 125 patients with DSM IV criteria for schizophrenia or schizoaffective disorder was used to asses two scales (ASEX, DGSFi). In addition, a socio-demographic questionary and a Quality Life Scale were applied. Results: 1) Demographic and Clinical characteristics of subjects from PROESQ: 74 (59,2%) male; 51 (40,8%) female;100 (80%) single; 76(60,8%),white; 42 (36,6%) with high school education; 82 (65,6%) live with parents; 94 (75,2%) are unemployed; Median age: 36,5 (DP 9,9) years; Familiar gains (per month) (Median): 1962,00 reais (DP 1518,6) (980,00 USA dollars); Median age of onset of symptoms:13,2 (DP 7,8) years; Quality of Life (values 0 to 10-self-report):7,1(DP 2,2).
2-Asex is a sensitive(Sens 0.795 with 95% CI [0.688,0.871]) and specific (spec 0.885 with 95% CI [0.770, 0.946]) tool. PPV 0.906 95% CI [0.810,0.956] and NPV 0.754 [0.633,0.845]. Discussion/Conclusions: ASEX is sensitive and specific tool like DGSFi and can be used like a good instrument capable to detect sexual disfunction in patients with schizophrenia or schizoaffective disorder. ASEX is easy to understand, can be auto-applied,is approriate for use in those with and without sexual partners and can be completed quickly in 5 min.

**REFERENCES:**

1. Ucok A, Incesu C, Aker T, Erkok S. Sexual dysfunction in patients with schizophrenia on antipsychotic medication. Eur Psychiatry. 2007 Jul;22(5):328-33. Epub 2007 Mar 6.
2. Byerly M, Nakonezny P, Fisher R, Magouirk B, Rush J. An empirical evaluation of the Arizona Sexual Experience Scale and a simple one-item screening test for assessing antipsy chotic-related sexual dysfunction in outpatients with schizo phrenia and schizoaffective disorder. Schizophrenia Research. 2006; 81: 311-316.

**NR4-066**

## ANALYSIS OF THE LINGUISTIC STRUCTURE OF THE DISCOURSE OF THE KRAEPELINIAN SUB-TYPE OF SCHIZOPHRENIA USING A MATHEMATICAL ANALYSIS, CALLED ALCEST

*Marie-Cécile M Bralet, M.D. CHI de clermont de l'oise (FJ5) 2 rue des finets, Clermont de l'Oise France 60600, Delphine Lemoullec, M.D., Julie Bosset, M.D., Bruno Falissard, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to identify the kraepelinian form of schizophrenia, to learn about a new method to analyze the language of the patients, to improve his knowledge about the role of the language in schizophrenia with its link with social cognition

**SUMMARY:**

Language trouble could represent a core feature of schizophrenia and /or could be characteristic of a specific form of schizophrenia characterized by disorganization and thought disorders. Also schizophrenic patients show neurocognitive and social cognitive deficits. These deficits are linked with the functional prognosis (social abilities, independent living). Actually the kraepelinian sub-type represent a valid form of schizophrenia characterized by a very poor functional prognosis. The aim of this study is to analyze the stucture of the language of the kraepelinian patients using a linguistic mathematical software, called Alcest to detect in these patients some specific language structure which could be linked with disorganization and functional prognosis. A sample of 14 kraepelinian schizophrenic patients were recruited from the Psychiatric Department (FJ 5) of the Clermont de l'Oise Psychiatric Hospital (Picardie area, France)according to *DSM-IV-TR* criteria and to Keefe's criteria of kraepelinian sub-type(1987). This sample was matched on sex, age and duration of illness(+/- 5 years)with a no kraepelinian schizophrenic sample. Several sociodemographic data were collected. All the patients were recorded during the same no structured interview realized by a psychiatrist. This interview included open questions about abilities of social interactions and independent living.The results show specific linguistic abnormalities among kraepelinian reflecting poor abilities of insight and of interpersonnal comunication, poor executive functions with poverty of speech and of dicursive marks.Kraepelinian schizophrenia represent a form of schizophrenia with specific etiopathogenic mechanisms including more trouble in language and in social cognition. Alcest could represent an interesting method to detect this very poor prognosis form of schizophrenia

**REFERENCES:**


1. Bralet MC et al.Clinical characteristics and risk factors for kraepelinian subtype of schizophrenia: replication of previous findings and relation to summer birth.Psych Res 2002 Aug 30; 111 (2-3): 147-54
2. Noel Jorand MD et al.Mathematical stucture of language:dis tributional analysis- A new approach of discourse in psychia try. Ann Psychiatr 1997, vol 12, N°4, pp 245-257


**NR4-067**

## TREATMENT PATTERNS OF SCHIZOAFFECTIVE DISORDER AND SCHIZOPHRENIA IN TWO STATE-WIDE MEDICAID POPULATIONS


*Mark Olfson, M.D. 1051 Riverside Drive, New York, NY 10032, Steven C. Marcus, Ph.D., George J. Wan, Ph.D., M.P.H.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to describe the background, pharmacologic treatment and mental health service use characteristics that distinguish adult outpatients with schizoaffective disorder from those with schizophrenia.

**SUMMARY:**


Introduction: Uncertainty surrounds whether schizoaffective disorder is clinically distinct from schizophrenia. We compare treatment patterns of patients diagnosed with schizoaffective disorder and schizophrenia.

Methods: Medicaid claims from 2 states were analyzed focusing on adults with =2 claims with a first listed diagnosis for either schizoaffective disorder or schizophrenia during a 6-month study period and no claims with first listed diagnoses for the other disorder during this period or the preceding 6 months. Patient groups were compared with respect to demographic characteristics, medications and service use.

Results: More patients were treated for schizophrenia (n=38,760; 70.1%) than schizoaffective disorder (n=16,570; 29.9%). In the prestudy period, significantly more schizoaffective patients were treated for depressive (19.6% vs 11.4%, P<0.0001), bipolar (14.8% vs 5.8%, P<0.0001), substance use (11.8% vs 9.7%, P<0.0001) and anxiety (6.9% vs 5.3%, P<0.0001) disorders. Although similar proportions of both groups were treated with antipsychotics (schizoaffective disorder: 87.3%; schizophrenia: 87.1%), schizoaffective patients were significantly more likely to receive antidepressants (61.6% vs 44.0%, P<0.0001), mood stabilizers (55.2% vs 34.4%, P<0.0001) and anxiolytics (43.2% vs 35.1%, P<0.0001) during the study period. Schizoaffective patients were also significantly more likely than schizophrenia patients to receive psychotherapy (23.4% vs 13.0%, P<0.0001) and inpatient mental health care (9.4% vs 6.2%, P<0.0001).

Conclusion: Schizoaffective disorder is commonly diagnosed among Medicaid beneficiaries. These patients often receive complex pharmacologic regimens; many also receive treatment for mood disorders. Substantial differences in service use patterns between schizoaffective disorder and schizophrenia argue for considering separately the healthcare needs of these two patient groups.


**REFERENCES:**


1. Flynn J, Grieger TA, Benedek DM: Pharmacologic treatment of hospitalized patients with schizoaffective disorder. Psych Serv 2002; 53:94-96
2. Baethe C: Long-term treatment of schizoaffective disorder: review and recommendations. Pharmacopsychiatry 2003; 36:45-56


**NR4-068**

## THE IMPACT OF PSYCHOTIC RELAPSE DEFINITIONS IN ASSESSING DRUG EFFICACY: A RETROSPECTIVE COMPARISON OF QUETIAPINE XR, OLANZAPINE AND PALIPERIDONE ER


*Martin Knapp, Ph.D. Personal Social Service Research Unit London School of Economics Houghton Street, London United Kingdom WC2A 2AE, Martin Brecher, M.D., Julie Locklear Pharm.D., M.B.A., Krister Järbrink, Ph.D*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to; 1) recognize the significance of the definition of psychotic relapse used in clinical trials; 2) evaluate the impact of relapse criteria in assessing drug efficacy; and 3) assess the relative efficacy of extended release quetiapine fumarate (quetiapine XR), olanzapine and paliperidone extended release (ER) in preventing a psychotic relapse in patients with schizophrenia

**SUMMARY:**
Introduction: Several clinical trials have assessed the efficacy of antipsychotic therapy in preventing psychotic relapse; however, these studies have used different definitions of relapse based on symptom score data. The purpose of this study was to evaluate the relative efficacy presented in placebo-controlled studies that included outpatients only and using standardized psychotic relapse definitions.
Method: Psychotic relapse definitions from two published clinical trials 1-2, that met the criteria, were used to re-calculate relapse outcomes in extended release quetiapine fumarate (quetiapine XR) clinical trial data (Psychiatry [Edgemont] 2007; 4:34-50). Resulting relapse outcomes were compared to those in each of the studies1-2. Relapse definition was primarily based on changes in the Positive and Negative Syndrome Scale (PANSS) and Clinical Global Impression-Severity (CGI-S) scores for the paliperidone extended release (ER) study1 and changes in predefined Brief Psychiatric Rating Scale (BPRS) positive items for the olanzapine study2.
Results: Out of 11 relapse cases (11.7%) identified in the quetiapine XR study (n=94), 10 met the psychotic relapse criteria for the paliperidone ER study (n=105), along with 4 additional non-relapsing quetiapine XR patients. In total, 14 quetiapine XR patients (15%) relapsed compared to 23 relapse cases (22%) in the paliperidone ER study.
Only 2 of the 11 quetiapine XR relapsers and 1 of the non-relapsers met the psychotic relapse criteria from the olanzapine study (n=224). Three quetiapine XR patients (3.2%,) experienced a relapse compared to 9 patients (4.0%) in the olanzapine study.
Conclusion: Besides demonstrating the stability of quetiapine XR in relapse prevention, the results show that the definition of relapse has a significant impact on relapse outcomes and that the relative drug efficacy can be compared only when results are based on standardized relapse criteria. Supported by AstraZeneca Pharmaceuticals LP.
**REFERENCES:**
1. Kramer M, Simpson G, Maciulis V, Kushner S, Vijapurkar U, Lim P, Eerdekens M: Paliperidone Extended-Release Tablets for Prevention of Symptom Recurrence in Patients With Schizophrenia. J Clin Psychopharmacol 2007; 27:6–14
2. Beasley CM, Sutton VK, Hamilton SH, Walker DJ, Dos senbach M, Taylor CC, Alaka KJ, Bykowski D, Tollefson GD: A Double-Blind, 3.Randomized, Placebo-Controlled Trial of Olanzapine in the Prevention of Psychotic Relapse. J Clin Psychopharmacol 2003; 23:582–594

**NR4-069**

## DISAPPEARED FRONTAL MIDLINE THETA ACTIVITY (FMTHETA) IN NON-RESPONDER SCHIZOPHRENIA PATIENTS.

*Masatomo Suetsugi, M.D., Ph.D., Department of Neuropsychiatry, Yamaguchi University School of Medicine, 1-1-1 Minami-Kogushi, Ubu, 755-8505 Japan, Yasushi Mizuki, M.D., Ph.D., Yoshifumi,Watanabe,M.D.,Ph.D*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to understand Fmtheta could be an objective tool for evaluating the symptoms associated with schizophrenia.

**SUMMARY:**
Fmtheta is a distinct theta activity of EEG in the frontal midline area that appears during mental tasks and reflects focused attentional processing. A couple of groups demonstrated that prefrontal cortex (PFC) including anterior cingulated cortex (ACC) are the source of Fmtheta? Recently, in patients with Parkison desease, we found that the thalamus also play an important role in the appearance of Fmtheta using analysis of EEG recorded simultaneously from scalp and depth electrodes during the calculation. It is reported that the PFC, ACC and thalamus are the key brain regions in the pathophysiology of schizophrenia. We reported the close relation between the appearance of Fmtheta and sleep spindles in normal volunteers, and Ferraeli et al (2007) reported reduced sleep spindle activity in schizophrenic patients. In the present study, we investigated the appearance of Fmtheta and dopamine (DA) function in 50 male inpatients with chronic schizophrenia. The scores of PANSS and EEGs during arithmetic addition wer
**REFERENCES:**
1. Reduced sleep spindle activity in schizophrenia patients. Am J Psychiatry 2007; 164(3): 483-492 Rose SE, Chalk JB, Janke AL, Strudwick MW, Windus LC, Hannah DE, Mc Grath JJ, Pantelis C, Wood SJ, Mowry BJ: Evidence of altered prefrontal-thalamic circuitry in schizophrenia: an optimized diffusion MRI study. Neuroimage 2006; 32(1): 16-22

**NR4-070**

## SAFETY AND EFFICACY OF ZIPRASIDONE IN PEDIATRIC BIPOLAR DISORDER

*Melissa DelBello, M.D. 231 Albert Sabin Way, PO Box 670559, Cincinnati, OH 45267, Robert L. Findling, M.D., Paul P. Wang, M.D., Balarama Gundapaneni, M.S., Mark Versavel, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be should be familiar with the safety and efficacy of ziprasidone in children and adolescents with bipolar disorder.

**SUMMARY:**
Objective: To evaluate the efficacy and safety of oral ziprasidone in children and adolescents with bipolar I disorder. Methods: Subjects aged 10 to 17 years with bipolar I disorder (manic or mixed) were recruited to participate in a 4-week, double-blind, placebo-controlled multicenter study of ziprasidone. Diagnoses were confirmed using the K-SADS. Subjects were randomized in a 2:1 ratio to flexible-dose ziprasidone (80–160 mg/d) or placebo, titrated over 1 to 2 weeks. The primary and key secondary outcome measures were the change from baseline to end point in YMRS total and CGI-S scores, respectively. A mixed-model repeated measures ANCOVA was used to compare outcomes. Safety assessments included treatment-emergent adverse events, vital signs, laboratory measures, ECGs, and movement disorder scales. Results: 150 subjects were randomized to ziprasidone and 88 to placebo. In the ITT population, the estimated least squares (LS) mean changes from baseline to end point in the YMRS total score were –13.83 (ziprasidone) and –8.61 (placebo; p = 0.0005); a significant difference was also confirmed in the per protocol population (p = 0.0004). The estimated LS mean

changes from baseline to end point for CGI-S score in the ITT population were –1.43 (ziprasidone) and –0.74 (placebo; p = 0.0001). The most commonly reported adverse events in the ziprasidone group were sedation (22%), somnolence (25%), nausea (13%), fatigue (13%), and dizziness (11%). No changes in mean BMI z scores, or lipids, liver enzymes, or glucose levels were observed. QTcF mean changes from baseline at time of Cmax were 8.8 msec in the ziprasidone group and –3.5 msec in the placebo group. QT prolongation ? 460 msec was reported in 1 subject (0.7%) in the ziprasidone group.
Conclusion: These results suggest that ziprasidone is effective and generally well tolerated for the acute treatment of mania in children and adolescents with bipolar disorder. This study was supported by funding from Pfizer Inc.

**REFERENCES:**


1. Keck PE Jr, Versiani M, Potkin S, West SA, Giller E, Ice K: Ziprasidone in the treatment of acute bipolar mania: a three-week, placebo-controlled, double-blind, randomized trial. Am J Psychiatry 2003; 160:741–748.
2. Potkin SG, Keck PE Jr, Segal S, Ice K, English P: Zipra sidone in acute bipolar mania: a 21-day randomized, double-blind, placebo-controlled replication trial. J Clin Psychophar macol. 2005; 25:301–310.
3. Tohen M, Kryzhanovskaya L, Carlson G, Delbello M, Woz niak J, Kowatch R, Wagner K, Findling R, Lin D, Robertson-Plouch C, Xu W, Dittmann RW, Biederman J: Olanzapine versus placebo in the treatment of adolescents with bipolar mania. Am J Psychiatry 2007; 164:1547–1556.


**NR4-071**

## WEIGHT CONTROL BEHAVIORS IN PATIENTS WITH SCHIZOPHRENIA


*Michael Y Hwang, M.D. Wilkes-Barre VAMC1 111 East End Blvd (116), Wilkes-Barre, PA 18702, Sun Young Yum, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant will recognize that dieting behaviors in patients with schizophrenia are similar to the general population and therefore need to be considered in clinical assessments and treatment plans.

**SUMMARY:**


Introduction: Despite lack of systematic studies, it is conventionally thought that patients with schizophrenia have little control over their food intake. This study examines efforts to control weight in patients with schizophrenia.
Methods:Patients from an urban VAMC with well-established schizophrenia, clinically stable on treatments were asked to fill out a survey asking their highest, lowest adult weights, and about their attempts to lose weight: number and types of diets, greatest weight loss in an attempt. They were also asked about food avoidance: types, how strictly, and the reasons. SPSS was used for descriptive analyses.
Results:
46 out of 53 (87%) respondants reported at least one attempt to lose weight. Among them, 38 (83%) reported multiple attempts. Median difference between highest and lowest adult weight was 59 lbs (range 0-180). Patients with greater difference were more likely to have dieted multiple times. Patients reported various forms of popular diets, most commonly low carb, low protein as well as exercises. Median greatest weight loss in one attempt was 25 lbs (range 0-140). 26 (49%) reported avoidance of certain foods, mostly calorie dense, palatable foods such as cakes, ice cream, potato chips. 8 patients reported difficulties adhering to their own dieting rules while 18 reported being able to adhere to their own restriction rules most of the time to always. Discussion:Patients with schizophrenia seem to engage in dieting behaviors similar to the general population. They may actually be able to more rigidly adhere to their specific restriction rules, possibly associated with stereotypies of the illness. Dieting seems to be associated with greater weight fluctuations; the causal relationship would need further exploration.


**REFERENCES:**


1. Yum SY, Hwang MY, Lee YH, Halmi KA. Non-dieting approaches to the management of obesity in schizophrenia. Paradigm 2006; fall: 12,13,22.
2. Yum SY, Hwang MY, Halmi KA. Eating disorders in schizophrenia. Psychiatric Times. Vol XXIII, No 7. June, 2006. http://www.psychiatrictimes.com/Schizophrenia/showArticle.jhtml?articleID=189500521


**NR4-072**

## A 9-WEEK, PLACEBO-CONTROLLED STUDY IN SCHIZOPHRENIA PATIENTS: EFFICACY AND SAFETY OF THE LONG-ACTING INJECTABLE AGENT, PALIPERIDONE PALMITATE


*Michelle Kramer, M.D. Johnson & Johnson Pharmaceutical Research & Development, 1125 Trenton-Harbourton Road, Titusville, NJ, 08560, Robert Litman, M.D., David Hough, M.D., Rosanne Lane, M.A.S., Pilar Lim, Ph.D., Marielle Eerdekens, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand that the long-acting injectable agent, paliperidone palmitate, is both effective and well tolerated in the treatment of acute schizophrenia.

**SUMMARY:**


Introduction: This 9-week, randomized, double-blind, placebo-controlled study assessed the efficacy and safety of long-acting injectable, paliperidone palmitate in schizophrenia. Methods: Patients (n=247) were randomized to receive paliperidone palmitate 50 or 100mg eq. or placebo on Days 1, 8, 36 (no oral supplementation). The primary efficacy variable=change in mean PANSS total score (baseline=87.0±12.5). Secondary endpoints included onset of action and change in CGI-S scores. Safety assessments included adverse event (AE) reporting and laboratory assessments. Results: The ITT set (n=197) showed significant improvement at endpoint in mean±SD change in PANSS total score (p<=0.001) for paliperidone palmitate 50mg eq. (-5.2±21.5) and 100mg eq. (-7.8±19.4) vs. placebo (+6.2±18.3); improvements were observed from Day 8 (p<=0.011). All 5 PANSS factor scores significantly improved at endpoint (p<=0.08; prespecified alpha level=0.1). CGI-S ratings of marked/severe/extremely severe decreased from baseline to endpoint: paliperidone palmitate 50mg eq.=52% to 37%; paliperidone palmitate 100mg eq.=44% to 32%; placebo=52% to 50%. Incidence of treatment-emergent AEs was similar across groups (64%, 65% and 60% for placebo, paliperidone palmitate 50 and 100mg eq., respectively). Insomnia, schizophrenia

and extrapyramidal disorder occurred more frequently (>=5% difference) in either paliperidone palmitate group vs. placebo. Serious AEs in >=1 patient in any group were schizophrenia and psychotic disorder. No deaths occurred. There were no clinically relevant treatment-related changes in laboratory analytes. Prolactin levels at endpoint remained above the normal reference range with paliperidone palmitate but decreased to pre-treatment levels with placebo. Injections were well tolerated locally. Conclusions: Paliperidone palmitate (50 and 100mg eq. doses) was effective and well tolerated in the treatment of acute schizophrenia. Funded by J&J Pharmaceutical Services, LLC and J&J PRD.

**REFERENCES:**

1. Kane J, et al.: Treatment of schizophrenia with paliperidone extended-release tablets: a 6-week placebo-controlled trial. Schizophr Res 2007; 90:147-161.
2. Davidson M, et al.: Efficacy, safety and early response of paliperidone extended-release tablets (paliperidone ER): results of a 6-week, randomized, placebo-controlled study. Schizophr Res 2007; 93:117-130.

**NR4-073**

## DESCRIPTIVE EPIDEMIOLOGY AND COMORBIDITY OF SCHIZOPHRENIA IN THE NATIONAL HOSPITAL DISCHARGE SURVEY (NHDS), 1979-2003

*Natalya Weber, M.D. Department of Epidemiology,Division of Preventive Medicine,Walter Reed Army Institute of Research, 503 Robert Grant Ave, Silver Spring, MD 20901, David N. Cowan, Ph.D., M.P.H.; David W. Niebuhr, M.D., M.P.H., M.Sc.; Amy M. Millikan, M.D., M.P.H.; Timothy E. Powers, M.S.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand the distribution of demographic characteristics, time trends, and the likelihood of certain psychiatric and none-psychiatric comorbid conditions among hospitalized with schizophrenia.

**SUMMARY:**

Introduction: Medical morbidity and mortality rates in schizophrenia patients are elevated compared to the general US population. More then 50% of patients with schizophrenia have been diagnosed with one or more comorbid psychiatric or medical conditions that worsen prognosis and contribute to the increased morbidity and mortality. The greater risk of concurrent medical illnesses among persons with schizophrenia may be attributed to high risk and unhealthy behaviors, socioeconomic disadvantages, and side effects of psychotropic medications. Methods: Using NHDS we evaluated temporal trends in the proportional morbidity of schizophrenia, demographic characteristics and the most frequent comorbid conditions among hospitalizations with schizophrenia, in comparison to hospitalizations with other diagnoses. The demographic characteristics are presented for the total estimated number of discharges (N=835,919,990) based on the NHDS sample of 5,733,781 records. Comorbidity is analyzed using unweighted NHDS sample. Results: Percent of hospitalized with schizophrenia was higher among males (1.3) compared with females (0.8), blacks (1.8) compared with whites (0.9) or others (1.0), age group 15-44 (1.6) followed by 45-64 (1.3), and those from Northeast (1.5) compared with the other regions (=1). There was a significant increase over time in the proportion of discharges with schizophrenia among both males and females ($p<0.0001$). As expected compared with the discharges without schizophrenia, those with schizophrenia have a much higher proportion of comorbidity with other mental disorders and some none-psychiatric conditions such as obesity (proportionate morbidity ratio 2.1), chronic airway obstruction not elsewhere classified (1.7), asthma (1.4), and diabetes type II (1.2). Discussion: A closer attention to prevention, early diagnosis and treatment of comorbid conditions may decrease medical morbidity and mortality and improve schizophrenia prognosis.

**REFERENCES:**

1. Carney CP, Jones L, Woolson RF. Medical comorbidity in women and men with schizophrenia: a population-based con trolled study. J Gen Intern Med 2006; 21(11):1133-1137.
2. Brown S, Inskip H, Barraclough B. Causes of the excess mor tality of schizophrenia. Br J Psychiatry 2000; 177:212-217.

**NR4-075**

## NEW RESEARCH OF SLEEP IN SCHIZOPHRENIA: PARANOID SCHIZOPHRENIA IS IT AN AFFECTIVE DISORDERS?

*Nikola Ilankovic, Ph.D. Pasterova 2, Belgrade, Yugoslavia YU-11000, Andrej Ilankovic, M.D, M.A, Ph.D., Tanja Lakovic, M.D., Vera Ilankovic, Ph.D., Lana Marija Ilankovic, M.A, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to make a differences between sleep disturbances in acute, paranoid and chronic schizophrenic states and use the new neurophysiological models in differential dignosis of psychotic states.

**SUMMARY:**

AIMS: Emil Kraepelin introduced a disorder called “paranoid depression,” but “paranoid” became linked to schizophrenia, not to mood disorders. We made Polysomnographic (PSG) measurement of sleep by schizophrenic patients (acute, paranoid and chronic) to investigate models of sleep disturbances in different types of schizophrenia. METHODS: Neurophysiologic measurement of sleep using electroencephalography (EEG), electrooculography (EOG) and electromyography (EMG) was carried out in 30 patients with an acute schizophrenic state (F 23.1 & F 23.2 in ICD-10) and in 30 patients with a chronic/ residual schizophrenic state (F 20.5 in ICD-10). Recording of sleep patterns (according to Rechtschaffen & Kales), statistical analysis and estimation of the discriminative models of sleep was made in these two groups of psychotic patients. The Electrophysiological Profile of Sleep (EPS) was derived from these measures and contained 130 variables of nocturnal sleep. Statistical analysis was by step-wise discriminative function analysis. RESULTS: The most discriminative variable in this battery was the Index of Endogenous Periodicity/Perturbation (IEP-P1): IEP-P1=REM-1/NREM-1, where REM-1 and NREM-1 are the first periods of REM and NREM sleep, respectively. Two patterns were seen: 1. The Index of Endogenous Perturbation (IEP-P1) was LOW in the first group which we call the “REM DEFICIT” type of sleep disturbance (with reduction of “REM-1 phase”) in acute schizophrenic states; IEP-P1 < 0.3. 2. The IEP-P1 index was HIGH in the second group which we call the “DELTA DEFICIT” type of disturbed

sleep (with reduction of "delta-sleep") in paranoid and chronic (residual) schizophrenia states; IEP-P1 > 2.40, very similar to sleep disturbances by affective (psychotic mood) disorders. CONCLUSIONS: The results of our investigations demonstrate that the Index of endogenous sleep perturbation (IEP-P1) is a highly reliable indicator of sleep disturbance in acute, paranoid schizophrenia.

**REFERENCES:**


1. Ilankovic A., Ilankovic N., Lakovic T., Ilankovic V., Ilankovic L.M.: NEW DIMENSIONS OF SLEEP IN SCHIZOPHRE NIA (BNPA London, 2006), Journal of Neurology Neuro surgery and Psychiatry, 2006.
2. Charles Raymond Lake: Hypothesis: Grandiosity and Guilt Cause Paranoia; Paranoid Schizophrenia is a Psychotic Mood Disorder. Schizophr Bull, December 2007.


**NR4-076**

## EFFECT OF ZIPRASIDONE DOSE ON ALL-CAUSE DISCONTINUATION IN RANDOMIZED CLINICAL TRIALS OF SCHIZOPHRENIA


*Onur N Karayal, M.D. Pfizer Inc235 East 42nd StreetNY, NY 10017, New YorkNY 10017, Leslie Citrome, M.D., M.P.H., Ruoyong Yang, Ph.D., James Harnett, Pharm.D., M.S., Paul Glue, M.D., Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to explain the relationship of ziprasidone dose to all-cause discontinuation in fixed-dose randomized clinical trials.

**SUMMARY:**


Objective: This study examines the relationship of ziprasidone dose and all-cause discontinuation in randomized clinical trials in patients with acute exacerbation of schizophrenia or schizoaffective disorder. Methods: Data were analyzed for the first 28 days from 4 pivotal, randomized, double-blind, fixed-dose ziprasidone trials. Patients in these trials had a *DSM-IV* diagnosis of schizophrenia or schizoaffective disorder where ziprasidone was administered twice daily with food. Data were analyzed to examine the association between ziprasidone dose and all-cause discontinuation due to lack of efficacy and/or adverse events relative to placebo. Differences in discontinuation were evaluated using Cox proportional hazard models and number needed to treat (NNT). Results: Overall all-cause discontinuation for ziprasidone ranged from 26.9% for 160 mg/d to 40.9% for 40 mg/d compared with 49.5% for placebo. The NNTs for avoiding 1 additional all-cause discontinuation compared with placebo were 12 (40 mg/d, n = 186), 25 (80 mg/d, n = 154), 9 (120 mg/d, n = 125), and 4 (160 mg/d, n = 104). The 120 mg/d and 160 mg/d groups were the only ziprasidone regimens associated with significantly lower all-cause discontinuation rates vs placebo ($p < 0.05$). The ; 160 mg/d group was the only ziprasidone regimen associated with a significantly lower all-cause discontinuation rate vs lower-dose ziprasidone regimens (40–80 mg/d, $p < 0.05$). Lack of efficacy accounted for 51% of all medication discontinuations across ziprasidone groups, compared with 62% for placebo. Findings for overall discontinuation due to lack of efficacy are consistent with results for all-cause discontinuation. Conclusions: Consistent with previous reports, higher doses of ziprasidone (120–160 mg/d) are associated with significantly lower all-cause discontinuation rates and more favorable NNTs vs placebo. This was primarily driven by lower rates of discontinuation due to lack of efficacy. Supported by Pfizer.


**REFERENCES:**


1. Mullins CD, Shaya FT, Zito JM, Obeidat N, Naradzay J, Harrison DJ: Effect of initial ziprasidone dose on treatment persistence in schizophrenia. Schizophr Res 2006; 83:277–284.
2. Citrome L. Show me the evidence: using number needed to treat. South Med J 2007; 100:881–884.


**NR4-077**

## EFFECTS OF SWITCHING FROM EXISTING ANTIPSYCHOTIC THERAPY TO ZIPRASIDONE ON WEIGHT AND METABOLIC PARAMETERS IN PATIENTS WITH SCHIZOPHRENIA


*Paul Glue, M.D. Pfizer Inc. 235 East 42nd Street, New YorkNY 10017, Onur N. Karayal, M.D., M.P.H., Sheela Kolluri, Ph.D., Alessandro Rossi,M.D., Antonio Vita, M.D., Antonio Sciarretta, M.D., Claudio Mencacci, M.D., Paola Tiradritti M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to to recognize the changes in metabolic parameters that result from switching from the antipsychotics olanzapine, risperidone, quetiapine, or haloperidol to ziprasidone.

**SUMMARY:**


Background: Prior studies have shown that switching to ziprasidone from other antipsychotics leads to decreases in weight and improvements in metabolic parameters.[1,2] This analysis assessed a cohort of Italian patients switching from prior antipsychotics to ziprasidone. Methods: In 2 similarly designed studies, patients with schizophrenia not tolerating or responding to current antipsychotic therapy (olanzapine, risperidone, quetiapine, or haloperidol) were switched to open-label ziprasidone, 80 to 160 mg/d, for 8 weeks. In both studies, the primary efficacy variables were changes from baseline scores in PANSS total and CGI-S at Weeks 1-8; a paired t test assessed statistical significance of the change from baseline at each Week (LOCF). In this analysis, data from the 2 studies were pooled and the mean change from baseline at Week 8 in weight and metabolic parameters were analyzed similarly to the primary efficacy variables. Results: In total, 510 patients were randomized, 501 patients received treatment with ziprasidone. From the pooled data analysis of both studies, decreases in weight (kg) at Week 8 were –1.70 ($p < 0.0001$), –1.43 ($p < 0.0001$), –0.78 ($p = 0.046$), and –0.44 ($p = 0.073$) after switching from olanzapine, risperidone, quetiapine, and haloperidol, respectively. The corresponding changes in metabolic parameters were: body mass index (kg/m2), –0.61 ($p < 0.0001$), –0.49 ($p < 0.0001$), –0.27 ($p = 0.034$), and –0.13 ($p = 0.129$); total cholesterol (mg/dL), –16.13 ($p < 0.0001$), –9.83 ($p = 0.005$), –9.27 ($p = 0.096$), and –4.65 ($p = 0.083$) and glycosylated hemoglobin (HbA1c) (%),–0.20 ($p = 0.004$), –0.11 ($p = 0.049$), –0.11 ($p = 0.385$), and 0.03 ($p = 0.756$). PANSS total and CGI-S scores improved significantly from baseline. Conclusions: These data confirm observations that switching from other antipsychotics to ziprasidone leads to improvements in weight and metabolic parameters, occurring as early as 8

weeks post-switch. This study was supported by Pfizer Inc.

**REFERENCES:**


1. Weiden PJ, Daniel DG, Simpson G, Romano SJ. Improve ment in indices of health status in outpatients with schizo phrenia switched to ziprasidone. J Clin Psychopharmacol 2003; 23(6):595–600.
2. Weiden PJ, Newcomer JW, Loebel AD, Yang R, Lebovitz HE. Long-term changes in weight and plasma lipids during main tenance treatment with ziprasidone. Neuropsychopharmacol ogy 2007 Jul 18; [Epub ahead of print].


**NR4-078**

## EFFICACY OF ILOPERIDONE IN A PLACEBO- AND ZIPRASIDONE-CONTROLLED CLINICAL TRIAL FOR THE TREATMENT OF SCHIZOPHRENIA


*Peter J Weiden, M.D. Center for Cognitive Medicine (MC913)The Neuropsychiatric Institute 912 South Wood Street, Chicago, IL 60612, Michael Di Marino, M.A., Curt D. Wolfgang, Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, participants should be able to: 1) recognize the efficacy profile of iloperidone; 2) discuss the efficacy of iloperidone relative to ziprasidone.

**SUMMARY:**


Introduction: Iloperidone is an atypical antipsychotic currently being evaluated by the FDA for use as a treatment for schizophrenia. The results of a pivotal Phase III efficacy study of iloperidone are presented here and respective safety data will be presented separately. Methods: The efficacy and safety of iloperidone at a dose of 24 mg/day was evaluated in a 4-week, double-blind, inpatient trial of acute exacerbation of schizophrenia using both a placebo and an active treatment comparator (ziprasidone 160 mg/day). Recently admitted adult inpatients with acute psychotic exacerbation of schizophrenia meeting PANSS-T criteria for an acute psychotic episode defined by =70 on PANSS-T, and =4 on at least two PANSS-P symptoms and =4 on CGI-S. The primary efficacy variable was change in PANSS-T, analyzed using mixed-effects model repeated measures (MMRM). PANSS subscales, BPRS, and CGI also were measured. Results: Of the 593 randomized patients (iloperidone 295, ziprasidone 149, placebo 149), 65% of iloperidone, 66% of ziprasidone, and 60% of placebo patients completed the study. From baseline to endpoint, iloperidone showed significantly greater improvement than placebo in PANSS-T scores (-12.0; P=0.006), as did ziprasidone (-12.3; P=0.012). Significant improvements from baseline to endpoint were observed for iloperidone compared with placebo in BPRS (-7.4; P=0.013), PANSS-P (-4.2; P<0.001), PANSS-N (-3.0; P=0.027), and CGI-S scores (-0.7; P=0.007), the magnitude of which were similar to the ziprasidone comparator as well. Conclusions: In this Phase III acute trial, iloperidone (24 mg/day) was more effective than placebo for the treatment of acute psychotic exacerbation, and with its favorable safety and tolerability profile, iloperidone may offer an alternative treatment option to existing antipsychotics for patients with schizophrenia. Vanda Pharmaceuticals sponsored this study.


**REFERENCES:**


1. Lieberman JA, Stroup TS, McEvoy JP, et al. Effectiveness of antipsychotic drugs in patients with chronic schizophrenia. N Engl J Med 2005; 353:1209-1223.
2. Weiden PJ. Switching in the era of atypical antipsychotics. An updated review. Postgrad Med 2006; Spec No:27-44.


**NR4-079**

## REDUCTION OF FUNCTIONAL DISABILITY WITH ATYPICAL ANTIPSYCHOTIC TREATMENT: A LONG-TERM


*Randomized Clinical TrialPhilip D. Harvey, Ph.D. Department of PsychiatryEmory University School of Medicine 101 Woodruff Circle, Suite 4000, Atanta, GA 30322, Antony Loebel, M.D., Charlotte M. Kremer, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) understand the impact of atypical antipsychotic medications on functional disability in schizophrenia; and 2) understand the concept of functional remission in schizophrenia.

**SUMMARY:**


Background. Recent interest has focused on the measurement of clinical remission in people with schizophrenia. However, development of remission may not be associated with functional recovery, which needs to be examined separately. This study examined the development of "functional remission" in a long-term double-blind study of haloperidol and ziprasidone. Methods. Community dwelling patients with schizophrenia were randomized to treatment with haloperidol (n=47) or ziprasidone dosed either once or twice daily (n=139). They were re-examined at follow-up intervals that ranged up to 196 weeks. Their community functioning was examined with the Heinrichs-Carpenter Quality of Life Scale (QLS). Total scores for employment and social functioning and achievement of improvement milestones across the individual items were analyzed. Results. Mixed random-effects models adjusting for length of follow-up indicated a significant (p<.05) treatment effect favoring ziprasidone for social functioning. While the model was not significant for employment, the 95% confidence interval for change scores in the haloperidol group overlapped with 0, while mean change was significantly greater than 0 for the ziprasidone group. Analyses of the distributions of change scores across the items showed that the number of items where endpoint scores were 5 or 6 (reflecting minimal to no impairment) was significantly higher in ziprasidone treated patients, (X2[8]=16.92, p=.03). There was an overall shift in the distribution of endpoint scores, with haloperidol patients having fewer items where substantial change was detected, compared to ziprasidone patients. Implications. Long term treatment with ziprasidone was associated with greater functional gains than treatment with conventional medications. This study was conducted by Pfizer, Inc, who is the sole sponsor of the study.


**REFERENCES:**


1. Harvey PD, Patterson TL, Potter LS, Zhong K, Brecher M: Improvement in social competence with short-term atypical antipsychotic treatment: A randomized, double-blind com parison of Quetiapine versus Risperidone for social compe tence, social cognition, and neuropsychological functioning. Am J Psychiatry 2006; 163:1918-1925.
2. Velligan DI, Prihoda TJ, Sui D, Ritch JL, Maples N, Miller AL The effectiveness of quetiapine versus conventional anti psychotics in improving cognitive and functional outcomes in standard treatment settings J Clin Psychiatry2003;64:524531.

**NR4-080**

## THE EFFICACY OF ARIPIPRAZOLE ON THE FIVE DIMENSIONS OF SCHIZOPHRENIA DERIVED BY FACTOR ANALYSIS: POOLED DATA FROM FIVE SHORT-TERM STUDIES

*Philip Janicak, M.D. Professor of PsychiatryRush University1720 W Polk St, Chicago, IL 60612, Ira Glick, M.D., Stephen R. Marder, M.D., James M. Eudicone, M.S., Andrei Pikalov, M.D., Ph.D., Robert D. McQuade, Ph.D., Sheila Assunção-Talbott, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to: 1) describe the five symptom dimensions of schizophrenia as derived from a PANSS factor analysis and the importance of targeting all these symptom domains for an optimal clinical outcome; and 2) appreciate the similarities and differences in improvement of these symptom dimensions in patients receiving aripiprazole, haloperidol or risperidone as compared to placebo.

**SUMMARY:**

Objective: To evaluate the efficacy of aripiprazole on five dimensions of schizophrenia derived by factor analysis. Methods: Pooled data were analyzed from five short-term, double-blind, multicenter studies involving patients hospitalized with an acute exacerbation of schizophrenia or schizoaffective disorder and randomized to aripiprazole (ARI 2-30mg/day) (n=875), haloperidol (HAL) (n=193; three studies), risperidone (RIS) (n=95; one study) or placebo (PBO) (n=406). Factor analysis of the Positive and Negative Syndrome Scale (PANSS) data evaluated changes from baseline with ARI on five symptom dimensions of schizophrenia (positive, negative, cognitive, depression/anxiety and hostility) (1,2). The same variables were also used for an analysis in schizoaffective disorder patients (ARI n=117; PBO n=54). Results: ARI demonstrated significantly greater improvement than PBO on all five PANSS factors (each p<=0.001). In the three HAL-active control studies, ARI showed significantly greater improvement vs. PBO on all five PANSS factors whereas HAL separated from PBO on four of the five factors (p<=0.05 for all with the exception of the anxiety/depression factor in the HAL arm). No significant was found between active arms. In the RIS-active control study, RIS separated on all five PANSS factors vs. PBO and ARI on four of the five factors (p<=0.05 for all with the exception of the anxiety/depression factor in the ARI arm). Comparison between both active arms yielded no significant differences. In the schizoaffective group, despite the small sample sizes, ARI was associated with significantly greater improvement vs. PBO on the positive and hostility factors (p<=0.05) and trended toward significance on the negative factor (p=0.055). Conclusion: Examination of a PANSS-based five factor model showed ARI, RIS, and HAL to be efficacious across multiple symptoms domains associated with schizophrenia when compared with PBO. Supported by Bristol-Myers Squibb and Otsuka.

**REFERENCES:**

1. Lindenmayer JP, Grochowski S, Hyman RB: Five factor odel of schizophrenia: replication across samples. Schizophr Res 1995;14:229-234.
2. Marder SR, Davis JM, Chouinard G (1997): The effects of risperidone on the five dimensions of schizophrenia derived by factor analysis: combined results of the North American trials. J Clin Psychiatry 1997;58:538-546.

**NR4-081**

## ASENAPINE PHARMACOKINETICS: INFLUENCE OF HEPATIC AND RENAL IMPAIRMENT

*Pierre Peeters, Ph.D. Organon, a part of Schering-Plough CorporationP.O. Box 20, Oss, Netherlands 5340 Howard Bockbrader, Edwin Spaans, Kenneth Lasseter, Thomas Marbury, Gordon L. Gibson, Henrik J. M. M. de Greef*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) describe the effects of hepatic impairment on the pharmacokinetics of asenapine and its primary metabolites; 2) describe the effects of renal impairment on the pharmacokinetics of asenapine and its primary metabolites; and 3) describe the pharmacokinetics of asenapine and its primary metabolites.

**SUMMARY:**

Objective: Asenapine is a novel psychopharmacologic agent being developed for the treatment of schizophrenia and bipolar disorder. Asenapine is extensively metabolized into two metabolites, N-glucuronide (N-gluc) and N-desmethylasenapine (desM) that are biologically inactive. As part of the safety testing program of asenapine, we assessed the impact of hepatic impairment (HI) and renal impairment (RI) on the pharmacokinetics of asenapine, desM, and N-gluc. Methods: Two studies that included patients and healthy controls (HI, N=30; RI, N=32) were conducted. Mild, moderate, and severe status was determined for HI using the Child-Pugh system and for RI using creatinine clearance (CrCl) and the Cockcroft-Gault formula. Following a single sublingual dose of 5 mg asenapine, serial blood samples were obtained for asenapine and desM exposure in both studies, and also for N-gluc exposure in the HI study. Pharmacokinetic parameters were determined from plasma concentration-time data using standard noncompartmental methods. Results: Mild or moderate HI did not affect asenapine (or its metabolites) exposure when compared to healthy controls. Severe HI increased asenapine, desM, and N-gluc exposure by 7-, 3-, and 2-fold, respectively. Asenapine exposure was approximately 30% higher with mild RI, but only 3% and 6% higher with moderate and severe RI, respectively, compared with controls. DesM exposure was slightly increased with mild RI and slightly decreased with moderate and severe RI compared with controls. Clinically relevant correlations between CrCl and asenapine or desM Cmax or AUC0-8 were not observed in patients with RI. Conclusions: Exposure to asenapine was increased in patients with severe HI but not in patients with mild or moderate HI or in patients with RI. No dose adjustment is needed in patients with RI or in patients with mild or moderate HI. This research was funded by Organon, a part of Schering-Plough Corporation.

**REFERENCES:**

1. Potkin SG, Cohen M, Panagides J: Efficacy and tolerability of asenapine in acute schizophrenia: a placebo- and risperi done-controlled trial. J Clin Psychiatry 2007; 1492–1500.
2. Caccia S: Biotransformation of post-clozapine antipsychotics: pharmacological implications. Clin Pharmacokinet 2000; 38: 393–414.

NR4-082

## ASENAPINE VERSUS OLANZAPINE IN PATIENTS WITH PREDOMINANT, PERSISTENT NEGATIVE SYMPTOMS OF SCHIZOPHRENIA

*Pilar Cazorla, Organon, a part of Schering-Plough Corporation, Roseland, NJ 07068, John Panagides, Larry Alphs, Alex Kouassi, Robert Buchanan*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) describe the criteria used to identify patients with predominant, persistent negative symptoms of schizophrenia; 2) discuss the effects of asenapine on predominant, persistent negative symptoms of schizophrenia in comparison with the effects of olanzapine; and 3) describe the adverse effect profile of asenapine compared with olanzapine in patients with predominant, persistent negative symptoms of schizophrenia.

**SUMMARY:**

Introduction: We assessed the effects of asenapine, a novel psychopharmacologic agent being developed for the treatment of schizophrenia and bipolar disorder, and olanzapine in patients with predominant, persistent negative symptoms of schizophrenia. Methods: In a double-blind study, 481 patients with a >=6 month history of negative symptoms were randomly assigned to asenapine 5 or 10 mg BID or olanzapine 5 to 20 mg QD for 26 weeks. Primary efficacy was change from baseline on the 16-item Negative Symptom Assessment (NSA-16) total score using mixed model for repeated measures. Results: At week 26, mean change from baseline on NSA-16 total score was –12.2 with asenapine and –12.5 with olanzapine; difference between treatments not significant. In a subgroup of patients with predominant negative symptoms persisting for >2 years, mean change was –12.1 with asenapine and –11.6 with olanzapine. On secondary endpoints in the patient subgroup, mean changes from baseline with asenapine and olanzapine, respectively, were –7.1 and –6.6 on the Positive and Negative Syndrome Scale (PANSS) negative subscale score and –8.0 and –7.4 on PANSS negative symptom Marder factor. Little change was observed in positive or depressive symptoms indicating that the proper patients were enrolled. Treatment-related AEs occurred in 55% of patients in each group, most commonly insomnia, headache, and somnolence with asenapine; weight gain, somnolence, and insomnia with olanzapine. Weight gain occurred in 5% and 21% of the asenapine and olanzapine groups, respectively. EPS symptoms occurred in approximately 8% and 3% of the asenapine and olanzapine groups, respectively. Conclusion: Asenapine decreased NSA-16 total score from baseline in patients with predominant, persistent symptoms of schizophrenia by 27%, which may be considered clinically relevant. Asenapine was well tolerated, with minimal effect on weight. This research was supported by Organon, a part of Schering-Plough Corporation.

**REFERENCES:**

1. Buchanan RW: Persistent negative symptoms in schizophre nia: an overview. Schizophr Bull 2007; 33:1013-1022
2. Potkin SG, Cohen M, Panagides J: Efficacy and tolerability of asenapine in acute schizophrenia: a placebo- and risperi done-controlled trial. J Clin Psychiatry 2007; 68:1492-1500.

NR4-083

## A PILOT STUDY OF A CATECHOL-O-METHYL-TRANSFERASE (COMT) INHIBITOR AGENT IN TREATMENT OF NEGATIVE AND POSITIVE SYMPTOMS OF SCHIZOPHRENIA

*Rahim Shafa,, M.D., 67 Union Street, Suite #107, Natick, MA 01760, Hamid Mostafavi Abdolmaleky, M.D., Sahab Yaqubi, M.D., Cassandra L. Smith, Ph.D., Ming Tsuang, M.D., Ph.D., and S. Nassir Ghaemi, M.D., M.PH.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to: 1) understand the role of COMT gene activity in relation to hypofrontality in szchizophrenia; 2) demonstrate knowledge of dopamine regulating genes methylation, overall dopamine activity and negative/ positive symptoms of schizophrenia; and 3) recognize the importance of adjunct treatment with COMT-Inhibitiors to improve negative and positive symptoms of schizophrenia regardless of the type of antipsychotics used.

**SUMMARY:**

Introduction: COMT gene coding an enzyme involved in synaptic cleft Dopamine (DA) degradation located on chromosome 22q11.21, a region strongly linked to SCZ. COMT has two isoforms: membrane-bound COMT (MB-COMT) and soluble COMT, transcribed from two different promoters. COMT over-activity is associated with disturbance in attention, executive cognition, working memory and hedonic activity; clinical symptoms compatible with Negative Symptoms of SCZ. We have recently reported a highly significant MB-COMT promoter hypomethylation and MB-COMT over-expression in the post-mortem brains of 40 patients with SCZ versus the controls, accompanied with decrease expression of DRD1, DRD2 and RELN genes, particularly in the left frontal lobes supporting the hypothesis of laterality of hypofrontality in SCZ. Furthermore, the frequency of valine allele at the Val158Met polymorphism was significantly increased in SCZ, suggesting COMT promoter hypomethylation and associated hyper-expression or the hyperactive valine allele as likely contributors to an increase in dopamine degradation in the frontal lobe which has been postulated to lead to limbic DA hyperactivity and Positive Symptoms formation in SCZ. Methodology: Based on these findings a COMT-inhibitor drug, Entacapone, (used in Parkinson's disease) was tried in an out-patient open label, adjunct therapy to standard of care antipsychotic treatment in SCZ. Clinical response was evaluated through CGI-S, GAS, and relevant items of SANS and PANNS. Results: Entacapone improved negative and positive symptoms in SCZ, Mean CGI improved 57% (ps=0.05) details will be discussed. There was no exacerbation of psychosis in SCZ. Conclusion: COMT-Inhibitors, as adjunct to antipsychotics may have potentials to improve function in SCZ proposing more studies in this arena.

**REFERENCES:**

1. Abdolmaleky HM, Cheng KH, Russo A, Smith CL, Faraone SV, Wilcox M, Shafa R, Glatt SJ, Nguyen G, Ponte JF, Thiag alingam S, Tsuang MT. Hypermethylation of the reelin (RELN) promoter in the brain of schizophrenic patients: a preliminary report. Am J Med Genet B Neuropsychiatr Genet. 2005 Apr 5;134(1):60-6.
2. Abdolmaleky HM, Cheng KH, Faraone SV, Wilcox M, Glatt

SJ, Gao F, Smith CL, Shafa R, Aeali B, Carnevale J, Pan H, Papageorgis P, Ponte JF, Sivaraman V, Tsuang MT, Thiagal ingam S. Hypomethylation of MB-COMT promoter is a ma jor risk factor for schizophrenia and bipolar disorder.Hum Mol Genet. 2006 Nov 1;15(21):3132-45.Epub 2006 Sep 19.

**NR4-084**

## REDUCED SALIVATION AND IMPROVED CONDITION: PRELIMINARY RESULTS FROM FOCUS REGISTRY OF CLOZAPINE ORALLY DISINTEGRATING TABLETS FOR SCHIZOPHRENIA

*Ramesh Gihwala, M.D. Ramesh Gihwala & Associates, 825 Majestic Ct., Ste A, Gastonia, NC 28054, Gil Golden, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to identify potential differences in side-effect profiles between same-class atypical antipsychotic agents, based on different mechanisms of drug delivery. This information should enable the clinician to make appropriate treatment recommendations for patients with treatment-resistant schizophrenia.

**SUMMARY:**

Introduction: Atypical antipsychotic agents are sometimes associated with troublesome side effects, such as weight gain and hypersalivation. There have been reports of patients losing weight after being switched from standard oral clozapine to a newer formulation of clozapine, FazaClo® Orally Disintegrating Tablets (FODT). The FOCUS survey is a multicenter, open-label, observational registry assessing the effect of FODT on weight and salivation in patients with treatment-resistant schizophrenia. Preliminary data are presented here from a single center. Methods: 29 patients =18 years of age were switched from standard clozapine to FODT and evaluated under naturalistic conditions for up to 12 weeks. Body weight, salivation (0=normal to 4=marked drooling), and Clinical Global Impression (CGI) scores for Severity of Illness (1=normal to 7=extremely ill) were assessed at baseline (prior to initiation of FODT treatment) and Weeks 4, 8, and 12. CGI scores for Global Improvement (3=minimally improved, 2=much improved, and 1=very much improved) were assessed at Weeks 4, 8, and 12. Results: The mean maintenance dose of FODT was 450?475 mg/day. The overall mean weight change from baseline to Week 12 was -0.55 lbs. The mean ?SD salivation score was 2.84 ?1.57 at baseline and 2.8 ?1.58, 2.11 ?1.76, and 1.14 ?1.58 at Weeks 4, 8, and 12, respectively. The mean CGI-Severity scores were stable, with no meaningful changes over time. The CGI-Improvement scores on average improved over time; the mean ?SD score was 3.63 ?0.8 at Week 4, 2.96 ?1.1 at Week 8, and 2.25 ?1.2 at Week 12. Conclusions: Results from this single-center case series suggest that FODT may decrease sialorrhea in clozapine-treated patients.

**REFERENCES:**

1. Sonnenberg JG, Reinstein MJ, Mohan SC, Jones LE, Girard S. Oral clozapine tablets versus FazaClo® (clozapine, USP) orally disintegrating tablets: Differences in side effects. Poster presentation at: 18th Annual US Psychiatric and Mental Health Congress; November 9, 2005; Las Vegas, NV.
2. McEvoy JP, Lieberman JA, Stroup TS, et al. Effectiveness of clozapine versus olanzapine, quetiapine, and risperidone in patients with chronic schizophrenia who did not respond to prior atypical antipsychotic treatment. Am J Psychiatry. 2006;163:600-610.

**NR4-085**

## RELATIONSHIP BETWEEN FUNCTION AND EMPLOYMENT STATUS IN PATIENTS WITH SCHIZOPHRENIA

*Riad Dirani, Ph.D. 1125 Trenton-Harbourton Road, Titusville, NJ 08560, Chris Kozma, Ph.D., Lian Mao, Ph.D., Joan Amatniek, M.D., Carla Canuso, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to discuss the relationship between function and employment status in patients with schizophrenia.

**SUMMARY:**

Introduction: This post-hoc analysis aimed to assess functioning and employment status in patients with schizophrenia. Methods: Data were from three, 52-week, open-label extensions of the double-blind pivotal trials of paliperidone extended-release (ER). Employment status and Personal and Social Performance (PSP) scale scores were reported at baseline and 4-week intervals. Included patients were in the open-label intent-to-treat population, had at least one postbaseline PSP score and had valid dates in the productivity data. The PSP was used to assess patient functioning. Employment categories included full-time; part-time; casual; sheltered work; unemployed, but seeking work; unemployed, but not seeking work; retired; housewife or dependent husband and student. Mean PSP scores within groups were tested using paired t tests and between groups were tested using independent sample t tests. Results: Of the 1077 enrolled patients, 1012 (94.0%) met analysis inclusion criteria. The average age was 37.7 (SD 10.9); 59.1 % were male. Ten percent (n=101) were employed at baseline, 21.7% (n=220) were employed at some time during observation and 18.8% (n=190) were employed at the last visit. During periods of employment, patients had significantly higher PSP scores than those who were unemployed (73.6 [10.8] vs 61.7 [14.4]; P<0.0001). Of the 220 patients who were employed at some time during the study, 119 also had periods of unemployment. Among these 119 patients, the mean PSP score during periods of employment was 7.7 points greater than during periods of unemployment (P<0.0001). For the subset who was employed “full-time” at some time during the observation period, the difference in mean PSP was over 15 points greater than in other groups. Conclusion: In this population of schizophrenia patients who were treated with paliperidone ER, there was a strong association between improved functioning and employment. Sponsored by Ortho-McNeil Janssen Scientific Affairs, L.L.C.

**REFERENCES:**

1. Kane J, Canas F, Kramer M, Ford L, Gassmann-Mayer C, Lim P, Eerdekens M: Treatment of schizophrenia with pali peridone extended-release tablets: a 6-week placebo-con trolled trial. Schizophrenia Research 2007; 90(1-3):147-161.
2. Kramer M, Simpson G, Maciulis V, Kushner S, Vijapurkar U, Lim P, Eerdekens M: Paliperidone extended-release tablets for prevention of symptom recurrence in patients with schizo phrenia: a randomized, double-blind, placebo-controlled study. J Clin Psychopharmacol. 2007; 27(1):6-14.

**NR4-086**

## COGNITIVE DEFICITS IN BIPOLAR DEPRESSION MEASURED WITH THE BRIEF ASSESSMENT OF COGNITION IN AFFECTIVE DISORDERS (BAC-A)

*Richard S Keefe, Ph.D. Box 3270Duke Medical CenterDurham, NC 27710, Durham, NC 27710, Phillip D. Harvey, Terry E. Goldberg, James M. Gold, Trina M. Walker, Courtney Kennel, Ilise Lombardo, Kirsten A. Hawkins*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to describe the BAC-A test and its ability to measure cognitive deficits.

**SUMMARY:**

Background: Cognitive impairment in schizophrenia is a core component of the illness; however, little is known about the profile of cognitive strengths and weaknesses in bipolar disorder.1,2 Most cognitive studies in bipolar disorder have used small samples and have not addressed the possibility of specific deficits in the processing and memory of emotionally salient information. Methods: The study included 166 patients with bipolar depression (mean HAM-D score = 30.0; SD=4.7) assessed at baseline during a 34-site ziprasidone clinical trial and 404 healthy controls selected to match the demographic characteristics of the 2005 census. Subjects completed the Brief Assessment of Cognition in Affective Disorders (BAC-A), which includes the six standard measures of cognition from the Brief Assessment of Cognition in Schizophrenia (verbal memory, symbol coding, digit sequencing, Tower of London, token-motor task and verbal fluency), plus additional tests of verbal affective interference and emotional disinhibition ("emotional Stroop test"). Results: Compared to the normative sample, patients with bipolar depression had similar levels of premorbid intelligence as measured by WRAT-Reading scores, yet had impairments on measures of standard cognition, with z-score differences between groups ranging between 0.44 and 0.80 ($P < 0.01$). Patients with bipolar disorder showed poorer immediate and delayed recall of words with without emotional content relative to emotionally-laden words ($p<.05$). However, the BAC-A tests designed to measure specific affective processing showed similar sensitivity to standard BAC tests and did not contribute significant additional between-group variance beyond the standard cognitive measures. Conclusions: A brief battery of tests demonstrated that patients with bipolar depression have medium-sized cognitive deficits on standard and specific measures of affective processing.

**REFERENCES:**

1. Malhi GS, Ivanovski B, Hadzi-Pavlovic D, et al. Neuropsy chological deficits and functional impairment in bipolar de pression, hypomania and euthymia. Bipolar Disord. 2007;9:114-25.
2. Daban C, Martinez-Aran A, Torrent C, et al. Specificity of cognitive deficits in bipolar disorder versus schizophrenia. A systematic review. Psychother Psychosom. 2006;75:72-84.

**NR4-087**

## ETHNIC DIFFERENCES IN METABOLIC EFFECTS OF ARIPIPRAZOLE AND OLANZAPINE IN EPISODE SCHIZOPHRENIA (CN138-002)

*Richard Whitehead, B.S. Otsuka America Pharmaceutical, Inc. Medical Affairs2440 Research Blvd., Rockville, MD 20850, Jonathan Meyer, M.D., Edward Kim, M.D., Ph.D., M.B.A., Lisa Rosenblatt, M.D., M.P.H.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to understand the relationship between ethnicity and metabolic complications of antipsychotic therapy.

**SUMMARY:**

Objective: To assess ethnic differences in metabolic effects of aripiprazole and olanzapine in patients with schizophrenia. Method: Data from a 26-week double-blind randomized controlled trial comparing aripiprazole with olanzapine (CN138-002) was stratified by ethnicity. Patients in the safety sample were classified as "White/Other", "Black", or "Hispanic" patient groups. Within each subgroup, we conducted an ANOVA on body mass index (BMI), weight, waist circumference, systolic and diastolic blood pressure (SBP and DBP), serum lipids and glucose and glycosylated hemoglobin (HgbA1c). The last observation carried forward (LOCF) was applied in data analysis. Results: The safety sample of 304 yielded 167 White/Other, 86 Black and 51 Hispanic cases. Baseline differences between treatment arms were limited to the Hispanic patient sample in which aripiprazole patients were older than olanzapine patients ($p=0.03$). In the White/Other patient group, olanzapine was associated with significantly greater increases in BMI, weight and waist circumference ($p<0.01$), as well as increased SBP compared with aripiprazole ($p=0.03$). Serum triglycerides and low-density lipoprotein also favored aripiprazole ($p=0.02$). In the Black patient group, olanzapine was associated with greater increases in weight ($p=0.03$). Serum high-density lipoprotein changes favored aripiprazole ($p<0.01$). There were no treatment differences in Hispanic patients on any metabolic parameters studied. Conclusions: The different metabolic profiles demonstrated by aripiprazole and olanzapine vary in different ethnic groups. Further studies are warranted to assess the interaction between treatment and ethnicity. Supported by Bristol-Myers Squibb and Otsuka.

**REFERENCES:**

1. Subramaniam M, Ng C, Chong SA, et al: Metabolic differ ences between Asian and Caucasian patients on clozapine treatment. Hum Psychopharmacol 2007;22:217-222.
2. McQuade RD, Stock E, Marcus R, et al: A comparison of weight change during treatment with olanzapine or aripip razole: results from a randomized, double-blind study. J Clin Psychiatry 2004;65(Suppl 18):47-56.

**NR4-088**

## LONG-TERM SAFETY AND TOLERABILITY OF ZIPRASIDONE IN CHILDREN AND ADOLESCENTS WITH BIPOLAR DISORDER

*Robert L Findling, M.D. University Hospitals Case Medical Center, 11100 Euclid Avenue, Cleveland, Ohio 44106-5080, Melissa P. Delbello, M.D., Paul P. Wang, M.D., Mary Bachinsky, Ph.D., Balarama Gundapaneni, M.S., Mark Versavel, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be familiar with the long-term safety and tolerability of ziprasidone in children and adolescents with bipolar disorder.

**SUMMARY:**
Objective: To evaluate the long-term safety and tolerability of ziprasidone in children and adolescents with bipolar I disorder. Methods: A 26-week, open-label extension study was conducted among subjects aged 10 to 17 years diagnosed with bipolar I disorder (manic or mixed) treated with ziprasidone 40 to 80 mg bid, who previously completed a 4-week, randomized, double-blind, placebo-controlled trial of ziprasidone. Safety was assessed at weeks 1 and 2, and then every 4 weeks during treatment, with a follow-up visit at week 27. Safety assessments included body weight and body mass index (BMI) z scores, laboratory evaluations, ECGs, reports of adverse events, and movement disorder scale findings. Results: 156 subjects entered the study, with a mean age of 13.4 years (range 10–17 years). 73.1% of subjects experienced adverse events (AEs) and 16% discontinued treatment as a result. The most commonly reported treatment-emergent AEs were sedation (21.8%), headache (17.3%), somnolence (16.7%), dizziness (9%), insomnia (7.7%), nausea (6.4%), and fatigue (5.1%). A total of 5 subjects experienced cardiac AEs (2 subjects with tachycardia, 2 with palpitations, and 1 with atrial fibrillation), none of which was considered severe. QT prolongation ? 460 msec was reported in 1 subject in the ziprasidone group. Suicidal and homicidal ideation was reported in 5 and 1 subjects, respectively. No clinically significant changes in BMI z scores, lipid values, liver enzymes, or glucose values were observed. Conclusion: These results suggest that ziprasidone is safe and generally well tolerated for the long-term treatment of bipolar I disorder (manic or mixed) in children and adolescents aged 10 to 17 years and confirm the metabolic safety of ziprasidone in this population.
This study was supported by funding from Pfizer Inc.
**REFERENCES:**
1. Keck PE Jr, Versiani M, Potkin S, West SA, Giller E, Ice K: Ziprasidone in the treatment of acute bipolar mania: a three-week, placebo-controlled, double-blind, randomized trial. Am J Psychiatry 2003; 160:741–748.
2. Sporn AL, Vermani A, Greenstein DK, Bobb AJ, Spencer EP, Clasen LS, Tossell JW, Stayer CC, Gochman PA, Lenane MC, Rapoport JL, Gogtay N: Clozapine treatment of childhood-onset schizophrenia: evaluation of effectiveness, adverse effects, and long-term outcome. J Am Acad Child Adolesc Psychiatry 2007; 46:1349–1356.
3. Tohen M, Kryzhanovskaya L, Carlson G, Delbello M, Wozniak J, Kowatch R, Wagner K, Findling R, Lin D, Rob ertson-Plouch C, Xu W, 5.Dittmann RW, Biederman J: Olan zapine versus place

**NR4-089**

## COST-EFFECTIVENESS OF GENERIC RISPERIDONE VS. OTHER ORAL ATYPICAL ANTIPSYCHOTICS IN THE TREATMENT OF PATIENTS WITH SCHIZOPHRENIA IN THE U.S.

*Robert W Klein, B.S. Medical Decision Modeling3600 Woodview TraceSuite 317Indianapolis IN, 46268, Haya Ascher-Svanum, Ph.D., Nicolas Furiak, M.S., Lee J Smolen, B.S., Anthony H. Lawson, M.A., Danielle L Loosbrock, M.H.A., Amy Kemner, M.P.H.*
**EDUCATIONAL OBJECTIVE:**
At the conclusion of this presentation, the participant will: 1) recognize that, upon patent expiration of oral risperidone in the United States in June 2008, the availability of generic risperidone will require an examination of its cost-effectiveness versus other atypical antipsychotics; and 2) become familiar with a cost-effectiveness model that simulates usual care of schizophrenia patients in the U.S. comparing generic risperidone with other oral atypical antipsychotics.
**SUMMARY:**
Introduction: The patent expiry of oral risperidone has cost implications. This study assessed the cost-effectiveness of generic risperidone versus other atypical antipsychotics in standard oral formulation in the usual treatment of schizophrenia patients from a U.S. healthcare perspective. Methods: Published medical literature and a clinical expert panel were used to populate a micro-simulation model comparing standard oral tablets of risperidone, olanzapine, quetiapine, ziprasidone, and aripiprazole in the usual care of schizophrenia. The 1-year micro-simulation model captures clinical and cost parameters including adherence levels, treatment discontinuation by reason, relapse with and without hospitalization; quality adjusted life years (QALYs), treatment-emergent adverse events, and healthcare resource utilization and associated costs. Key results included annual direct total cost per treatment and incremental cost-effectiveness values per one inpatient relapse avoided and per one QALY gained. Results: Based on model projections, olanzapine therapy was less costly ($9,577 vs. $10,309) and more effective than generic risperidone, reflecting a lower inpatient relapse rate (16% vs. 25%) and better QALY (0.748 vs. 0.730), thus more cost-effective and a dominant treatment choice over generic risperidone. Sensitivity analyses confirmed olanzapine to be the dominant choice. All other comparators were dominated by olanzapine and generic risperidone. The model was found by an independent cost-effectiveness expert to fulfill attributes of a good decision model. Conclusions: This model predicts the utilization of olanzapine to result in better clinical outcomes and lower total healthcare costs compared to generic risperidone, quetiapine, ziprasidone, and aripiprazole. Olanzapine may therefore be a cost-effective therapeutic option for patients with schizophrenia. Funding provided by Eli Lilly and Company.
**REFERENCES:**
1. Lieberman JA, Stroup TS, McEvoy JP et al. Effectiveness of antipsychotic drugs in patients with chronic schizophrenia. N Engl J Med. 2005;353(12):1209-23.
2. Tunis SL, Faries DE, Nyhuis AW, Kinon BJ, Ascher-Svanum H, Aquila R. Cost-effectiveness of olanzapine as first-line treatment for schizophrenia: results from a randomized, open-label, 1-year trial. Value Health. 2006; 9(2):77-89.

**NR4-090**

## CARDIOVASCULAR & METABOLIC STATUS IN NEUROLEPTIC-TREATED SCHIZOPHRENIA PATIENTS SCREENING FOR CLINICAL TRIALS: COMPARISON TO NHANES CONTROLS

*Robert E Litman, M.D. 9605 Medical Center Drive, Suite 270, Rockville, MD 20850, Camelia M. Graham, M.S.P.H., Megan Shanahan, B.A.*
**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able

to take away a knowledge of and recognize the prevalence of metabolic and cardiovascular abnormalities in a clinical trials population of schizophrenia patients as well as identify the comparative rates of metabolic and cardiovascular abnormalities between physically healthy schizophrenia patients and the general population, including factors other than neuroleptic medications which may account for these abnormalites.

**SUMMARY:**
Schizophrenics are at risk for the development of co-morbid metabolic and cardiovascular illness. In particular, use of antipsychotic medication has been implicated as a contributing factor. Methods: We analyzed metabolic and cardiovascular status, including fasting blood sugars, fasting lipids, body mass index, and blood pressure in 189 chronically ill (39.2+10.4 years old) patients with schizophrenia (132 M, 81% African-American), comparing them to a sample of 4,135 normal controls from the 2003-2004 National Health and Nutrition Examination Survey (NHANES) and in association with atypical and typical antipsychotic treatment. Patients were screening for participation in clinical drug trials. Results: 81.4% of patients were treated with atypical antipsychotics, either monotherapy or in combination (10.1% on aripiprazole, 24.3% on olanzapine, 23.1% on risperidone, 29.1% on quetiapine, and 8.4% on ziprasidone) versus 11.7% on typical antipsychotics alone. Analyzing BMI measurements, 74% were overweight (BMI> 25 kg/m2) with 41% in the obese range (BMI>30 kg/m2). Cholesterol and triglyceride levels were elevated in 46% and 42% of patients, respectively. In terms of fasting blood sugars, glucoregulatory impairment was found in 15% of patients, with 8% having frank diabetes (FBS>126 mg/dL). 18% of patients were hypertensive (diastolic BP > 85 mmHg). There were no statistically significant differences between patients and NHANES controls on these parameters. No statistically significant associations for any parameters were found between typical and atypical antipsychotics. Conclusion: Although most of our patients were treated with atypical antipsychotics, the lack of association of these abnormalities with neuroleptic treatment suggests other contributing factors, eg. diet and exercise. This is also supported by lack of differences with NHANES controls. Further data regarding metabolic and cardiovascular abnormalities will be presented in an expanded patient sample.

**REFERENCES:**

1. Mackin P, Bishop D, Watkinson H, Gallagher P, Ferrier IN: Metabolic disease and cardiovascular risk in people treated with antipsychotics in the community. Br J Psychiatry 2007 Jul; 191:23-29.
2. Correll CU, Frederickson AM, Kane JM, Manu P: Metabolic syndrome and the risk of coronary heart disease in 367 pa tients treated with second-generation antipsychotic drugs. J Clin Psychiatry 2006 Apr; 67(4):575-583.

**NR4-091**

## OLFACTORY DEFICITS CORRELATE WITH IMPAIRMENTS IN COGNITIVE PERFORMANCE. A CONTROLLED STUDY OF SCHIZOPHRENIC VS. BIPOLAR PATIENTS.

*Roberto Delle Chiaie, M.D. via L eone IV, 38, Rome, Italy 00192, Cristina Manera, M.D., Massimo Salviati, M.D., Annalisa Giordano, M.D., Camilla Fini, M.D., Maria Caredda, M.D., Massimo Biondi, M.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this presentation participants should be able to recognize olfactory deficits present in bipolar patients, focusing on the similarities with those previously described in schizophrenics. They will be guided to interpret these results as consequent to specific deficits in neural circuits. Particolarly they should better focus on the importance of frontal-temporal deficits which are present in both schizophrenics and bipolars with different levels of severity.

**SUMMARY:**
INTRODUCTION: Among schizophrenics, an association between impairments in cognitive performance and measures of olfactory function has been observed in several studies. Less clear is if this function may or may not be compromised also in bipolar patients. The aims of this study were to: 1) assess olfactory function in schizophrenic and bipolar patients and to compare their measures with those obtained in a sample of normal controls, 2) determine differences in cognitive performance in these 3 groups, and 3) identify correlations between olfactory deficits and impairments in specifics cognitive domains.
METHODS: A total of 76 participants (28 schizophrenics, 28 bipolars and 20 healthy controls) were assessed with the Sniffin' Sticks test battery and with the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS). Statistical analysis was performed with ANOVA and Mann Whitney test for intergroup comparisons and with Pearson test for correlations.
RESULTS: Olfactory threshold scores did not significantly differ among the 3 groups. For the other measures of the olfactory function, the lower scores were showed by schizophrenics (discrimination 10,75?2,82; identification 8,71?2,37), while those measured in bipolars (discrimination 11,39? 2,36; identification 10,96?2,38) were lower than those of healthy controls (discrimination 13,55? 1,19; identification 14?1,07). Intergroup differences were statistically significant. In both groups of patients these olfactory deficits significantly correlated with reductions in RBANS subscores for language, attention and delayed memory and with RBANS total score.
CONCLUSIONS: Our results showed that measures of olfactory identification and discrimination are compromised both in bipolar and in schizophrenic patients. The different level of severity of these deficits correlates with the severity of cognitive impairment. Frontal-temporal deficits could account for the observed results in both groups.

**REFERENCES:**

1. Kobal G, Klimek L, Wolfensberger M: Multicenter inves tigation of 1,036 subjects using a standardized method for the assessment of olfactory function combining tests of odor identification, odor discrimination, and olfactory thresholds. Eur Arch Otorhinolaryngol 2000; 257: 205-11.
2. Compton MT, McKenzie Mack L, Esterberg ML, Bercu Z, Kryda AD, Quinterno L, Weiss PS, Walzer EF: Association between olfactory identification and verbal memory in pa tients with schizophrenia, first-degree relatives, and non-psy chiatric controls. Schizophrenia Res 2006; 86: 154-166.

NR4-092

## DOUBLE-BLIND EXTENSION STUDIES OF ASENAPINE IN PATIENTS WITH BIPOLAR MANIA

*Roger McIntyre, Head, Mood Disorders Psychopharmacology Unit University Health Network University of Toronto 399 Bathurst Street, MP 9-325, TorontoCanada M5T 2S8, Miriam Cohen, Jun Zhao, John Panagides*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) compare the clinical efficacy of asenapine vs olanzapine in the extended treatment of bipolar mania; and 2) compare the extended use of asenapine and olanzapine in terms of incidence of adverse events and relative effects on metabolic parameters and extrapyramidal symptoms.

**SUMMARY:**

Objective: Asenapine is a novel psychopharmacologic agent under development for treatment of schizophrenia and bipolar disorder. We studied the extended use of asenapine in patients with bipolar mania. Methods: In a pair of matched 3-week trials from the Olympia clinical program (Ares 7501004 and 7501005), patients were randomized to treatment with asenapine (10 mg BID, adjustable to 5 mg BID on day 2), placebo, or olanzapine (15 mg QD, adjustable to 5–20 mg QD on day 2, given to verify assay sensitivity). Patients who completed a 3-week trial were eligible for a 9-week double-blind extension (Ares 7501006) in which asenapine and olanzapine, at the maintenance dosages from the 3-week trials, were compared directly; patients who completed this extension were eligible for an additional 40-week double-blind extension (Ares 7501007) for a total of 52 weeks of exposure to asenapine. Primary efficacy was change from baseline in the Young Mania Rating Scale (YMRS) total score. Results: In the 9-week extension (N=504), mean change from baseline in YMRS score was –24.4 with asenapine vs –23.9 with olanzapine. Prespecified statistical analysis for noninferiority indicated no significant difference between asenapine and olanzapine. In the 40-week extension (N=218), comparable efficacy was maintained. At study end, rates of response (YMRS score reduced by >=50%) and remission (YMRS score <=12) were 93% for asenapine and 95% for olanzapine. Discontinuation rates were also similar. The incidence of treatment-related adverse events was 65.7% with asenapine and 61.7% with olanzapine. Weight gain, metabolic syndrome, and hyperprolactinemia were more common with olanzapine; EPS were more common with asenapine. Conclusions: In this year-long study in patients with bipolar mania, asenapine provided long-term maintenance of effect comparable to that of olanzapine, with a favorable safety and tolerability profile. This research was supported by Organon, a part of Schering-Plough Corp.

**REFERENCES:**

1. Baldessarini RJ, Leahy L, Arcona S, Gause D, Zhang W, Hennen J: Patterns of psychotropic drug prescription for U.S. patients with diagnoses of bipolar disorders. Psychiatr Serv 2007; 58:85-91.
2. Smith LA, Cornelius V, Warnock A, Tacchi MJ, Taylor D: Pharmacological interventions for acute bipolar mania: a sys tematic review of randomized placebo-controlled trials. Bipo lar Disord 2007; 9:551-60.

NR4-093

## ILOPERIDONE VERSUS HALOPERIDOL AS LONG-TERM MAINTENANCE TREATMENT FOR PATIENTS WITH SCHIZOPHRENIA OR SCHIZOAFFECTIVE DISORDER

*Rosarelis Torres, Ph.D. Vanda Pharmaceuticals Inc., 9605 Medical Center Drive, Rockville, MD 20850, Henry A. Nasrallah, M.D., Michael Di Marino, M.A., Paolo Baroldi, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) review the long-term efficacy results for iloperidone as treatment for patients with schizophrenia or schizoaffective disorder; and 2) discuss the use of time to relapse for assessment of long-term antipsychotic effectiveness.

**SUMMARY:**

Introduction: This analysis compared long-term (46 weeks) maintenance of the antipsychotic effect of the mixed D2/5-HT2 antagonist iloperidone with haloperidol in patients with schizophrenia or schizoaffective disorder. Haloperidol has a well-defined long-term efficacy profile, making it a suitable comparator for this atypical antipsychotic agent in development. Methods: Data were pooled from 3 prospective, multicenter, double-blind, parallel-group studies with an initial 6-week, double-blind phase follow by a 46-week long-term, double-blind phase. Patients were randomized to iloperidone (4-16 mg/day) or haloperidol (5-20 mg/day). Patients were included in the efficacy analysis if they completed the initial 6-week phase with >=20% reduction from baseline in the PANSS total score at weeks 4 and 6, had a CGI-I score <4, and had >=1 efficacy assessment during the long-term phase. The long-term primary efficacy variable was time to relapse, defined as >=25% and 10-point increase in PANSS-T score, discontinuation due to lack of efficacy, worsening psychosis with hospitalization, or 2-point increase in CGI-C score after week 6. Results: Of 1634 patients (iloperidone 1231; haloperidol 403) entering and 1326 (iloperidone 1014; haloperidol 312) completing the initial 6-week phase, 473 (iloperidone 359; haloperidol 114) qualified for inclusion in the long-term maintenance analysis. The proportion of patients discontinuing the long-term phase was 34.3% for iloperidone and 34.2% for haloperidol. Discontinuation due to adverse events was 3.9% for iloperidone and 7.9% for haloperidol. Iloperidone was shown to be statistically non-inferior to haloperidol on the primary endpoint of time to relapse. Conclusions: Iloperidone demonstrated non-inferior efficacy to that of haloperidol in this study of long-term maintenance treatment for patients with schizophrenia or schizoaffective disorder. Vanda Pharmaceuticals sponsored this analysis.

**REFERENCES:**

1. Kalkman HO, Subramanian N, Hoyer D. Extended radioli gand binding profile of iloperidone: a broad spectrum do pamine/ serotonin/norepinephrine receptor antagonist for the management of psychotic disorders. Neuropsychopharmacol 2001; 25:904-914.
2. Lieberman JA, Stroup TS, McEvoy JP, et al. Effectiveness of antipsychotic drugs in patients with chronic schizophrenia. N Engl J Med 2005; 353:1209-1223.

**NR4-094**

**RELAPSE PREVENTION AND EFFECTIVENESS IN SCHIZOPHRENIA OF RISPERIDONE LONG-ACTING INJECTABLE (RLAI) VERSUS QUETIAPINE OR ARIPIPRAZOLE**

*Rossella Medori, Janssen-Cilag, Medical Affairs EMEA, Beerse, Belgium, 2340, Robert Wapenaar, Ph.D., Rosario de Arce, M.D., Frédéric Rouillon, Ph.D., Wolfgang Gaebel, M.D., Joachim Cordes, M.D., Lars Eriksson, M.D., Enrico Smeraldi, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize that in schizophrenia patients currently treated with antipsychotics there is still room for improvement due to lack of efficacy or side effects. The participant will learn that RLAI may play a role in improving the unmet needs and dissatisfaction with current treatment.

**SUMMARY:**

To investigate if risperidone long-acting injectable (RLAI) provides better efficacy maintenance over 2 years, as measured by the time to relapse, in comparison to the oral atypical antipsychotic quetiapine or aripiprazole tested general psychiatric services across Europe.

**REFERENCES:**

1.Kane JM, Malhotra A.The future of pharmacotherapy for schizophrenia. World Psychiatry. 2003 Jun;2(2):81-6.

2. Chue P. The relationship between patient satisfaction and treatment outcomes in schizophrenia. J Psychopharmacol. 2006 Nov;20(6 Suppl):38-56

**NR4-095**

WITHDRAWN

**NR4-096**

WITHDRAWN

**NR4-097**

## THE EFFICACY OF ARIPIPRAZOLE IN THE TREATMENT OF MULTIPLE SCHIZOPHRENIA SYMPTOMS DOMAINS: A POOLED ANALYSIS OF DATA FROM THE PIVOTAL TRIALS

*Sheila Assunção-Talbott, M.D. Bristol-Myers Squibb Company777 Scudders Mill Road, Plainsboro, NJ 08536-1615, David Crandall, Ph.D., James M. Eudicone, M.S., Andrei Pikalov M.D., Ph.D., Richard Whitehead, M.S., William H. Carson, M.D., John M. Kane, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to: 1) appreciate the need to target multiple symptoms domains in schizophrenia in order to maximize treatment outcome; and 2) describe the efficacy of aripiprazole from the statistical and clinical perspective in the treatment of these multiple schizophrenia symptoms as measured by different parameters with focus on mean changes and effect sizes.

**SUMMARY:**

Objective: Investigate the main schizophrenia symptoms driving the overall clinical efficacy of aripiprazole by examining mean changes and effect sizes of the Positive and Negative Syndrome Scale (PANSS) Total score, the PANSS Positive, Negative, General Psychopathology (GP) subscales, and 30 individual PANSS items in patients with acute exacerbation of schizophrenia spectrum disorders. Methods: In this analysis, 4-week data were pooled from five short term studies (aripiprazole 5–30 mg/day, n=904; placebo, n=412). Mixed Model Repeated Measures (MMRM) was used to analyze the mean change from baseline in the PANSS Total, Positive, Negative, GP subscales, and PANSS items. Effects sizes, number needed to treat (NNT) and response rates (CGI-I of one or two at or decrease =>30% in PANSS Total score) were also assessed. Results: Aripiprazole demonstrated statistically significant decreases compared with placebo on the PANSS Total (–14.4 vs. –2.4; p<0.001), Positive (–4.5 vs. –1.1; p<0.001), Negative (–3.5 vs. –0.9; p<0.001), and GP (–14.4 vs. –2.3; p<0.001) subscales, and in 26 of the 30 PANSS items (all p<0.05) at Week 4. Effects sizes for PANSS Total, Positive and GP subscales were 0.6 for all and the largest individual effect size was seen on the hostility item (0.7). Improvements with aripiprazole were statistically significant compared with placebo by Week 1 in the PANSS Total, Positive, Negative, GP subscales, and in 18 of the individual PANSS items. Significantly higher response rates occurred with aripiprazole than placebo (37.4% vs. 21.4%, p<0.001). Conclusion: Aripiprazole provided statistically and clinically significant improvements in many symptoms associated with schizophrenia, as measured by the PANSS. Supported by Bristol-Myers Squibb and Otsuka.

**REFERENCES:**

1. Burton S. Symptom domains of schizophrenia: the role of atypical antipsychotic agents. J Psychopharmacol 2006;20(6 Suppl):6-19.
2. Buchanan RW, Carpenter WT. Domains of psychopathology: an approach to the reduction of heterogeneity in schizophre nia. J Nerv Ment Dis 1994;182:193-204.

**NR4-098**

## EFFECTS OF ASENAPINE VERSUS PLACEBO ON QTC INTERVAL IN PATIENTS WITH SCHIZOPHRENIA

*Sheldon H Preskorn, M.D. Clinical Research Institute Department of Psychiatry 201 S. Hillside, Wichita, KS 67211, Sunny Chapel, Ph.D., John Panagides, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) characterize the placebo-corrected effects of asenapine and quetiapine on QTc prolongation in patients with schizophrenia or schizoaffective disorder: and 2) contrast observed QTc effects using data obtained at mean tmax for each treatment group and effects predicted by an exposure-response model using data obtained at Cmax for each individual patient.

**SUMMARY:**

Objective: We assessed the QTc effects of asenapine, a novel psychopharmacologic agent in development for the treatment of schizophrenia and bipolar disorder. Methods: Patients with schizophrenia or schizoaffective disorder were randomized to 16 days of double-blind treatment with placebo BID; asenapine 5 mg BID for 10 days followed by 10 mg BID for 6 days; asenapine 15 mg BID for 10 days followed by 20 mg BID for 6 days; or quetiapine 375 mg BID (given as active control with limited effect on QTc). ECGs and blood samples for pharmacokinetic analysis were obtained at baseline and on treatment days 10 and 16 before the morning dose and at 1, 2, 3, 4, 6, 8, and 12 hours postdose. Repeated measures ANOVA was used to assess the placebo-corrected time-matched least squares mean change from baseline in QTc (Fridericia correction). In addition, a linear mixed-effects model using data obtained at mean individual Cmax was developed to predict QTc effects based on drug exposure. Results: From 148 enrolled patients (mean age 42.6, 77% men), postdose ECGs were obtained from 125 patients on day 10 and 114 patients on day 16. Placebo-corrected changes from baseline were 2.6 and 6.4 ms with asenapine 5 and 15 mg BID (6.7 ms with quetiapine) on day

asenapine 5 and 15 mg BID (6.7 ms with quetiapine) on day 10; 10.5 and 5.2 ms with asenapine 10 and 20 mg BID (9.9 ms with quetiapine) on day 16. There were no instances of QTc increase >60 ms with asenapine and no instances of QTc interval >500 ms in any group. The exposure-response model showed that QTc prolongation was 1.8, 2.8, 3.4, and 4.5 ms with asenapine 5, 10, 15, and 20 mg BID, respectively (7–8 ms with quetiapine). Although observed changes in QTc showed no correlation with asenapine dosage, the exposure-response model revealed a correlation with Cmax for each drug. Conclusions: By exposure-response modeling, QTc prolongation was <5 ms at all tested doses of asenapine. This research was supported by Organon, a part of Schering-Plough Corporation.

**REFERENCES:**


1. Haddad PM, Anderson IM: Antipsychotic-related QTc pro longation, torsade de pointes and sudden death. Drugs 2002; 62:1649-71.
2. Harrigan EP, Miceli JJ, Anziano R, et al: A randomized evalu ation of the effects of six antipsychotic agents on QTc, in the absence and presence of metabolic inhibition. J Clin Psycho pharmacol 2004; 24:62-69.


**NR4-099**

## EFFECTIVENESS OF LONG ACTING INJECTABLE RISPERIDONE IN PATIENTS WITH FIRST-EPISODE SCHIZOPHRENIA


*Shin Young Suh, M.D. Department of Psychiatry, Bundang CHA Hospital, 351 Yatap, Bundang, Seongnam, Korea 463-712, Lee, Sang-Hyuk, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize that long acting injectable risperidone could be effective in preventing relapse in patients with first-episode schizophrenia.

**SUMMARY:**


Objectives: Schizophrenia is a chronic disorder usually characterized by relapses alternating with periods of full or partial remission. First-episode schizophrenia usually respond well to treatment. but relapse is frequent during the first years of the illness and may be associated with clinical deterioration. To reduce relapse and rehospitalization rates, new long-acting injectable antipsychotics may be needed in some patients with first-episode schizophrenia. therfore, we examined whether long-acting injectable risperidone could reduce relapse rate among outpatients with first-onset schizophrenia. Methods: we conducted a prospective study of 49 subjects with first-episode schizophrenia. We nonrandomly assigned 21 patients with first episode schizophrenia to long acting risperidone group and 28 patients to oral risperidone group. Relapse Rate, Medication Adherence, Brief Psychiatric Rating Scale(BPRS), Clinical Global Impression(CGI)and General Assessment of Functioning(GAF)was assessed. Results: Long acting risperidone group showed lower relapse rate compared to oral risperidone group(1-year relaspe rate: 19% Vs 48%; 2-year relapse rate: 23% Vs 87%). Medication compliance was higher in long acting risperidone group than in oral risperidone group(85.7±21.2 Vs 54.5±32.1 %). Cox proportional survival analysis showed that medication compliance was most significant predictor of first relapse in first episode schizophrenia. Conclusion: We suggest that long acting injectable risperidone could be more effective in maintaining medication adherence than oral risperidone and The most significant predictor of relapse is noncompliance in first episode schizophrenia. Large multicentered trial is needed.


**REFERENCES:**


1. Robinson D, Margaret G, Woerner, et al. Predictors of relapse following response from a first episode of schizophrenia or schizoaffective disorder. Arch Gen Psychiatry 1999:56;241-247
2. Kane JM, Eerdenkens M, Lindenmayer J-P, et al. Long-acting injectable risperidone: efficacy and safety of the first long-act ing atypical antipsychotic. Am J Psychiatry 2003;160:1125-1132


**NR4-100**

## SAFETY AND TOLERABILITY OF PALIPERIDONE PALMITATE INJECTED IN THE DELTOID OR GLUTEUS MUSCLE IN PATIENTS WITH SCHIZOPHRENIA


*Srihari Gopal, 1125 Trenton-Harbourtown Road, Titusville, NJ 08560, Jean-Pierre Lindenmayer, David Hough, M.D., Rama Melkote, M.Sc., M.P.H., Pilar Lim, Ph.D., Mariëlle Eerdekens, M.D., M.B.A.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to describe the overall safety and tolerability of the long-acting injectable investigational antipsychotic, paliperidone palmitate (50, 75, and 100 mg eq. doses) administered into either the gluteal or deltoid muscles of adult patients with schizophrenia.

**SUMMARY:**


Objective: Paliperidone palmitate (PP) is an investigational long-acting injectable formulation of the recently marketed oral antipsychotic paliperidone for treatment of schizophrenia (1-3). This study assessed the safety and tolerability of initiating treatment via deltoid vs. gluteal injection given every 4 wks and of switching injection sites after 3 injection cycles (13 wks) in adults with stable schizophrenia.

Methods: In this crossover trial, patients (N=252) were equally randomized to 3 treatment groups (PP 50, 75, or 100 mg eq.) and 2 injection sequences: deltoid muscle in period 1 followed by gluteal muscle in period 2 or the reverse. The double-blind phase (blinded to dose) had 2 study periods: 13 wks (first injection site), then 12 wks (second site). Results: The ITT population had 249 patients: mean age= 43 (SD:12.8) yrs; men (57%); white (81%); baseline mean PANSS total score=56 (SD:11.5). The most common (³5% overall) treatment-emergent adverse events (TEAEs) were: (period 1) insomnia, anxiety, headache, and agitation; and (period 2) insomnia, psychotic disorder, weight increase, and tachycardia. During treatment initiation (period 1), the rates of systemic TEAEs were similar between the 2 injection sites across all dose levels (proportion of patients reporting TEAE for gluteus minus deltoid [90%CI]): -6.7% (-23.5, 10.7) for 50 mg eq.; -0.7% (-17.6, 16.5) for 75 mg eq.; and -3.4% (-20.4, 13.8) for 100 mg eq. The total difference between the rates (90% CI) across doses was -3.3% (-13.3, 6.7). A comparison of systemic TEAE rates during the last 8 wks of the 2 study periods did not reveal significant differences upon switching of injection sites. Injection-site pain was rated

slightly higher with the deltoid injection by investigators and patients. Conclusion: The incidence of systemic TEAEs was similar when initiating treatment with either deltoid or gluteal injections. Switching between injection sites was also safe and well tolerated. Funded by Johns

**REFERENCES:**


1. Literature Reference 1: Davidson M, Emsley R, Kramer M, Ford L, Pan G, Lim P, Eerdekens M: Efficacy, safety and early response of paliperidone extended-release tablets (pali peridone ER): Results of a 6-week, randomized, placebo-con trolled study. Schizophr Res 2007; 93:117-130.
2. Literature Reference 2: Kane J, Canas F, Kramer M, Ford L, Gassmann-Mayer C, Lim P, Eerdekens, M: Treatment of schizophrenia with paliperidone extended-release tablets: a 6-week placebo-controlled trial. Schizophr Res 2007; 90:147-161.


**NR4-102**

## THE METABOLIC PROFILE OF ILOPERIDONE: SUMMARY OF PHASE II AND III SCHIZOPHRENIA TRIALS


*Stephen M Stahl, M.D. 1930 Palomar Point WaySuite 103 Carlsbad, CA 92008, Carlsbad CA 92008, Paolo Baroldi, M.D., Ph.D., John Feeney, M.D., Curt D. Wolfgang, Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to

1.Demonstrate an understanding of the metabolic changes associated with antipsychotic therapy

2.Understand the effects of iloperidone treatment on metabolic parameters and body weight in patients with schizophrenia

**SUMMARY:**


Introduction: Many atypical antipsychotics are associated with adverse effects on metabolic parameters that may increase diabetes and cardiovascular disease risk. Iloperidone is a mixed D2/5-HT2 antagonist being developed for the treatment of schizophrenia. Body weight, blood glucose, cholesterol, triglyceride, and prolactin level changes were assessed in a pooled analysis of iloperidone clinical data. Methods: Nine phase II and III double-blind or open-label clinical trials of adults previously diagnosed with schizophrenia were identified and included in the analysis. Mean duration of iloperidone treatment was 27.8 days, similar to the comparators. Maximum treatment duration was 2 years. Weight gain and metabolic parameters were evaluated. Results: A total of 4838 patients (iloperidone 4-24 mg/day, n=3210; haloperidol 5-20 mg/day, n=546; risperidone 4-8 mg/day, n=311; ziprasidone 160 mg/day, n=184; placebo, n=587) were included in the pooled safety analysis. Mean changes from baseline to endpoint in body weight were +2.1, +0.8, +1.7, +1.1, and -0.1 kg, respectively. Respective mean changes at endpoint in blood glucose levels were +5.4, +1.8, +1.8, +9.0, and 0.0 mg/dL. Mean changes at endpoint in total cholesterol were -3.9, 0.0, -7.7, +3.9, and -7.7 mg/dL, and mean changes at endpoint in triglycerides were -17.7, 0.0, 35.4, +8.8, and -26.5 mg/dL, respectively. Respective mean changes at endpoint in prolactin levels were -16.7, +124.0, +205.3, +2.0, and -40.9 µg/L. Conclusions: Pooled analysis results indicate that iloperidone has a favorable metabolic profile with clinically neutral values or reductions on key parameters often associated with atypical antipsychotics. Vanda Pharmaceuticals sponsored this analysis.


**REFERENCES:**


1. Kalkman HO, Feuerbach D, Lotscher E, Schoeffter P. Func tional characterization of the novel antipsychotic iloperidone at human D2, D3, alpha 2C, 5-HT6, and 5-HT1A receptors. Life Sci 2003; 73:1151-1159
2. Newcomer JW. Metabolic considerations in the use of antipsychotic medications: a review of recent evidence. J Clin Psychiatry 2007; 68(suppl 1):20-27


**NR4-103**

## AGITATION AND SOMNOLENCE IN PATIENTS TREATED WITH ZIPRASIDONE: ANALYSIS OF FIXED-DOSE, PLACEBO-CONTROLLED TRIALS


*Steven G Potkin, M.D. Department of Psychiatry and Human Behavior, University of California, Irvine, Brain Imaging Center, 5251 California Avenue, Ste. 240, IrvineCA 92617, Ilise Lombardo, M.D., Ruoyong Yang, Ph.D., Charlotte Kremer, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should understand the occurrence of reports of agitation and somnolence according to ziprasidone dose in the clinical trial database.

**SUMMARY:**


Background: There have been clinical anecdotes that lower doses of ziprasidone have been associated with mild agitation. We undertook analyses of the fixed-dose double-blind clinical trial database to better understand these reports. Given the receptor binding profile of ziprasidone, we hypothesized that reports of agitation would be inversely dose-related, while somnolence would be directly dose-related.1,2

Methods: Data from 4 short-term (4 or 6 weeks), fixed-dose, placebo-controlled trials of ziprasidone in schizophrenia were analyzed to determine the incidence and duration of adverse event reports of agitation and somnolence. Ziprasidone-treated subjects were divided into 2 groups: 40–80 mg/d and 120–160 mg/d.

Results: The analysis population comprised 273, 340, and 229 patients in the placebo, ziprasidone 40–80 mg/d, and ziprasidone 120–160 mg/d groups, respectively. In these respective groups, 90.1%, 83.2%, and 90.0% reported concomitant use of benzodiazepines. 10.3%, 10.6%, and 8.3%, respectively, experienced agitation. The cumulative total mean duration of agitation (days ± SD) was 7.4 ± 8.9, 9.2 ± 12.4, or 7.4 ± 11.6, respectively. 6.6%, 12.0% (p = 0.03 vs placebo), and 15.7% (p = 0.001 vs placebo), respectively, experienced somnolence. The cumulative total mean duration of somnolence was 3.7 ± 4.7, 11.8 ± 16.1, or 14.2 ± 15.6, respectively.

Conclusions: These analyses showed numerical trends towards higher rates, and longer total duration of agitation for the lower doses as compared to the higher doses of ziprasidone. Conversely, there were trends towards higher rates and longer total duration of somnolence in the higher dose group. These trends were not statistically significant. The common use of benzodiazepines during initiation of ziprasidone treatment in the clinical trial setting, which may not represent current clinical practice, may explain the low rates of agitation observed at lower doses. This study was supported by Pfizer Inc.

**REFERENCES:**


1. Mamo D, Kapur S, Shammi CM, Papatheodorou G, Mann S, Therrien F, Remington G: A PET study of dopamine D2 and serotonin 5-HT2 receptor occupancy in patients with schizophrenia treated with therapeutic doses of ziprasidone. Am J Psychiatry 2004; 161:818–825.
2. Kapur S, Zipursky R, Jones C, Remington G, Houle S: Rela tionship between dopamine D(2) occupancy, clinical re sponse, and side effects: a double-blind PET study of first-episode schizophrenia. Am J Psychiatry 2000; 157:514–520.


**NR4-104**

## KOREAN TRANSLATION AND PSYCHOMETRIC STUDY OF THE AMBIGUOUS INTENTIONS HOSTILITY QUESTIONNAIRE (AIHQ-K): A MEASURE OF HOSTILE SOCIAL-COGNITIVE BIAS


*Suk Kyoon An, M.D. Department of Psychiatry, Severance Mental Health Hospital, Yonsei University College of Medicine, 696-6, Tanbul-dong, Gwangju-si, Gyeonggi-doSouth Korea 464-100, Hyung Yoon Chang M.D., Seon Koo Lee, M.D., Su Young Lee, M.D., Hyong Jin Cho, M.D, Kyung Ran Kim, M.D., Jin Young Park, M.D., Jee In Kang, M.D., Eun Lee, M.D, Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to get informations about the Ambiguous Intentions Hostility Questionnaire and procedure of translation scales written in a foreign language into their own.

**SUMMARY:**


Introduction: We studied the psychometric properties of a Korean version of Combs, Penn, Wicher and Waldheter's(2007) Ambiguous Intentions Hostility Questionnaire (AIHQ), which measuring hostile social-cognitive biases for use in paranoia research. The AIHQ are composed of the variety of the perceived threat situations that differ in terms of intentionality. Methods: The translation and back-translation of the AIHQ with considering the cultural differences were done according to the standard procedure. The separated two participants group (n=55, n=87, college students) were asked to complete the AIHQ-K along with measures of paranoia, attributional style, and magical thinking. The internal consistencies and inter-rater reliabilities were calculated. The correlation analyses were done for validity. Results: The blame scores of the intentional, ambiguous, and accidental items were 3.68(3.75), 2.68(3.65), and 1.99(2.99), respectively. The scores of paranoia scale and magical thinking were 23.1(12.67) and 11.0(5.91) in respect. The Cronback's alpha values and test-retest reliabilities of intentional, ambiguous and accidental items were in the acceptable range (0.60 - 0.70). The AIHQ especially ambiguous items was positively correlated with the paranoia scale scores (p=0.050) and was not associated with magical thinking scores (p>0.153). Conclusions: The Korean version of AIHQ seems to be a reliable and valid measure of hostile social cognitive biases in paranoia.


**REFERENCES:**


1. Combs DR, Penn DL, Wicher M, et al.: The Ambiguous Intentions Hostility Questionnaire (AIHQ): a new measure for evaluating hostile social-cognitive biases in paranoia. Cognit Neuropsychiatry 2007;12:128-143.
2. Combs DR, Penn DL, Jeffrey C, et al. : Perceived Racism as a Predictor of Paranoia Among African Americans. J Black Psychology 2006; 32: 87-104.


**NR4-105**

## AMISULPRIDE IMPROVES OBSESSIVE-COMPULSIVE SYMPTOMS IN SCHIZOPHRENIA PATIENTS TAKING ATYPICAL ANTIPSYCHOTICS: AN OPEN-LABEL SWITCH STUDY


*Sung-Wan Kim, M.D. Dept. of Psychiatry, Chonnam National University Hospital, 8 Hak-dong, Dong-gu, Gwang-ju, South Korea 501-757, Dong-Seok Yang, M.D., Yo-Han Lee, M.D., Sang-Wook Park, M.D., Sung-Jin Kim, M.D., Joon-Young Cho, M.D., Tak Youn, M.D., Il-Seon Shin, M.D., Jae-Min Kim, M.D., Jin-Sang Yoon, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the strategy to manage obsessive compulsive symptoms in schizophrenia patients taking atypical antipsychotics.

**SUMMARY:**


Introduction: Atypical antipsychotics with a 5-HT2a antagonist effect have been reported to induce or exacerbate obsessive-compulsive symptoms (OCS) in patients with schizophrenia. We performed a prospective study of an open case series of patients with schizophrenia and co-morbid OCS. Methods: Subjects with a Yale-Brown Obsessive Compulsive Scale (Y-BOCS) score of 10 or greater and taking atypical antipsychotics were recruited. Their OCS were observed for changes 12 weeks after their antipsychotic medications were changed to amisulpride, which is a selective dopamine D2/D3 receptor antagonist with a negligible affinity for the 5-HT2a receptor. Results: Thirteen patients taking risperidone and three patients taking aripiprazole were enrolled and fifteen patients completed the study. Improvements in the YBOCS scores were statistically significant. Twelve of the sixteen patients showed 50% or greater improvement in the YBOCS total score. The scores of the Positive and Negative Syndrome Scale (PANSS) also significantly decreased following the switch to amisulpride, but there was no significant relationship between the changes of the YBOCS and PANSS scores. In this case series, OCS in patients with schizophrenia were improved after changing risperidone or aripiprazole to amisulpride. Conclusions: Consequently, amisulpride might be a good treatment option for the management of OCS in patients with schizophrenia who are taking atypical antipsychotics. Further large controlled studies are warranted.


**REFERENCES:**


1. Hwang MY, Bermanzohn PC, Opler LA. Obsessive-compul sive symptoms in patients with schizophrenia. In: Hwang MY, Bermanzohn PC, ed. Schizophrenia and Comorbid Condi tions. Washington DC: American Psychiatry Press, 2001:57-78.
2. Alevizos B, Lykouras L, Zervas IM, et al. Risperidone-in duced obsessive-compulsive symptoms: a series of six cases. J Clin Psychopharmacol 2.2002;22:461-7.


**NR4-106**

## A 28-WEEK, RANDOMIZED, DOUBLE-BLIND

**STUDY OF OLANZAPINE VERSUS ARIPIPRAZOLE IN THE TREATMENT OF SCHIZOPHRENIA**

*Susan B Watson, Ph.D. Eli Lilly and Company Lilly Corporate CenterIndianapolis IN 46285, John M. Kane, M.D., Olawale Osuntokun, M.D. (presenting), Ludmila A. Kryzhanovskaya, M.D., Wen Xu, Ph.D., Virginia Stauffer, Pharm.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to describe the relative effectiveness of olanzapine and aripiprazole in the treatment of schizophrenia.

**SUMMARY:**

Objective. Olanzapine (OLZ) has demonstrated efficacy in schizophrenia and has been reported superior to other atypical antipsychotics on time to all-cause discontinuation, a proxy for treatment effectiveness. The current study was designed to evaluate the effectiveness of OLZ compared with aripiprazole (APZ) in patients with schizophrenia. Methods. Patients with a diagnosis of schizophrenia (N=566) aged 18 to 65 years were randomized to either OLZ (n=281) or APZ (n=285) for 28 weeks of double-blind treatment. The primary outcome measure was time to all-cause discontinuation. Symptom efficacy was measured by Positive and Negative Syndrome Scale (PANSS) total change from baseline (LOCF). Time-to-event data were analyzed via the Kaplan Meier method and log-rank test. Results. Treatment groups did not differ significantly in time to all-cause discontinuation (p=.067) or in discontinuation rates (OLZ 42.7%, APZ 50.2%, p=.053). The OLZ group had a significantly greater least-squares mean decrease in the PANSS (–30.2) than the APZ group (–25.9, p=.014). Mean weight change (kg) was +3.4 for OLZ and +0.3 for APZ (p<.001). Fasting mean glucose change (mg/dL) was +4.9 for OLZ and +0.9 for APZ (p=.045). Percent of patients with baseline glucose <100 and a value of >=126 at any time was 1.7% for OLZ and 0.6% for APZ (p=.623). Fasting mean total cholesterol change (mg/dL) was +4.1 for OLZ and 9.8 for APZ (p<.001). Percent of patients with baseline total cholesterol <200 and a value of >=240 at any time was 9.2% for OLZ and 1.5% for APZ (p=.008). Conclusion. The OLZ and APZ groups did not differ significantly on the primary outcome measure; however, the OLZ group had significantly greater improvement in symptom efficacy. Significantly greater increases in weight, glucose, and total cholesterol were observed in OLZ-treated patients. Results are generally consistent with previous randomized, double-blind studies comparing the 2 therapies. Research supported by Lilly

**REFERENCES:**

1. Lieberman JA, Stroup TS, McEvoy JP, Swartz MS, Rosen heck RA, Perkins DO, Keefe RS, Davis SM, Davis CE, Leb owitz BD, Severe J, Hsiao JK; Clinical Antipsychotic Trials of Intervention Effectiveness (CATIE) investigators: Effec tiveness of antipsychotic drugs in patients with chronic schizophrenia. N Engl J Med 2005; 353:1209-1223
2. McQuade RD, Stock E, Marcus R, Jody D, Gharbia NA, Vanveggel S, Archibald D, Carson WH: A comparison of weight change during treatment with olanzapine or aripip razole: results from a randomized, double-blind study. J Clin Psychiatry 2004; 65(Suppl 18):47-56

**NR4-108**

**RISPERIDONE LONG ACTING IN EARLY PSYCHOSIS: INTERIM RESULTS AFTER 6 MONTH FOLLOW-UP**

*Vincent M Dubois, M.D. Cliniques universitaires St-lucHippocrate avenue, 10, Brussels, Belgium 1200, Jozef Megens, M.D., Mike Povey, MS.C., Jo Van der Veken, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the value of risperidone long-acting injection (RLAI) in improving both the clinical and functional outcomes of patients with schizophrenia early in the course of their disease.

**SUMMARY:**

Objectives: results after 6 months (M) follow up (FU) in early psychosis (less than 4 episodes). Methods: TIMORES is a Belgian non-interventional study collecting data web-based for 12 months pro- and retrospectively. Treatment with Risperidone Long Acting Injectable (RLAI) was started between 1 and 4 weeks after start of the acute index episode, and principles of motivational interviewing were applied to support the treatment strategy. Results refer to 6 M FU following start of RLAI treatment. Data were collected in 22 psychiatric services. Mirror image analysis for hospitalization attributed the index event for in-patients starting with RLAI to the previous treatment (1). Results: 100 schizophrenia patients were enrolled, 61 completed 6 M FU. 73.8% were male, mean age 31.7 years (Y)(SD7.1), mean duration of disease 2.5Y (2.9). At start of RLAI 75.4% were hospitalized. Clinical symptoms improved significantly: mean(SD) CGI score decreased from 4.36(1.11) to 3.15(1.09) (p<0.0001). Functioning improved: GAF increased from 43.0(9.5) to 52.7(13.9) (p<0.0001). Compared to 6 M retrospectively, full hospitalizations decreased from 59.6(60) days (d) to 10.8(28) d (p<0.0001). Since start of RLAI, 28% of patients were rehospitalized after 72(39.3)d average. None of the 15 outpatients were rehospitalized before 6 M. Cross sectional remission(2) increased from 1.6% at acute event to 13.3% at start of RLAI to 38.3% after 6M. Patient, investigator satisfaction rated very good/good in 70.8 and 77.1% of patients respectively. Caregiver burden to medicate patient was rated positive in 50.8% at start and 77.1% after 6M. 87.5% of patients were rated as adherent to RLAI, 5 (8.2%) discontinued , main reason being patient refusal (n=3). Conclusions: results of this study support the use of RLAI in early psychosis. Clinical symptoms improved significantly after 6 months of treatment. 91.8% of patients continued treatment at 6 months. This study was funded by Janssen.

**REFERENCES:**

1. Niaz Os et al: Thirty five months experience of risperidone long acting injection in a UK psychiatric service including a mirror-image analysis of inpatient care. Acta Psychiatr Scand 2007: 1-11.
2. Emsley Robin et al: Remission in early psychosis: Rates, pre dictors and clinical and functional outcome correlates.Schizo phrenia Research: 2007: 89: 129–139.

**NR4-109**

**OLANZAPINE VERSUS ARIPIPRAZOLE FOR THE TREATMENT OF AGITATION IN ACUTELY ILL PATIENTS WITH SCHIZOPHRENIA**

*Virginia Stauffer, Pharm.D. Lilly Corporate Center*

*Drop Code 4133, Indianapolis, IN 46285, Bruce Kinon, M.D., Sara Kollack-Walker, Ph.D., Lei Chen, M.D., Jennifer Sniadecki, M.S.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to understand the comparative aspects of treatment with atypical antipsychotics in reducing acute agitation in patients with schizophrenia.

**SUMMARY:**
Introduction: Both olanzapine and aripiprazole have been shown to be safe and effective in treating patients with schizophrenia experiencing acute agitation. We compared olanzapine to aripiprazole in reducing agitation during a 5-day, inpatient, hospitalization setting. Methods: In this 5-day, randomized, double-blind, comparator trial, hospitalized patients received orally dosed olanzapine (n=306, 20 mg/day) or aripiprazole (n=298, 15 mg/day with an optional increase to 30 mg/day after Day 2 as needed). Lorazepam could also be given (1-2 mg every 4 hours as needed, total dose =4 mg/day), but not as a substitute for increasing the dose of study drug. The primary efficacy measure was daily change from baseline in PANSS Excited Component score (PANSS-EC). Secondary outcomes included changes in BPRS positive subscale, other measures of agitation, benzodiazepine use, and treatment tolerability. Results: Treatment with both olanzapine and aripiprazole led to daily decreases from baseline in PANSS-EC and all secondary measures of efficacy, with no between-group differences. There was a greater proportion of patients receiving lorazepam at each visit in the aripiprazole group as compared to the olanzapine group, but that difference was significant only at visit 5 [41% versus 31% (p=.033). Fasting glucose and triglycerides increased significantly more in the in the olanzapine-treated group (p=.030 and p=<.001, respectively). Prolactin increased for the olanzapine group and decreased for the aripiprazole group, with a between-group difference of p<.001. Conclusion: Despite having different proposed mechanisms of action and greater concomitant use of lorazepam with aripiprazole, treatment with olanzapine or aripiprazole was effective in reducing agitation in patients with schizophrenia during a 5-day, inpatient, hospitalization setting. Funded by Eli Lilly and Company.

**REFERENCES:**
1. Kinon BJ, Ahl J, Rotelli MD, McMullen E. Efficacy of ac celerated dose titration of olanzapine with adjunctive loraz epam to treat acute agitation in schizophrenia. Am.J Emerg. Med 2004 May;22(3):181-6.
2. Beasley CM, Jr., Sanger T, Satterlee W, Tollefson G, Tran P, Hamilton S. Olanzapine versus placebo: results of a double-blind, fixed-dose olanzapine trial. Psychopharmacol ogy (Berl) 1996 Mar;124(1-2):159-67.

**NR4-110**

## EFFECT OF LONG-ACTING INJECTABLE RISPERIDONE ON CLINICAL OUTCOMES IN STABLE SCHIZOPHRENIA PATIENTS WITH EARLY ILLNESS

*Wayne Macfadden, M.D. 1125 Trenton-Harbourton Road, Titusville, NJ 08560, Cynthia Bossie, Ph.D., Ibrahim Turkoz, M.S., Peter Dorson, Pharm.D., Tom Haskins, Ph.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this presentation, the participant should be aware of the effects of treatment with long-acting injectable risperidone on relapse, symptoms and tolerability in stable schizophrenia patients with early illness.

**SUMMARY:**
Introduction: Early and persistent treatment is important for better long-term outcomes in schizophrenia. Early in the illness course, patients tend to be responsive to treatment but sensitive to adverse events (AEs) and poorly compliant with medications. We hypothesized that treatment with a long-acting injectable atypical antipsychotic would be associated with improved clinical outcomes in recently diagnosed patients compared to those with chronic illness. Methods: Post-hoc analysis from a study of stable patients receiving risperidone long-acting injectable (RLAI) (25 or 50 mg every 2 weeks) for up to 52 weeks. Effects were compared between patients recently diagnosed (<=3 years prior to study entry) and those diagnosed >3 years prior to study entry. Measures included relapse, Positive and Negative Syndrome Scale (PANSS), Clinical Global Impressions–Severity scale (CGI-S), Extrapyramidal Symptom Rating Scale (ESRS) and AEs. Results: 57 patients met criteria for recently diagnosed illness and 266 patients were diagnosed for >3 years; mean (SD) baseline PANSS scores were 64.8 (14.1) and 66.8 (16.9), respectively. Relapse rates were 10.5% and 21.8%, respectively (P=0.053). Both groups improved significantly at endpoint in mean PANSS total and CGI-S scores (P<0.01). Recently diagnosed patients had greater improvement vs patients diagnosed for >3 years in adjusted mean [SE] PANSS total (–10.2 [2.0] vs –3.8 [0.9]; P=0.004) and CGI-S (–0.5 [0.1] vs –0.2 [0.1]; P=0.002) scores. Most common AEs (recently diagnosed vs diagnosed for >3 years): insomnia (31.6% vs 26.7%), psychiatric disorder (19.3% vs 20.7%), headache (15.8% vs 19.2%) and anxiety (12.3% vs 17.3%). Mean ESRS scores in both groups were unchanged or improved at endpoint. Conclusions: In stable patients recently diagnosed with schizophrenia, RLAI was associated with more clinical improvement but comparable tolerability vs patients with a chronic course.
Supported by Ortho-McNeil Janssen Scientific Affairs, LLC

**REFERENCES:**
1. Chue P, Emsley R: Long-acting formulations of atypical anti psychotics: time to reconsider when to introduce depot anti psychotics. CNS Drugs 2007; 21(6):441-448.
2. Simpson GM, Mahmoud RA, Lasser RA, Kujawa M, Bossie CA, Turkoz I, Rodriguez S, Gharabawi GM: A 1-year double-blind study of 2 doses of long-active risperidone in stable patients with schizophrenia or schizoaffective disorder. J Clin Psychiatry 2006; 67(8):1194-1203.

**NR4-111**

## DOUBLE-BLIND VITAMIN INTERVENTION TO LOWER BLOOD HOMOCYSTEINE LEVELS: AMINO ACID AND CLINICAL RESPONSE IN INDIVIDUALS WITH SCHIZOPHRENIA

*William M Greenberg, M.D. 65 North Maple Ave., Ridgewood-NJ 07450, Melissa M. Benedict, M.A., Stephanie Kamiel, M.A., Alexis Moreno, B.A., Laura Panek, B.S.N., Joanna Doerfer, M.S., Daniel C. Javitt, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to: 1) recognize the medical and possible psychiatric benefits of lowering high homocysteine levels; 2) recognize the effects of high homocysteine levels on NMDA glutamate receptor function; and 3) treat individuals with high homocysteine levels with appropriate vitamin therapy.

**SUMMARY:**
Background: High homocysteine levels have been linked to NMDA glutamate receptor dysfunction. Folate, vitamins B12 and B6 can lower homocysteine. A recent Israeli study found such vitamin augmentation benefited individuals with schizophrenia and high homocysteine levels. Hypothesis: Folate (4mg), vitamins B12 (1 mg) and B6 (50 mg), adjunctive to a stable antipsychotic regimen, will reduce the clinical signs and symptoms of individuals with schizophrenia. Methods: Adult patients 18-65 with a principal diagnosis of schizophrenia and stabilized psychotropic medication regimen but not taking B-vitamin supplements, were screened and then evaluated 4 weeks later in a baseline visit, for medication regimen stability and continuing symptomatology (PANSS ³ 65, no change in CGI and PANSS change < 20% from screening). Eligible participants were randomized double-blind 1:1 to the adjunctive vitamin preparation or placebo, with follow-up evaluations at 6 weeks and 12 weeks. The principal outcome measure was the PANSS total score. Results: 50 patients were randomized, but several were incorrectly enrolled (already taking vitamin supplement) or lost early to follow-up. For the 42 evaluable participants, we found a non-significant trend for improvement in the PANSS for those taking vitamin compared with those taking placebo (t-test, p=.062), using intent-to-treat and LOCF analysis, which would represent a medium effect size (Cohen□s d = 0.61). This regimen was well-tolerated. Exploratory analyses suggested possible correlations between baseline serum folate level and change in PANSS-Neg subscale (p=.032) and change in CGI-S (p=.019), baseline serum B6 level and change in CDSS (p=.038), and baseline homocysteine level and change in CGI-S (p=.012). Conclusion: Some individuals with schizophrenia may benefit from specific B-vitamin augmentation. Support: Forest Research Institute may pay for Dr. Greenberg□s travel to the APA meeting, but this study was unrelated and completed prior to his Forest employment. This study was supported by a Stanley Medical Research Institute grant.

**REFERENCES:**
1. Levine J, Stahl Z, Sela BA, Ruderman V, Shumaico O, Ba bushkin I, Osher Y, Bersudsky Y, Belmaker RH: Homocys teine-reducing strategies improve symptoms in chronic schizophrenic patients with hyperhomocysteinemia. Biol Psychiatry 2006; 60:265-269.
2. Lerner V, Miodownik C, Kaptsan A, Cohen H, Loewenthal U, Kotler M: Vitamin B6 as add-on treatment in chronic schizo phrenic and schizoaffective patients: a double-blind, placebo-controlled study. J clin Psychiatry 2002; 63:54-58.

**NR4-112**

**THE "A" EFFECT OF ARIPIPRAZOLE**
*Xiaolei Y Baran, M.D. Weill Cornell Medical College, Payne Whitney Westchester 21 Bloomingdale Road, White Plains, NY 10605, John P. Docherty, M.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to learn the characteristic features of the Aripiprazole and understand its unique "A" effect on improvement in interpersonal function, mood, emotional expression and cognitive function.

**SUMMARY:**
Objective: A unique effectiveness of aripiprazole, the "A-Effect", has not been well characterized. We compared aripiprazole with other antipsychotic drugs through the review of case reports provided by treating psychiatrists to identify this distinct effect. Methods: This study drew on the expertise of psychiatrists experienced with a full range of antipsychotic medications including aripiprazole and employed several methods to systematize and codify their observations of its clinical effects. Twelve psychiatrists were recruited based on the study criteria. They were interviewed individually to report their various qualifying cases and to complete the Positive and Negative Symptoms Scales (PANSS), the Salience Scale and the Clinical Observation Scale. Results: Twenty-eight cases manifesting the A-Effect were collected, consisting of 12 male and 16 female patients, ranging in age from 10 to 80 years old, and most diagnosed with schizophrenia (n=13, 46.4%), schizoaffective disorder (n=4, 14.3%), bipolar disorder or conduct disorder (n=3, 10.7%). While 37.5% of patients received aripiprazole monotherapy, the rest of the group received a combination regimen that included other antipsychotic medications, mood stabilizers and antidepressants. The major difference between aripiprazole and seven other antipsychotics (haloperidol, risperidone, ziprasidone, olanzapine, clozapine and quetiapine) is explained by the perceived advantage of the former in active social avoidance, passive social withdrawal, emotional withdrawal and difficulty with abstract thinking as measured by the PANSS scale, and improvement in mood, energy, cognition, drive, motivation and appropriate social interaction measured by the Clinical Observation Scale and the Salience Scale. Conclusions: Results suggest that aripiprazole has a unique beneficial effect on interpersonal function, emotional expression, mood and cognition, distinctly different from and superior to that of other antipsychotics.

**REFERENCES:**
1.Tandon R, Marcus RN, Stock EG, Riera LC, Kostic D, Pans M, McQuade RD, Nyilas M, Iwamoto T, Crandall DT: A prospective, multicenter, randomized parallel-group, open-label, study of aripiprazole in the management of patients with schizophrenia or schizoaffective disorder in general psy chiatric practice: Broad Effectiveness Trial With Aripiprazole (BETA). Schizophrenia Research 2006; 84(1):77-89.
2. Kapur S: Psychosis as a State of Aberrant Salience: A Frame work Linking Biology, Phenomenology, and Pharmacology in Schizophrenia. American Journal of Psychiatry 160:1, Janu ary 2003.

**NR4-113**

**TREATMENT PATTERNS PRIOR TO INITIATING DEPOT TYPICAL ANTIPSYCHOTICS FOR NON-ADHERENT SCHIZOPHRENIA PATIENTS**

*Xiaomei Peng, M.D. Lilly Corporate Center, DC 4123, Indianapolis IN 46285, Haya Ascher-Svanum, Ph.D., Douglas E. Faries, Ph.D., William Montgomery, B. Pharm*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant will recognize that despite prior non-adherence with antipsychotic medication, only a small proportion of non-adherent schizophrenia patients get initiated on depot antipsychotics.

**SUMMARY:**

Objective: To identify treatment patterns and illness characteristics preceding the initiation of depot typical antipsychotics in the treatment of schizophrenia patients who are non-adherent with oral antipsychotic regimens. Methods: Data were drawn from a large, multi-site, 3-year prospective non-interventional observational study of schizophrenia patients in the U.S, conducted between 7/1997 and 9/2003. The analytical sample included patients who - in the 6 months prior to enrollment - were non-adherent with oral antipsychotics and were not treated with depot antipsychotics (N=314). Non-adherent patients who were subsequently initiated on typical depots during the 3-year follow-up were compared with patients continuing therapy with only oral agents. Comparisons were made on clinical, functional, and treatment variables assessed at predetermined intervals with standard psychiatric measures, a patient self-report questionnaire, and medical record information. Results: A small proportion of patients (12.4%) previously non-adherent with oral antipsychotics were subsequently initiated on a depot therapy during the 3-year study. Compared to patients treated with only oral antipsychotics, those subsequently initiated on a depot were significantly more likely to be hospitalized at depot initiation or during the previous 6 months, were more likely to have recent legal involvement, illicit drug use, and treatment with more antipsychotics during the 3 months prior to initiation. Conclusion: Despite prior non-adherence with antipsychotic medication, only a small proportion of non-adherent schizophrenia patients were initiated on depot antipsychotics in this 3-year prospective study. Patients who were subsequently initiated on depot had a distinct treatment pattern and illness profile preceding initiation of the depot medication. Funded provided by Eli Lilly and Company.

**REFERENCES:**

1. Olfson M, Marcus SC, Ascher-Svanum H. Treatment of schizophrenia with long-acting fluphenazine, haloperidol, or risperidone. Schizophr Bull. 2007;33(6):1379-87.
2. Shi L, Ascher-Svanum H, Zhu B, Faries D, Montgomery B, Marder S. Patient Characteristics and Antipsychotic Use Pat tern Among Individuals Treated With Typical Depot Antipsy chotics or Oral Antipsychotics in the Usual Care of Schizo phrenia. Psych Serv 2007; 58:482-488.

**NR4-114**

## AN ALTERNATIVE APPROACH TO MEASURING TREATMENT PERSISTENCE WITH ANTIPSYCHOTIC AGENTS AMONG PATIENTS WITH SCHIZOPHRENIA IN THE VA

*Xinhua Ren, Ph.D. 200 Springs Road, Bldg. 200, Bedford, MA 01730, Shirley Qian, M.S. and Lewis E. Kazis, Sc.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the problems associated with the existing measures of treatment adherence and understand the value of the approach we proposed in the study.

**SUMMARY:**

A number of studies have demonstrated the importance of treatment persistence with antipsychotic agents in sustaining control of schizophrenic symptoms. However, the conventional approach in measuring treatment persistence tended to use only the first prescription episode even though some patients received multiple prescriptions of the same medication within one year following the first prescription episode. In this study, we provided data from a large integrated health care system in the United States, the Veterans Health Administration, which indicated that about a quarter of the patients had multiple prescriptions (or multiple treatment episodes) within a year following the initiation of the target drug. offered an alternative approach to measuring treatment persistence using data from a large integrated health care system, the Veterans Health Administration, in the United States. The study found that the conventional approach, using only the first initiation record of medications, tended to yield results that were likely to be biased in comparing the levels of treatment persistence between typical and atypical antipsychotic agents. On the other hand, the alternative approach, which incorporated multiple medication records, tended to reflect routine clinical practices as switching across antipsychotic agents was common among patients with schizophrenia. Moreover, recognizing that patients with different number of medication records may differ in disease profiles, the alternative measure using a record-specific approach offered a fair comparison of the levels of treatment persistence across patients with different medication records. Future research needs to extend the analyses to more antipsychotic agents. A more comprehensive assessment using appropriate analytic methods should provide physicians with a better knowledge about treatment persistence associated with different antipsychotic agents and help them make prescription choices that will ultimately

**REFERENCES:**

1. American Psychiatric Association. 1997. Practice guideline for the treatment of patients with schizophrenia. Am J Psy chiatry, 154:1-63.
2. Ren XS, Qian S, Lee A, et al. 2006. Treatment persistence: A comparison among patients with schizophrenia who were initiated on atypical antipsychotic agents. Journal of Clinical Pharmacy and Therapeutics, 31;57-65.

**NR4-115**

## PATIENT CHARACTERISTICS AND PRESCRIPTION PATTERNS OF OLANZAPINE AMONG PATIENTS WITH SCHIZOPHRENIA IN THE VETERANS HEALTH ADMINISTRATION

*Xinhua Ren, Ph.D. 200 Springs Road, Bldg. 200, Bedford, MA 01730, Lewis E. Kazis LE, Sc.D., Shirley Qian, M.S., and Austin F. Lee, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant shall be able to identify some of the patients' clinical characteristics that are associated with the initiation of standard doses (<20 mg/day)

versus high doses (> 20 mg/day) of olanzapine among patients with schizophrenia in the Veterans Health Administration (VA).

**SUMMARY:**
The primary objective of the study is to compare clinical characteristics between patients who were initiated on standard doses (<20 mg/day) versus those initiated on high doses (> 20 mg/day) of olanzapine among patients with schizophrenia in the Veterans Health Administration (VA). The study used VA national data in identifying patients with a diagnosis of schizophrenia between 7/1/1998-6/30/1999 and selected those who were initiated on olanzapine between 4/1/1999 and 3/31/2000 provided that they were not on olanzapine for six months prior to initiation. Using t-tests of means or proportions, we compared clinical characteristics (during six months prior to initiation) between patients who were prescribed with standard or high doses of olanzapine. The study found that only 3.1% (N=9,739) of the patients were initiated on high dosage of olanzapine. Compared with patients who were initiated on standard doses, patients initiated on high doses were less likely to be on typical antipsychotic (43.0% vs. 52.9%; $p<0.01$), but were more likely to be treated with clozapine (2.0% vs. 0.8%; $p<0.05$); they were less likely to have at least one additional drug for psychiatric conditions (53.2% vs. 70.7%; $p<0.001$), but were more likely to have at least one psychiatric hospitalization (55.5% vs. 33.4%; $p<0.01$) and to have lengthy hospitalization stay (> 19 days) (26.5% vs. 7.3%; $p<0.001$). In conclusion, there are some evidence that the use of high doses of olanzapine might be reserved for a small segment of the patients who present with a more severe psychiatric illness profile of schizophrenia.

**REFERENCES:**

1. Leslie DL, Rosenheck RA. Use of pharmacy data to assess quality of pharmacotherapy for schizophrenia in a national health care system: individual and facility predictors. Med Care 2001;39:923-933.
2. RxList – The Internet Drug Index. www.rxlist.com

**NR4-116**

## IMPACT OF MENSTRUAL CYCLE ON SCHIZOPHRENIA

*Yasser A Elsayed, M.D. Institute of Psychiatry , Faculty of medicine, Ain Shams University Abbasia, Cairo, Egypt, Abdel Razek G., M.D., Refaat G., M.D., Mahmoud A., M.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to;1) identify the impacts of menstrual cycle on clinical parameters of schizophrenia; and 2) recognize the association between schizophrenic symptoms and the different clusters of symptoms related to menstrual cycle.

**SUMMARY:**
Hypothesis:
We investigate the hypothesis that monthly cycle during its different phases may affect schizophrenia regarding severity and exacerbation of symptomsMethod:We observed 40 female schizophrenic inpatients over two menstrual cycle. All subjects met ICD10 criteria for schizophrenia, and their psychotic symptoms rated using the positive and negative scale for schizophrenia (PANSS) during each of the three menstrual phases (premenstrual, menstrual, and postmenstrual).Data from the 27subjects who completed the study used for statistical analysis. Results:There was a significant correlation between date of admission (exacerbation) premenstrual and menstrual phase of the cycle. The mean total PANSS score for the 27 subjects was highest in the premenstrual phase and lowest in the postmenstrual phase, and a statistically significant difference was found among the three menstrual phases. There is statistical significant difference between follicular and luteal phase of the cycle regarding anxiety-tension and somatic symptoms but no changes in the psychotic symptoms. There is increase in rate of admission in premenstrual and menstrual phases of the cycle. CONCLUSIONS: Our findings suggest that premenstrual exacerbation of symptoms in female schizophrenics may not be a worsening of the core schizophrenic symptoms but a concurrence of a cluster of affective, behavioral, and somatic symptoms which may be related to hormonal changes.

**REFERENCES:**

1. Levitte SS: Treatment of premenstrual exacerbation of schizo phrenia. Psychosomatics, 1997; 38: 582–4.
2. So-Hyun Choi, , Sang-Bum Kang and Sook-Haeng Joe: Changes in Premenstrual Symptoms in Women With Schizo phrenia: A Prospective Study 3.American Psychosomatic Medicine , 2001;63:822-829

**NR4-117**

## DEMOGRAPHIC, CLINICAL CHARACTERISTICS, PSYCHOPATHOLOGY AND ATTITUDE TOWARD MEDICATION IN SCHIZOPHRENIC OUTPATIENTS USING TYPICAL DEPOT ANTIPSYCHOTICS

*Zana B Stankovic, M.D. Institute of Psychiatry, Clinical Centre of Serbia, Belgrade,Serbia, Yugoslavia 11000, Dubravka Britvic, M.D., Olivera Vukovic, M.D., M.Sc.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to recognise basic characteristics of schizophrenic outpatients using first-generation depot antipsychotics.

**SUMMARY:**
Introduction: Depot use of typical antipsychotics has fallen in recent years, perhaps owing to the introduction of oral atypical antipsychotics. We hypothesized that schizophrenic outpatients using typical depot antipsychotics would differ from these treated with only oral antipsychotics in demographic, clinical characteristics, psychopathology and attitude toward medication. Methods: 45 outpatients of both genders (<60 years) with a diagnosis of ICD-10 Schizophrenia on maintenance treatment at least 6 months from the latest hospitalisation were included into this cross-sectional study. 11 patients (24%) were on first-generation depot antipsychotics (fluphenazine or haloperidol decanoate, with or without oral antipsychotics) and 34 patients (76%) were treated with only oral antipsychotics (atypical or classical or both). All the study patients were prescribed concomitant psychotropic medication. Apart from the registration of demographic and illness characteristics, the Brief Psychiatric Rating Scale (BPRS) and the Positive and Negative Syndrome Scale (PANSS) were used to assess psychopathology. The self-report questionnaire Medication Adherence Rating Scale (MARS) was used to assess patient's attitudes toward medication. Results: Significant differences in age ($p<0.05$) and duration of treatment ($p<0.001$) between the

patients groups were found. There were significantly lower the PANSS (Total and General psychopathology subscales) scores and significantly higher the DAI subscale of the MARS score in schizophrenic outpatients using typical depot antipsychotic related to these receiving only oral antipsychotics ($p<0.05$) (the Student t test). Conclusions: Schizophrenic outpatients using typical depot antipsychotic were considerably older with longer duration of treatment, lesser severity of symptoms as well as better attitude toward medication compared with these receiving only oral antipsychotics.

**REFERENCES:**


1. Shi L, Asher-Svanum H, Zhu B, Faries D, Montgomery W, Marder SR: Characteristics and use patterns of patients taking first-generation depot antipsychotics or oral antipsy-chotics for schizophrenia. Psichiatr Serv 2007; 58(4): 482-8.
2. Walburn J, Gray R, Gournay K, Quraishi S, David A: System atic review of patients and nurse attitude to depotantipsy chotic medication. The British Journal of Psychiatry 2001; 179: 300-7.


**NEW RESEARCH POSTER SESSION 5**

**TUESDAY, MAY 6, 2008 3:00 P.M. – 5:00 P.M.**
**WEST LOBBY, LEVEL ONE, WASHINGTON CONVENTION CENTER**

**NR5-001**

## SELF-EFFICACY AS A MODERATOR OF TREATMENT OUTCOMES IN THE SINGLE-GENDER WOMEN'S RECOVERY GROUP VERSUS MIXED-GENDER GROUP DRUG COUNSELING


*Amanda M Cummings, B.A. McLean Hospital*
*115 Mill Street, Belmont, MA 02478, Melissa F. Lincoln, Laura E. Kuper, Robert J. Gallop, Ph.D., Shelly F. Greenfield, M.D., M.P.H.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) understand the role of self-efficacy in treatment outcomesadn 2) recognize how self-efficacy may be a moderator of outcome for women seeking treatment for substance use disorders.

**SUMMARY:**


Objective: In a Stage I controlled trial of a new manual-based Women's Recovery Group (WRG) compared with mixed-gender Group Drug Counseling (GDC), we hypothesized women with greater baseline self-efficacy would have better substance abuse treatment outcomes compared with low self-efficacy women regardless of treatment group assignment. We examined baseline self-efficacy as a moderator of outcome comparing women who received treatment in the WRG (N=24) to women in GDC (N=6). Methods: Women were divided into two categories based on a median split of high (= 72.5) or low (= 72.5) scores of self-efficacy on the Drug-Taking Confidence Questionnaire (DTCQ). We used a repeated measures analysis including a lagged effect for DTCQ score where baseline score predicts subsequent substance use outcomes. Outcomes were assessed as reduction from baseline in mean drinking days per month and mean days of any substance use per month during the 3-month treatment phase and the 6-month post-treatment follow-up phase. Results: The use of two categories resulted in all but one woman in GDC having high self-efficacy, while WRG women were split into high and low self-efficacy groups. At 6 months post-treatment, all the women in WRG were more likely than women in GDC to endorse significantly fewer drinking days ($t=3.38$, $p= .001$ and $t=2.31$, p- .02, respectively). Also, low self-efficacy WRG women endorsed fewer days of any substance use post-treatment ($t-2.34$, $p= .02$) than women enrolled in GDC. Conclusions: Women with both high and low self-efficacy in WRG had greater reduction from baseline in drinking days per month compared with women in GDC, and low-self efficacy women in WRG had fewer days of any substance use than women in GDC at 6 months post-treatment. The findings suggest that women with low self-efficacy at baseline may have enhanced treatment outcomes in a single gender group. Supported in part by NIDA R01 DA015434 (SFG) and K24 DA019855(SFG).


**REFERENCES:**


1. Greenfield, S.F., Trucco, E.M., McHugh, R.K., Lincoln, M.F., Gallop, R.J., 2007. The Women's Recovery Group study: A stage I trial of women-focused group therapy for substance use disorders versus mixed-gender Group Drug Counseling. Drug Alcohol Depend. 90, 39-47.
2. Annis, H.M., Martin, G., 1985. The Drug-Taking Confidence Questionnaire. Addiction Research Foundation of Ontario, Toronto.


**NR5-002**

## ADHD AND SLEEP DISORDERS AS CAUSE OF DEPRESSION AND DRUG ABUSE BY STUDENTS


*Andrej N Ilankovic, M.D. HEALTH COLLEGE OF PROFESSIONAL CAREER STUDIES "MILUTIN MILANKOVIC" Kneza Viseslava 27,11000 Belgrade,Serbia,Yugoslavia, Tanja Lakovic, M.D., Lana Marija Ilankovic, M.A., Nikola Ilankovic, M.D., Ph.D, Vera Ilankovic, Ph.D, Snjezana Tokovic, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand the correlation between ADHD and sleep disorder as cause of depression and drug addiction by students.

**SUMMARY:**


Aim of study: Our investigation is an prospective analysis of groups of students with diagnosed ADHD and their sleep and wake behavior, depression, and tendency to drug abuse. Methods: In the group were 70 students from high school (16-17 years old) with and without diagnose of ADHD and drug abuse. For assessment we used: (1) the scale for assessment of sleep-wake behavior, (2) AD/HD Rating Scale IV (3) the Hamilton Depressive Scale (HAMD), (4) the Zung scale for self-measurement of depression, (5) Self test of Anxiety Disorders in adolescents. The statistical analysis was made with Mc Pearson test of linear correlation, with Student t-test and with linear regression. Results: (1) The linear correlation (Mc Pearson) is very high and statistically very significant ($p<0.0001$) between delay of sleeping time (after midnight), depression score (HAMD and Zung), and tendency to drug abuse. (2) The predictive models (made with linear regression) as risk factors for addictive behavior point out: smoking, night life, different pains, abuses of drugs for pain, delay of time going to sleep, and very high score of depression. Conclusions:

1. Disorders of sleep (especially disorders of circadian sleep and wake cycles) by students is a great risk to developing depression and tendency to drug abuse. 2. All students with diagnosed ADHD have a sleep disorder and 76% of them have a secondary psychiatric disorders –depressive disorders and drug addiction.

**REFERENCES:**


1. Ilankovic A, et al.: Sleep disorders and depression by stu dents, M.Sc. Thesis, Medical faculty, Belgrade, 2002.
2. Silver, Larry B. Attention deficit/hyperactivity disorder: a clinical guide to diagnosis and treatment for health and mental health professionals.-3rd ed. American Psychiatric Publishing,Inc.2004.


**NR5-003**

## ONDANSETRON WITH OLANZAPINE FOR THE TREATMENT OF ALCOHOL DEPENDENCE: PRELIMINARY CLINICAL TRIAL


*Bankole A Johnson, D.Sc. Alumni Professor and Chairman, Department of Psychiatry and Neurobehavioral Sciences,University of Virginia, PO Box 800623,Charlottesville VA 22908-0623, Nassima Ait-Daoud, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: understand the mechanisms of action of the 5-HT3 receptor antagonist ondansetron and the 5-HT2 / DA-1–4 receptor antagonist olanzapine; gain knowledge of previous studies of ondansetron and olanzapine for treating alcohol dependence; be familiar with the rationale for combining the medications, and learn about the present study testing the combination of ondansetron and olanzapine for the treatment of early-onset alcoholism.

**SUMMARY:**


Introduction: Corticomesolimbic dopamine (DA) pathways mediate alcohol's rewarding effects associated with its abuse liability. Direct DA receptor blockade and decreased DA release by pretreatment with 5-HT3 receptor antagonists suppress ethanol self-administration and place preference in animals. The 5-HT3 antagonist ondansetron has been shown to be a promising medication for early-onset alcoholics. Also, results of human laboratory and preliminary clinical studies show that the atypical antipsychotic olanzapine—which blocks 5-HT2 and DA-1–4 receptors and has activity at 5-HT3 receptors—can effect reductions in alcohol craving and consumption. We hypothesized that ondansetron, by down-regulating DA synthesis, would augment olanzapine's DA-2 antagonist efficacy, making the combination useful for reducing DA turnover in corticomesolimbic neurons and controlling alcohol craving.

Methods: This study examined the safety and efficacy of ondansetron (4 µg/kg BID) and olanzapine (9, 18, and 36 µg/kg BID) vs. placebo in treating early-onset male and female alcoholics (10 subjects/cell×4 cells; total N=40) in a randomized, 9-week, double-blind, placebo-controlled, outpatient clinical trial. All subjects received manual-driven, standardized Brief Behavioral Compliance Enhancement Treatment.

Results: The retention rate in the study was 75%. All treatment groups showed improvement, and the difference between the ondansetron+olanzapine (36 µg/kg BID) and placebo groups on severity of drinking (ie, drinks/drinking day) appeared to be the largest—mean difference, –2.86; 95% CI, –6.40 to 0.67; P=0.05 (one-tailed). Adverse events were mostly mild, with no serious adverse events. Additional results will be available soon and presented.

Conclusions: Despite the small sample size, the combination of ondansetron and olanzapine appears to be a promising medication for the treatment of early-onset alcoholism. This research was supported by TransOral Pharmaceuticals (San Francisco, CA).


**REFERENCES:**


1. Johnson BA, Roache JD, Javors MA, DiClemente CC, Cloninger CR, Prihoda TJ, Bordnick PS, Ait-Daoud N, Hensler J: Ondansetron for reduction of drinking among biologically predisposed alcoholic patients: a randomized controlled trial. JAMA 2000; 284:963-971
2. Hutchison KE, Ray L, Sandman E, Rutter MC, Peters A, Davidson D, Swift R: The effect of olanzapine on craving and alcohol consumption. Neuropsychopharmacology 2006; 31:1310-1317


**NR5-004**

## MORTALITY RISK UP TO 25 YEARS AFTER INITIATION OF TREATMENT AMONG 420 SWEDISH WOMEN WITH ALCOHOL ADDICTION


*Brit Haver, M.D. Sandviksleitet 1, 5035 Bergen, Norway, Rolf Gjestad, Psy.D., Staffan Lindberg, M.A. B.A., Johan Franck, M.D. Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand the dangers of heavy drinking among women.

**SUMMARY:**


Aim: to compare the long term mortality and the causes of death of patients (N=420) versus matched general population controls (N=2037). Background: The increased use of alcohol among women is a major health concern. The Karolinska Project for Early treatment of Women with Alcohol Addiction (EWA) was a pioneer treatment project established in 1981 in Sweden, designed to meet the challenges resulting from the changes in women's drinking patterns. The programme addressed women not previously treated for alcohol problems. The women coming for treatment were socio-demographically more similar to the general population of women than substance abusers generally. Methods: Data through the follow-up period (0-25 years) from the Causes of Death Register, for the patients and their matched GP controls, were analyzed. Results: Women treated for alcohol problems had a significantly higher mortality through the whole follow-up period than the matched GP controls (RR=2.4). For the youngest women, mortality was 4 times higher than their matched controls, and the peak of deaths occurred through the first five years. Alcohol related causes of death were significantly overrepresented, as were uncertain suicides and external causes like accidents. Conclusions: Alcohol addiction among women is a serious disorder with a high mortality. This holds true even for socially well functioning samples treated early in their addiction career – at a highly reputable treatment centre. Improved primary and secondary preventive strategies are needed. Next Step: Survival models with baseline and

therapy outcome data will be analyzed. Morbidity data (e.g. outpatient/inpatient treatment, sick leave, health economy) will be collected for further analyses.

**REFERENCES:**


1. Haver B, Dahlgren L, Willander A. A 2-year follow-up of 120 Swedish female alcoholics treated early in their drinking career: prediction of drinking outcome. Alcohol Clin Exp Res. 2001 Nov;25(11):1586-93.
2. Smith EM, Lewis CE, Kercher C, Spitznagel E. Predictors of mortality in alcoholic women: a 20-year follow-up study. Alcohol Clin Exp Res. 1994 Oct;18(5):1177-86.


**NR5-005**

## METHADONE DEATHS: PREVALENCE OF PRESCRIPTION AND ILLICIT DRUG USE AMONG PATIENTS RECEIVING METHADONE


*Chandresh Shah, M.D. Los Angeles VA Ambulatory Care Center University of Southern California 351 E. Temple Street, Los Angeles, CA 90012,*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize extent of use of prescribed psychotropic medications as well as illicit drugs among patients receiving methadone; and its implication on potential risk for adverse outcome.

**SUMMARY:**


Disease, disability and death of celebrities often highlight the plea for help. Ana Nichole Smith's tragic death was sensationalized as Methadone Death. But the coroner's office had concluded that the cause of death might not be methadone alone, but methadone in combination with other drugs. Patients receiving methadone often underestimate potential risk while combining prescription and illicit drugs; and providers are often unaware of prescription and illicit drugs taken by their patients receiving methadone. Patients who have been actively participating in Methadone Maintenance Program for at least 180 days were evaluated for use of other prescription psychotropic drugs as well as of illicit drugs. There were 165 male patient (age = 57.22+7.36 years) receiving 62.26+25.59 mg of methadone daily. There were 30 patients receiving other opioids, 15 receiving benzodiazepines, 70 receiving antidepressants, 41 receiving antipsychotics, and 8 patients receiving mood-stabilizers. It was also noted that while 52.08% of patients received only one concomitant medication; 32.29% received 2 medications, and 2.08% received 5 concomitant medications. Review of urine toxicology results showed that only 45 patients (27.27%) were drug-free. Of those remaining patients who were noted to be still using illicit drugs; 78 were using opioids, 56 benzodiazepines, 56 cocaine and 11 patients were using amphetamine. While almost half (48.33%) of these patients were positive for only one drug; 37.5% were for two drugs, 10% for three drugs and 4.17% for four drugs. These data show that prescription of concomitant psychotropic drugs and continued illicit drug use while receiving methadone is more of a norm rather than exception. Providers as well as patients need to recognize the high potential for an accident with serious and grave consequences. Judicial use of concomitant psychotropic drugs and complete abstinence from use of illicit drugs can minimize the risk adverse outcome.


**REFERENCES:**


1. Fingerhut Lois A: Increases in Methadone-Related Deaths: 1999-2004. http://www.cdc.gov/nchs/products/pubs/pubd/hestats/methadone1999-04/methadone1999-04.htm.
2. Karch SB, Stephen BG: Toxicology and pathology of deaths related to methadone - retrospective review. West J Med 2000 Jan; 172 (1):11-4.


**NR5-006**

## STOP SMOKING TREATMENT IN DEPRESSED PATIENTS


*Derya Iren Akbiyik , M.D. Bulbulderesi Cad. 50/5, Ankara, Turkey 06660, Haldun Soygur, M.D., PhD., Elvan Ozalp, M.D., Eylem Sahin Cankurtaran, M.D., Semra Ulusoy Kaymak, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to learn that the treatment of nicotine dependency in depressed patients may require different approaches.

**SUMMARY:**


Objective: Stop smoking treatment includes different types of procedures extending from CBT to pharmaceutical treatment. However, the personal motivation and preparedness of the patients at the very beginning of the sessions are the most important predicting factors for the outcome. Patients with depression, often with a decreased motivation in general, constitute a special group for whom the professionals may need to develop special approaches to start the ordinary stop smoking programs. This study aims to evaluate the most appropriate timing to start the program in patients diagnosed as depression. Method: The patients who admitted to Nicotine Dependence Treatment Section (NDTS) of Psychiatry Department in Ankara Oncology Research and Training Hospital for smoking cessation programs and who were diagnosed as depression (Group A, n:38) were compared with the same group but who were not depressed (Group B, n: 57) for the duration to stop smoking for at least 3 months. After a brief psychiatric evaluation, all of the patients included in the study were given Beck Depression Scale, Symptom Check List 90 and Fagerstrom Nicotine Dependency Test. Group a divided into two subgroups; Group A1 (20) was started to stop smoking program as soon as they came in the unit and at the same time with the beginning of their treatment for depression. The second subgroup of Group A (Group A2, n:18) were waited until their depression treatment reached to three-four weeks. All groups were followed after they stop smoking and the behaviours at the 3rd month were recorded. RESULTS: The rate of success to stop smoking in the GoupA2 was (n:10 quit smoking) as high as Group B while Group A1 had showed a significant lower success than the other two. Discussion: Waiting for the best appropriate timing to begin stop smoking sessions for depressed patients is the best for keeping to be free of nicotine at least 3 months.


**REFERENCES:**


1. Hall SM., Nicotine interventions with comorbid populations. Am J Prev Med. 2007 Dec;33(6 Suppl):S406-13.
2. Arfken CL.Health issues in the Arab American community. A review: depression and smoking.Ethn Dis. 2007 Summer;17(2 Suppl 3):S3-16-S3-18.

**NR5-007**

**EFFECT OF BUPROPION FOR NICOTINE DEPENDECE IN PATIENTS WITH MAJOR DEPRESSIVE DISORDER: AN OPEN CLINICAL TRIAL**

*Hyun Kim, M.D. 2240, Daewha-dong, Ilsan-gu, Gyeonggi-do, Goyang-si, South Korea 411-706, Kang Joon Lee, M.D.,Ph.D*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to discuss the experience with bupropion for nicotine dependence in patients with major depressive disorder.

**SUMMARY:**

Although the underlying mechanism is not fully understood, previous studies have shown a strong relationship between depression and nicotine dependence. Five hypotheses for the relationships have been suggested: (a) Depression causes smoking, (b) smoking causes depression, (c)there is a bidirectional relationship between smoking and depression, (d) smoking and depression occur due to confounders, and (e) subgroups with different relationships between the two conditions exist. Bupropion is known to be a safe and effective antidepressant, suitable for first-line use. It also has been used as first-line treatment for smoking cessation. In addition to inhibiting dopamine reuptake, bupropion has been reported to block nicotinic acetylcholine receptors. So this action might contribute to its efficacy for smoking cessation. The objective of this study was to evaluate the effectiveness of bupropion in smoking cessation in nicotine dependece patients with major depressive disorder. 37 smokers with major depressive disorder (DSM-IV) took part in a trial of bupropion for treatment of depressive mood and smoking cessation. Exclusion criteria were history of convulsive disorder; eating disorders; cerebrovascular accidents; uncontrolled diabetes; increased hepatic enzymes. Patients had received flexible dose of bupropion(150-300 mg/day) for the duration of 8 weeks. All patients were assessed with the 17-item Hamilton Depression Rating Scale (HAM-D-17) and the Montgomery-Asberg Depression Rating Scale (MADRS) at baseline and after 8 weeks. 71.8 %(n=28) patients were continuously abstinent from week 1 to week 4. Success rate for smoking cessation at week 8 was 51.3%(n=19). There was no difference in mean HAM-D-17 score and mean MARDS score between the abstinence group and the non-abstinence group, at baseline and after 8 weeks($p<0.001$). These results suggest that bupropion is useful as a treatment for nicotine dependence in patients with major depressive disorder.

**REFERENCES:**

1. Garwood CL, Potts LA. Emerging pharmacotherapies for smoking cessation. Am J Health Syst Pharm. 2007 Aug 15;64(16):1693-1698.
2. Lief HI. Bupropion treatment of depression to assist smoking cessation. Am J Psychiatry. 1996 Mar;153(3):442.

**NR5-008**

**ASSOCIATION OF POLYMORPHISM ON ALDH2, BDNF, 5-HTTLPR AND MTHFR GENES WITH ALCOHOL DEPENDENCE IN OLDER KOREAN MALE**

*Jin-Sang Yoon, M.D. Clinical Trial Center, Chonnam National University Hospital, 5 Hak-Dong, Dong-Gu, GwangjuSouth Korea 501-746, Sangmoon Shin, M.D., Jeong-Hoon Lee, M.D., Sung-Wan Kim, M.D., Tak Youn, M.D., Dong-Seok Yang, M.D., Yo-Han Lee, M.D., Jae-Min Kim, M.D., Jeong-Gon Kim, M.D., Joon-An Yoo, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the relationship between alcohol dependence and genetic polymorphism.

**SUMMARY:**

Background: This study aimed to investigate the association of alcohol dependence with some candidate genes related to alcohol Metabolism and reactions in the central nervous system [aldehyde dehydrogenase 2 (ALDH2), brain derived neurotrophic factor (BDNF), 5-hydroxytriptamine transporter gene linked polymorphic region (5-HTTLPR), Methylenetetrahydrofolate reductase (MTHFR)] in older Korean men.

Methods: Study subjects consisted of community dwelling 300 men aged 65 or over. They were categorized into 68 subjects with alcohol dependence and 232 controls according to DSM-IV criteria. Genetic polymorphisms were tested using polymerase chain reaction and restriction fragment length polymorphism. Genotypes were classified into three groups that 5-HTTLPR genotype was to to s/s, s/l, l/l; BDNF to Val/Val, Val/Met, Met/Met; MTHFR to C/C, C/T, T/T; and ALDH2 to 2*1/1, 2*1/2, 2*2/2 respectively. Genotype distribution and allele frequency were compared between the subjects with and without alcohol dependence.

Results : The subjects with alcohol dependence had significantly higher frequencies of ALDH2*1/1 genotype and ALDH2*1 allele, and BDNF Met/Met genotype and Met allele compared to the controls (all P-Value < 0.05), However, there were no significant differences in the genotype distribution and allele frequencies of the 5-HTTLPR and MTHFR genes between the two groups (all P-Value > 0.3).

Conclusions: Alcohol dependence was associated with ALDH2*1 and BDNF Met alleles in older Korean men. These results might contribute to understand the pathogenesis of alcohol dependence to some extent.

**REFERENCES:**

1. Joe KH, Kim YK, Kim TS, et al : Decreased plasma brain-derived neurotrophic factor levels in patients with alcohol dependence. Alcohol Clin Exp Res 2007;31:1833-8.
2. LinksFeinn R, Nellissery M, Kranzler HR : Meta-analysis of the association of a functional serotonin transporter promoter polymorphism with alcohol dependence Am J Med Genet B Neuropsychiatr Genet 2005;133:79-84.

**NR5-009**

**PHYSICAL ILLNESS IN PATIENTS WITH SUBSTANCE-RELATED DISORDERS - AN INTERNATIONAL COMPARISON**

*Karel J Frasch, M.D. Ludwig-Heilmeyer-Strasse 2, Guenzburg-Germany 89312, Thomas Becker, M.D., Reinhold H. Kilian, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the importance of physical comorbidity in substance-related disorders (SRD) and that the comorbidity pattern of patients with SRD differs from other psychiatric

collectives. Furthermore, attendees should be able to consider that there may be distinct patterns of physical comorbidity in the various SRD subtypes and be in a position to debate reasons why some diseases have been diagnosed less often in our SRD patients.

**SUMMARY:**

Introduction: While there are many studies dealing with medical comorbidity of patients with schizophrenic and affective disorders (1), not much has been published on physical illness in psychiatric patients with substance-related disorders (SRD; e.g. (2)). Methods: Data on physical health status were collected from 2338 patients of 12 mental health care facilities in 5 different countries. 447 patients (19%) had a primary or secondary diagnosis of a SRD. Effects of an SRD diagnosis and the subtype of substance abuse on the prevalence of somatic diseases were analysed by use of logistic and linear regression models. Results: In comparison to patients with other mental disorders, patients with SRD had a higher probability of infectious ($p<0.001$) and digestive diseases ($p<0.001$) but a lower probability of overweight ($p=0.04$) and endocrinological diseases ($p=0.03$). In subgroup analyses, opioid abuse was associated with a higher risk of any somatic diagnosis (OR 2.8; $p=0.02$) which was mainly due to infectious diseases (OR 12.8; $p<0.001$). Benzodiazepine abuse increased the risk of being diagnosed with an endocrinological disorder (OR 2.5; $p<0.001$) and overweight (OR 2.6; $p=0.002$) but was associated with a lower risk of urological disorders (OR 0.5; $p=0.002$). Alcohol abuse increased the risk of cardiovascular diseases (OR 2.5; $p=0.03$). Tobacco abuse increased the risk of pulmonary disorders (OR 3.1; $p=0.004$) but lowered the risk of being diagnosed with urological disorders (OR 0.3; $p=0.004$) and injuries (OR 0.2; $p<0.001$). Cannabinoid abusers had lower BMIs ($b=–2.13$; $p<0.001$) and the combined SRD group had an increased risk of urological disorders (OR 3.0; $p=0.01$). Conclusion: Results of the study indicate that in comparison with other mental disorders, SRD are related to particular risks of somatic comorbidity which implicates the need for specific preventive and therapeutic action for this group of patients.

Supported by funding from AstraZeneca.

**REFERENCES:**

1. Kilian R, Becker T, Krueger K, Schmid S, Frasch K: Health behavior in psychiatric in-patients compared with a German general population sample. Acta Psychiatr Scand 2006; 114: 242-248.
2. Mannelli P, Pae CU: Medical comorbidity and alcohol depen dence. Curr Psychiatry Rep 2007; 9: 217-224.

**NR5-010**

## CAN THE WAYS OF COPING CAPTURE COPING RELEVANT TO SUBSTANCE USE RECOVERY? AN EXPLORATION OF UTILITY

*Laura E Kuper, B.A. McLean Hospital, Belmont, MA 02478, Amanda M. Cummings, B.A., Shelly F. Greenfield, M.D., M.P.H.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to identify coping scales which may capture changes in coping relevant to group treatment for substance use disorders. The participant should also be able to list some of the limitations of using the Ways of Coping towards this aim, and be able to note several ways further research may increase its utility.

**SUMMARY:**

Objective: Effective coping is cited as a key ingredient in relapse prevention and typically targeted by treatment interventions. We explored the utility of a widely used coping inventory, The Ways of Coping, to assess relationships between coping and treatment outcomes among male (n=9) and female (n=30) participants enrolled in a controlled study of two manualized group treatments for substance use disorders (SUDs), the Women's Recovery Group and Group Drug Counseling.

Methods: The Ways of Coping is categorized into 8 primary scales and several higher order strategies. We explored both methods of categorization. Coping was analyzed at baseline and end of 3-month treatment, and change scores were calculated by subtracting these scores. Change from baseline in mean days per month of any substance use and mean drinking days per month were the primary SUD outcome measures.

Results: At baseline, women endorsed both more emotion and problem focused coping than men ($t=2.61$, $p<.05$; $t=2.93$, $p<.01$). Women endorsed significantly greater use of both problem-focused engagement and disengagement ($t=2.08$, $t=2.22$, both $p<.05$). Differences in these higher order strategies only existed at baseline, but within treatment change in the keeping-to-self and escape avoidance primary scales were correlated with outcomes (-.336, -.337, both $p<.05$). Change in planful problem solving was also correlated with outcomes, but for men only (-.786, $p<.05$). Looking at end of treatment scores, tension reduction and social support seeking correlated with outcomes, but social support was only significant for women (-.318, .355, both $p<.05$).

Conclusions: Although these findings highlight potential gender differences and mechanisms of action for group therapy for SUDs, additional refinement and testing of coping measures would help to further elucidate how changes in coping might operate as a mechanism of action for these therapies.

Support was provided by NIDA R01 DA015434 and K24 DA019855 (SFG).

**REFERENCES:**

1. Folkman, and Lazarus. Ways of Coping Questionnaire. Con sulting Psychologists Press, 1988.
2. Greenfield, S., Trucco, E., McHugh, R., et al. The Women's Recovery Group study: A stage I trial of women-focused group therapy for substance use disorders versus mixed-gender Group Drug Counseling. Drug Alcohol Depend (2007) 90:39-47

**NR5-011**

## DIVALPROEX ER VERSUS RISPERIDONE FOR BIPOLAR DISORDER WITH COMORBID SUBSTANCE USE DISORDER

*Lori L Davis, M.D. VA Medical Center (151)3701 Loop Road East, Tuscaloosa, AL 35213, Xiaohua Li, M.D., Ph.D., Crystal Garner, M.A., Jennifer Biladeau, M.A., Yuriy Ustinov, M.A., Akihito Uezato, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to 1) recognize the similarities and differences in substance use disorder outcome during a 12-week treatment of either

divlaproex or risperidone in dual-diagnosed bipolar patients; 2)list the doses for divalproex and rispiridone in treatment; 3) treat the bipolar patient with concurrent substance use disorder with either divalproex or risperidone; and 4) idenitify features of a randomized clinical trial.

**SUMMARY:**
Introduction: This study evaluated divalproex extended release (DVPX-ER) versus risperidone (RISP) in the treatment of bipolar disorder with active substance use disorder. The primary efficacy outcome was the number of days until heavy relapse with substances. Research Methods: Subjects with bipolar disorder and active substance use disorder, confirmed by SCID-I, were prospectively randomized (1:1) into a double-blind, 12-week outpatient trial of DVPX-ER vs. RISP. No other mood stabilizers or neuroleptics were allowed. Biweekly assessments included a calendar of self-reported SUD and the following secondary outcomes: Schedule for Affective Disorders and Schizophrenia Change (SADS-C); Clinical Global Impression Scale for Bipolar – Severity; Clinical Global Impression Scale for Bipolar – Improvement; Clinician Drug Use Scale; Clinician Alcohol Use Scale; and Obsessive Compulsive Drinking Scale-Self Report. Results: Twenty-eight evaluable subjects were considered in the efficacy analysis (n= 17 RISP; n= 11 DVPX-ER). Ten subjects (36%) completed the entire study. In a survival analysis, no differences were found between groups in number of days until heavy relapse with substances. Nor were differences found between groups in the time to relapse, the percent days of substance use, the percent days of heavy substance use, or the percent days sober. While both groups showed significant change in the SADS-C Total, SADS-C depression subscale, and SAD-C mania subscale, there were no group differences for change from baseline to endpoint. Only one subject from each treatment group remained abstinent during the 12-week study. Conclusion: Although showing no group differences in SUD and mood outcomes, DVPX-ER and RISP were beneficial in reducing mood symptoms in this small sample of dual-diagnosed bipolar patients. This study demonstrates the difficult challenge of treating dual-diagnosed bipolar patients. Support: Investigator-initiated grant; Abbott Laboratories.

**REFERENCES:**

1. Brady KT, Myrick H, Henderson S, Coffey SF. The use of divlaproex in alcohol relapse prevention: a pilot study. Drug and Alchol Dependence 67:323-330, 2002.
2. Davis LL, Williams R, Cates M. Divalproex sodium in the treatment of adults with bipolar disorder. Expert Rev Neuro therapeutics 4:3:349-362, 2004.

**NR5-012**

## EARLY OUTCOME FOLLOWING LOW DOSE NALTREXONE ADDITION TO OPIOID DETOXIFICATION

*Paolo Mannelli, M.D. Duke University Medical CenterDepartment of Psychiatry and Behavioral Sciences*
*2218 Elder St., 2B Suite 123, Durham, NC 27705, Kathi Peindl, Ph.D., Li-Tzy Wu, Sc.D., Kamal Bhatia, M.D., Sneha Jadhav, M.D., Ashwin A. Patkar, M.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this presentation, the participant should be able to recognize the utility of specific methods of opiate antagonist administration during detoxification in preventing relapse and facilitate treatment continuation in opioid dependence.

**SUMMARY:**
Introduction: Opioid detoxification is offered to provide medical stabilization and humane withdrawal from drugs. However, early persistent withdrawal symptoms and craving following discharge often limit the effectiveness of the treatment and the ability of patients to maintain abstinence and enter aftercare. Objective: The addition of very low-dose naltrexone (VLNTX) to methadone taper is associated with reduced withdrawal intensity and craving during detoxification. We describe the results of a follow-up evaluation of subjects who received the treatment. Methods. 120 opioid addicts completed inpatient detoxification, receiving naltrexone 0.125/0.250 mg per day, or placebo, together with methadone in a double blind, randomized, multi-site study. They were evaluated 1 and 7 days following treatment completion. Results: Individuals receiving VLNTX reported attenuated withdrawal and craving the day following discharge. VLNTX addition during detoxification was also associated with higher rates of negative drug screens for opioids and cannabis and increased engagement in outpatient treatment 1 week later. No significant differences in demographics or drug use history were found that influenced the results. Conclusions: The use of VLNTX during opiod detoxification is associated with improved early outcome after completion. Further studies will test the utility of this approach as part of relapse prevention strategies and for the induction to long-term opioid antagonist treatment, using naltrexone depot formulations. NIH/NIDA grant DA15469.

**REFERENCES:**

1. Mannelli P, Patkar AA, Peindl KS, Gorelick DA, Wu LT, Got theil E. Very low dose naltrexone addition in opioid detoxifi cation: A randomized, controlled trial. Addiction Biol, in press.
2. Gossop M. Medical supervised withdrawal as stand-alone treatment. In: Strain EC, Stitzer ML (Eds). The Treatment of Opioid Dependence, Johns Hopkins University Press, Balti more.

**NR5-013**

## EVALUATION OF A BEHAVIORAL MEASURE OF "READINESS TO CHANGE" IN VETERANS IN RESIDENTIAL TREATMENT FOR CHEMICAL DEPENDENCY

*Patricia D Allred, M.D. Addictive Disorders Treatment Program (116A4)G. V. (Sonny) Montgomery VAMC 1500 East Woodrow Wilson Drive Jackson, MS 39216, JacksonMS 39216, Randy S. Burke, Ph.D., Jefferson D. Parker, Ph.D., Shunta Mallett, M.S.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to: 1) demonstrate an understanding of the relationship between engagement in standardized voluntary treatment activities and responses to existing Stage of Change measures; and 2) report an appreciation of the complexities involved in exploring the relationship between Likert self-ratings and staff ratings of readiness to engage in voluntary recovery tasks and actual

utilization of those tasks.

**SUMMARY:**
The primary aim of the present study was to examine the relationships between questionnaire, self-prediction and other prediction measures of stage of change and actual involvement in voluntary, recovery-oriented, tasks. Participants were 79 military veterans that were admitted to a residential substance abuse treatment program. Study participants completed standardized measures of stages of change and made predictions regarding the number of voluntary, recovery-oriented, tasks they would complete over the course of their treatment. Treatment staff also made predictions regarding the number of voluntary tasks participants would complete. Results did not find a significant relationship between standardized measures of readiness to change (i.e., URICA and SOCRATES) and completion of voluntary, recovery-oriented, tasks. Similarly, no significant differences were found between treatment staff and participant self-predictions in terms of engagement in voluntary recovery tasks. Subsequent analyses did find a significant relationship between self-prediction and actual engagement in voluntary, recovery-oriented, tasks. Analyses also found that participants who completed tasks reported significantly greater drug and family problems as compared to those who did not complete any voluntary tasks. Implications of the current findings and directions for future research will be discussed.

**REFERENCES:**

1. Prochaska, J. O. & DiClimente, C. C. (1983). Stages and pro cesses of self-change of smoking: Toward an integrative model of change. J of Consult Clin Psychol, 51, 390-395.
2. Blanchard, K. A., Morgenstern, J., Morgan, T. J., Labouvie, E., & Bux, D. A. (2003). Motivational subtypes and continu ous measures of readiness for change: Concurrent and predic tive validity. Psychol of Addict Behav, 17, 56-65.

**NR5-014**

**TRENDS IN NON-HEROIN OPIOID ABUSE ADMISSIONS IN THE U.S.**

*Raman Gopalakrishnan, M.D. 101 Fawn Hill Lane, Media PA 19063, Kathleen S. Peindl, Ph.D., Paolo Mannelli, M.D., Katherine Beebe, Ph.D., Ashwin A. Patkar, M.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to understand the trends in substance abuse admissions to addiction treatment programs, in particular the characteristics of opioid abusers.

**SUMMARY:**
Aims: Although epidemiological surveys have indicated an increase in prescription opiate use, the impact of this increase on treatment services remains unclear. We examined the characteristics and trends for treatment admissions for non-heroin opioid abuse from 1992 to 2004 in the U.S. Methods: Databases in public domain from the National Institute of Drug Abuse (NIDA): Treatment Episode Data Set (TEDS) were used to examine changing characteristics of admissions to treatment for non-heroin opioid abuse. Data are collected annually from each state on characteristics of admissions to treatment for all substances abused in the United States. Using the Mann-Kendall test for examining annual trends, we determined any significant trend changes by modeling data for every 2 years of TEDS information from 1992 to 2004. Results: We found significant changes for admissions to substance abuse treatment from 1992 to 2004. Non-heroin opioid, methamphetamine and marijuana admissions to treatment have increased. There was an increase in younger aged people admitted to treatment for non-heroin opioid abuse from 1992 to 2004. Other significant trends included an increase in the never married group admitted, a higher rate of psychiatric problems for non-heroin opioid abuse admissions, changes in the treatment service settings and significant associations between age of first use of marijuana and methamphetamine and non-heroin opioid abuse admissions. Conclusion: Recent admissions to addiction treatment programs confirm the epidemiological increases in prescription opioid use and identify a population group that is historically distinct from the heroin abusers. Treatment strategies that address non-heroin opioid abuse may need to be widely available in addiction treatment programs.

**REFERENCES:**

1. Joranson DE, Ryan KM, Gilson AM, Dahl JL. Trends in medical use and abuse of opioid analgesics. JAMA 2000; 283:1710-1714.
2. Sigmon SC. Characterizing the emerging population of pre scription opioid abusers Am J Addict 2006; 15:208-212.

**NR5-015**

**ROLE OF BUPRENORPHINE HYDROCHLORIDE AND NALOXONE HYDROCHLRIDE DIHYDRATE SL TABLETS IN MOOD DISORDERS AND QUALITY OF LIFE IMPROVEMENT.**

*Sachin Saigal, M.D. 4608 Penn Avenue, Pittsburgh, PA 15224, Prabir Mullick, M.D., Manohar Shetty, M.D.*

**EDUCATIONAL OBJECTIVE:**
To study the long term effects of Buprenorphine Hydrochloride and Naloxone Hydrochlride Dihydrate SL tablets in mood disorders and to understand the mechanism of action of its antidepressant properties.

**SUMMARY:**
Introduction
This is a retrospective 12 week chart review study looking at the patients who were started on Buprenorphine Hydrochloride and Naloxone Hydrochloride Dihydrate SL for opiate addiction. We noted that these patients had ongoing depression prior to the onset of opiate addiction and had treatment with antidepressant/ mood stabilizers. They showed significant improvement of depression. Because of encouraging results we plan to continue the study prospectively for 26 weeks.
Method
A retrospective study started in September 2007. The study is ongoing and we elected the end point at 12 weeks.
Inclusion criteria: Patients who are addicted to opiates.
Has on going depression.
Had trial of at least two antidepressants/mood stabilizers.
Onset of depression was prior to opiate addiction.
Number of patients are 15.
Ham D and CGI scales were used at the initiation, periodically thereafter and at the end point.
Results
Patients had an average HAM D score of 25 at initiation and a score of 6 at 12 weeks.

CGI scale showed improvement from an average of 6 to 2. There was a notable improvement in compliance with intensive psychotherapy and normalization of family structure with return to work or school.

Conclusion

Though prior use of opiates was the reason Buprenorphine Hydrochloride and Naloxone Hydrochloride Dihydrate SL was initiated; besides they were monitored for depression which preceded the substance use. It not only treated the continued opiate abuse, but was an effective augmentation of antidepressants. Our hypothesis is partial mu receptor agonist has an additional antidepressant property. The weakness of this study being, we are still in the process of exploring the additional neurochemical property of Buprenorphine which provides the antidepressant property. There is an unanswered question whether the sobriety and visits to the physician's office and periodic psychotherapy and adhesion to the strict compliance guidelines was

**REFERENCES:**

1. Buprenorphine Treatment for Refractory Depression by Har vard Medical School. wikipedia encyclopedia.

**NR5-016**

## A7 NICOTINIC RECEPTOR POLYMORPHISMS AND RESPONSE TO NICOTINIC REPLACEMENT THERAPY

*Vincenzo De Luca, M.D. 250 College St, Toronto, Canada M5T1R8, Laurie Zawertilo, Ph.D., Peter Selby, MD, James L. Kennedy, MD*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1)recognize the importance of pharmacogenetics of nicotinic receptors; and 2) be aware of the possible diagnostic tests for individualizing treatment for smoking cessation.

**SUMMARY:**

Nicotine replacement therapy (NRT) in the form of patches, gum or inhaler is the most popular treatment for quitting smoking. However, NRT is effective for only a fraction of smokers. As many as 80% of smokers respond either poorly or not at all to these treatments. Therefore, research is needed to maximize the successful treatment of smokers who want to quit. There is also a need to develop new treatment strategies that can be readily used in the clinic. The purpose of this study is to examine the role of inherited genetic variation in the therapeutic response to NRT. The specific aim of this project is to examine the role of genetic variation in the a7 nicotinic receptors located in the brain in NRT treatment success or failure. Study subjects participated in a stop smoking study examining the effectiveness of different types of NRT (patch, gum and inhaler) on smoking cessation. Subjects received 10-weeks of NRT treatment and their quit success was assessed at the end-treatment (83 responders and 279 non-responders). The DNA extracted from blood samples was tested for the D15S1360 variation in the genes that encode for the nicotinic receptors a7. This study is the first to investigate the link between treatment success with NRT and the genetics of nicotine receptors. The results of this study do not provide an evidence for a7 nicotinic receptor influencing response to NRT(chi-sq=0.155; 1df p=0.69).

**REFERENCES:**

1. De Luca V et al. (2004) Evidence of association between smoking and alpha7 nicotinic receptor subunit gene in schizo phrenia patientsNeuropsychopharmacology. 29:1522-6.
2. Lerman C et Al. (2004) The functional mu opioid receptor (OPRM1) Asn40Asp variant predicts short-term response to nicotine replacement therapy in a clinical trial. The Pharma cogenomics Journal 4:184-192

**NR5-017**

## EVALUATION OF THE TEEN AS TEACHER FOR ANTI-AMPHETAMINES (TATA) PROGRAM, THAILAND

*Wiranpat W Rattanasatien, M.D. 2045 9th Avenue, Greeley-CO 80631, Sunantha Chantarujikapong, M.D., Ph.D., Sarinee Rungsri, M.D.,Apisamai Srirangsan, M.D., Somchai Tunsirisittikul, M.D., Sornsiri Yantadilok, Anong Puatrakul*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to recognize the effectiveness and efficiency of the preventive strategy "The Teen As Teacher for Anti-Amphetamines (TATA) program."

**SUMMARY:**

Amphetamine use is an increasingly serious problem in Thailand which undermines the national economy, societies, families, and public health. Since 2003, the teenager group has been the group using amphetamines the most. In an effort to reduce the prevalence of this problem, a preventive program called "Teen As Teacher for Anti-Amphetamine (TATA)" was developed for training young activists to encourage younger adolescents to avoid amphetamine use and prevent them from encountering this problem. The participants in this study were 521 students from the Bangmod Vittaya secondary school, in Bangkok, Thailand. In the teen teacher group, 28 students were in the experimental group and 49 students were in the comparison group, whereas the teen student group consisted of 219 students in the experimental group and 216 students in the control group. All of the students were evaluated by the self report rating scale questionnaires in the area of knowledge about amphetamine's toxicity, attitude toward amphetamine use and life skills. Comparison of the group mean scores showed that the experimental teen teacher group significantly outperformed students in the control group in the areas of knowledge, attitude, refusal skills and warning skills. Additionally, the mean scores indicated the teen student experimental group significantly outperformed the control group in refusal skills. Although the data show statistically significant differences between groups, this research was a pilot study conducted in only one school, because the results of this limited study cannot be applied across all schools at this time. A boarder strategy should be implemented.

**REFERENCES:**

1. Chantarujikapong, S., Srirangsan, A., Tunsirisittikul, S., Rungsri, S., & Kittitharaphan,W. (2002).Amphetamine: epi demic and prevention. Sririraj Scientific
2. Congress Abstracts, Faculty of Medicine Siriraj Hospital,, 81-82.
3. Ruangkanchanasetr, S., Plitponkarnpim, A., Hetrakul, P., & Kongsakon, R. (2005, March). Youth risk behavior survey :

Bangkok, Thailand. Journal of Adolescent Health, 36(3), 227-235.

**NR5-018**

## TROOP INTERFERENCE AND BEHAVIORAL TRAITS IN DIFFERENT SUBSTANCE ADDICTS

*Yi-Chyan Chen , M.D. No.325, Sec. 2, Cheng-Kung Rd, Nei-Hu Area, Taipei,Taiwan 114, Yi-Chyan Chen,M.D.,Ph.D, Tzu-Yun Wang, M.D., Yi-Fang Wang, B.S., Wei-Win Lin, M.D., Ph.D.,*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to recognize the variations of behavioral traits and neuropsychological functions among alcoholics, heroin and amphetamine addicts.

**SUMMARY:**

Substance addicted disorders are the common psychiatric disorders influenced by multiple biological as well as psychosocial factors. The attention bias and impulse inhibition have seen as the behavioral trait modulating the development of substance addiction. To investigate the personality characteristics and neuropsychological functions in the different substance addicts, we recruited alcoholics (N =73), heroin addicts (N = 81), amphetamine addicts (N = 57) into the study after informed consent in detail. In this study, the mini international neuropsychiatric interview, anxiety and depression questionnaires were adapted to assess the psychiatric comorbidity and personality traits. The Wisconsin card sorting (WCST) and standard Stroop tests were performed to evaluate the neurocognitive functions and attention interference effect. The results demonstrated there were significantly higher scores of neurotic and dysphoric characters in the alcoholic patients ($P < 0.001$ vs. heroin and amphetamine addicts). In the WCST assessment, the perseverative errors and responses were significantly higher in heroin addicts than in alcoholics ($P = 0.02$). The naming interference tendency in Stroop test was significantly increased in alcoholic group ($P < 0.001$ vs. heroin group and $P = 0.002$ vs. amphetamine group). The results suggest that the individuals with different substance dependence have distinct behavioral traits for developing addicted behaviors and exist variant deficits of neuropsychological function in habituated state.

**REFERENCES:**

1. Ryan F: Attentional bias and alcohol dependence-A control study using the modified Stroop paradigm. Addict Behav 2002; 27:471-482
2. Robinson TE, Berridge KC: Addiction. Annu Rev Psychol 2003; 54:25-53

**NR5-019**

## CORRELATES OF PERINATAL DEPRESSION IN HIV-INFECTED PREGNANT WOMEN

*Suad Kapetanovic, M.D. University of Southern California, Department of Psychiatry, 2020 Zonal Avenue Room #13, Los Angeles, CA 90033, Roksana Karim, M.D., Ph.D., Florence Lin, Shawna Christensen, Francoise Kramer, M.D., Alice Stek M.D., Andrea Kovacs, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) recognize that heterosexual women at childbearing age are the fastest-growing HIV+ population in the world; 2) appreciate the risk for perinatal depression in HIV-infected pregnant women; and 3) identify specific bio-psycho-social risk factors that are associated with perinatal depression in HIV-infected pregnant women.

**SUMMARY:**

Methods: We reviewed charts of all HIV+ women who received perinatal care in the Maternal-Child and Adolescent Clinic for Infectious Diseases and Virology at LAC/USC Medical Center from 1997 through 2006. 273 charts of HIV+ women (328 live births) were reviewed to examine the prevalence of depression diagnoses during- and within first 4 weeks after pregnancy (i.e., "perinatal depression"). Demographic, behavioral, psychiatric, medical and obstetric correlates of depression during the perinatal period were examined for an association with PD using multivariate logistic regression with generalized estimating equations to account for the within subject correlation due to multiple births per mother. Results: The overall prevalence of PD among HIV+ women was 31% (n=84). Of these, 69% were Hispanic (n=188) and 26% African American (n=70). Multivariate analysis showed that PD was significantly associated with substance abuse during pregnancy (OR=2.83, 95% CI:2.11-6.93) and past history of psychiatric illness (OR=3.83, 95% CI: 1.25-6.45). When compared to mothers with CD4 nadir >500 cells/mm3, mothers with a CD4 nadir during pregnancy =200 cells/mm3 were 2.92 times as likely to develop PD (95% CI: 1.27-6.72). There was a marginal association between PD and low antiretroviral (ARV) therapy adherence during pregnancy (OR=1.98, 95% CI: 0.98-4.02). PD was not associated with psychosocial stressors, pregnancy complications, and various perinatal ARV regimens. Infant birth weights and APGAR scores did not differ in relation to PD. PD was not predictive of HIV-1 viral load rebound at the first post-partum visit within 12 weeks of delivery. Conclusions: We found high rates of PD in HIV+ women. HIV+ pregnant women with substance use, low ARV therapy adherence and CD4 = 200 cells/mm3 during pregnancy, as well as those with past history of a psychiatric illness should be carefully monitored for development of perinatal depression.

**REFERENCES:**

1. Forstein M, Cournos F, Douaihy A, Goodkin K, Wainberg ML, Wapenyi KH. American Psychiatric Association Guide line Watch: Practice Guideline for the Treatment of Patients with HIV/AIDS.
2. Cook JA, Grey D, Burke J, Cohen MH, Gurtman AC, Richardson JL, Wilson TE, Young MA, Hessol NA. Depres sive symptoms and AIDS-related mortality among a multi site cohort of HIV-positive women. Am J Public Health 2004; 94:1133–1140.

**NR5-020**

## SSRI AND GC ANTAGONIST INHIBIT HIV INFECTION OF MACROPHAGES IN HIV/AIDS

*Tami Benton, M.D. 3440 Market Street, Philadelphia, PA 19104, Kevin G. Lynch Ph.D., Steven D. Douglas, M.D., Benoit Dube M. D., David R. Gettes, B.S., Nancy B. Tustin, MLT (ASCP) HEW., Jian Ping Lai, M.D., David Metzger, Ph.D., Dwight L. Evans, M.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to: 1) recognize the potential for SSRI's and glucocorticoid antagonist to decrease susceptibility to HIV viral infection of monocytes; and 2) recognize the potential clinical benefits of antidepressant agents for delaying progression to AIDS in HIV+ individuals.

**SUMMARY:**
Introduction: Depression is a potential risk factor for morbidity and mortality among many medical condition including HIV/ AIDS. Monocytes are important in Human Immunodeficiency Virus (HIV) pathogenesis. Serotonin and glucocorticoid systems are potential mediators between depression and susceptibility of monocytes to HIV infection. This study aims to determine whether there are differences in susceptibility to HIV entry and replication in monocytes of HIV+ depressed women and non-depressed HIV+ women and how these processes are affected by exposure to an SSRI (citalopram) and a glucocorticoid antagonist (RU486).
Hypothesis: Monocytes from HIV+ depressed women would exhibit greater susceptibility to HIV entry/ replication than monocytes from HIV+ non-depressed women and that susceptibility may be decreased by an SSRI and a glucocorticoid antagonist.
Method: HIV+ women were recruited to obtain a sample of depressed and non-depressed women. Ex vivo experiments focused on how susceptibility to HIV entry and replication in monocyte-derived macrophages (MDM's) are affected by an SSRI or a GC antagonist in a subset of HIV+ women.
Results: Among 38 HIV+ depressed and non-depressed women, susceptibility of monocytes (MDM's) to HIV infectivity was significantly decreased when an SSRI (citalopram) and the GC antagonist (RU 486) were present. No significant effects of depression diagnosis or depression by agent interaction were found.
Conclusions: Our study provides the first evidence that HIV infectivity of MDM's may be inhibited by selective serotonin reuptake inhibition and by glucorticoid antagonism in depressed and non-depressed individuals. Further studies should determine whether SSRI or GC antagonist decrease HIV-infectivity of MDM's in HIV+ individuals, and determine the potential clinical benefits of serotonergic agents and glucocorticoid antagonist in decreasing HIV's ability to infect monocyte/macrophages, and delay disease progression.

**REFERENCES:**
1. Mossner R, Lesch KP: Role of serotonin in the immune system and in neuroimmune interactions. Brain Behav Immun 1998; 12: 249-71
2. Schafer EA, Venkatachari NJ, Ayyavoo V: Antiviral effects of mifepristone on human immunodeficiency virus type-1 (HIV-1) targeting Vpr and its ccellular partner, the glucocorticoid receptor (GR). Antiviral Res 2006; 72: 224-232

**NR5-021**

**ASSOCIATED FACTORS WITH THE ILLICIT DRUGS USE AMONG STUDENT ADOLESCENTS**

*Andres M Rangel-Martinez-Villalba, M.D. Calle 57 # 19 - 55 Cañaveral Parque, Florida Blanca, Colombia., Bucaramanga-Colombia 1642, German E. Rueda-Jaimes, M.D., Paul A. Camacho, M.D., M.Sc., Eliana Duarte-Pineda, M.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to know the prevalence of ilicit drug use in colombian adolescents and its associated factors in women and men.

**SUMMARY:**
Introduction. Patterns of substance use established in adolescence are quite stable and predict chronic patterns of use, mortality, and morbidity later in life.
Objective. Assess illicit drug use prevalence, and associated factors among school-students in Colombia. Methods. Anonymous questionnaire concerning illegal and legal substance use, CAGE questionnaire, Center for Epidemiological Studies-Depression Scale, Rosenberg Self-Esteem Scale, the module for antisocial personality of the questionnaire of the structured clinical interview for DSM-IV axis II diagnosis, and family APGAR to a random sample of 2,848 students were applied. Antisocial behavior was taken as a risk explicatory variable for illicit drug use, a stratificated analysis by sex was made; finally logistic regression was done. Results. Mean age was 14.4 years; 49.9% was male. The prevalence of illicit drug use during the last year was 6.48% (95%CI; 5.61-7.44). Logistic regression analysis in women showed an association with the fact adolescent's best friend substance consumption (OR=4.12;95%CI 2.35-7.23), antisocial behavior (OR=3.66;95%CI; 2.17-6.16), adolescent's relative substance consumption (OR=2.49;95%CI 1.40-4.43), bad academic performance perception (OR=2.01;95%CI; 1.04-3.89), and alcohol dependence pattern (OR=1.40;95%CI 1.14-1.72). In men showed an association with the fact adolescent's best friend substance consumption (OR=6.13;95%CI 3.32-11.33), antisocial behavior (OR=2.32;95%CI; 1.28-4.19), adolescent's relative substance consumption (OR=2.20;95%CI 1.17-4.15), alcohol dependence pattern (OR=1.63;95%CI 1.29-2.06), and bad family functioning (OR=1.41;95%CI 0.76-2.62). Conclusions. There were some shared factors in both sexes like antisocial behavior, the fact of adolescent's best friend and relative substance consumption, and alcohol dependence pattern. Further, women showed an association with bad academic performance perception and men showed an association with bad family functioning.

**REFERENCES:**
1. Benjet C, Borges G, Medina-Mora ME, Fleiz C, Blanco J, Zambrano J, et al. Prevalence and socio-demographic correlates of drug use among adolescents: results from the Mexican Adolescent Mental Health Survey. Addiction. 2007 Aug;102(8):1261-8.
2. Castro FG, Garfinkle J, Naranjo D, Rollins M, Brook JS, Brook DW. Cultural traditions as "protective factors" among Latino children of illicit drug users. Subst Use Misuse. 2007;42(4):621-42.

**NR5-022**

**A RANDOMIZED, DOUBLE-BLIND, PLACEBO-CONTROLLED STUDY OF THE NEUROCOGNITIVE EFFICACY OF A TREATMENT FOR METHAMPHETAMINE DEPENDENCE**

*Harold C Urschel, M.D. The Urschel Recovery Science Institute 8222 Douglas Avenue, Suite 375, Dallas, TX 75225, Larry L.*

*Hanselka, Ph.D., Michael Baron, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the changes in neurocognitive function before and after treatment for methamphetamine dependence.

**SUMMARY:**

Objective: During early abstinence, methamphetamine-dependent patients often experience difficulty with concentration, memory and other cognitive impairments which may contribute to attrition from psychosocial treatment as well as relapse to methamphetamine use. A treatment program to rapidly restore cognitive function by reversing methamphetamine-induced changes at the GABAA benzodiazepine receptor has been developed. The objective of this controlled study is to rigorously test the efficacy of the program's medications in reversing methamphetamine-induced neurocognitive deficits. This study is a follow-up to an open-label study we conducted of the program's clinical effectiveness. Method: Following screening and baseline assessment, 135 outpatient subjects were randomized to either (1) an active treatment group receiving flumazenil, 2 mg administered IV on days 1, 2, 3, 21, 22; oral gabapentin 1200 mg/day, and hydroxyzine 50 mg for pre-infusion and PRN for sleep; or (2) a control group receiving inactive formulations of the three medications. Eighty-eight subjects who completed all 5 flumazenil administrations and completed the last scheduled study visit were included in the analysis. Cognitive functioning across domains including processing speed, working memory, declarative memory, attention, response inhibition, implicit memory, and executive function (reasoning and problem solving) was measured with a computerized test battery (Cogtest®, Wilmington, DE) administered at baseline and days 4, 6, 13, 20, 24, 30. Drug use was assessed using timeline-followback and urine drug screens. All subjects received drug abuse counseling and nutritional support. Results: At the time of abstract submission, the data analyses were ongoing and results pending. This presentation will focus on between group comparisons of the neurocognitive measures collected during the 30-day trial.

**REFERENCES:**

1. Urschel HC, Hanselka LL, Gromov I, White L Baron M. Open-Label Study of a Proprietary Treatment Program Tar geting Type A Gamma-Amino-Butyric Acid Receptor Dys regulation in Methamphetamine Dependence. Mayo Clinic Proceedings. 2007;82:1170-1178.
2. Kalechstein AD, Newton TF, Green M. Methamphetamine dependence is associated with neurocognitive impairment in the initial phases of abstinence. J Neuropsychiatry Clin Neu rosc. 2003 May;15(2):215-220.

**NR5-023**

## RELATIONSHIP BETWEEN CRAVING AND DEPRESSION IN FEMALES WITH ALCOHOL ADDICTION

*Olivera S Vukovic, M.D. Institute of psychiatry, Pasterova 2, BelgradeYugoslavia 11000, Tijana Cvetic M.S.C., Mirjana Zebic M.S.C., Dubravka Britvic M.D., Nadja Maric M.D., Ph.D, Aleksandar Damjanovic M.D., Ph.D, Miroslava Jasovic-Gasic M.D., Ph.D*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to better understand factors that contribute to the prediction of craving and consequently deal better therapeutically with the comorbid disorders.

**SUMMARY:**

Introduction: Craving was recognized as a central part of alcohol dependence more than fifty years ago. Still, there is no consistency in either defining or describing underlying mechanisms of this phenomenon. Better understanding of individual differences of craving may contribute to more effective treatment of alcohol related disorders. The aim of this study is to investigate the relationship between craving and depression in females with alcohol addiction, controlling for several potentially relevant mediating variables (age, education, number of previous detoxification, duration of abstinence).
Methods: The sample included 30 females with alcohol addiction, age range 35-50, diagnosed by DSM IV criteria for alcohol dependence in the late stage of disorder (duration of illness at least 15 years and more), and abstinent for at least 5 and no more than 30 days. The control group consisted of 30 nonalcoholic females, age and education matched. The assessment was done by using Alcohol Dependence Scale (ADS), Obsessive Compulsive Drinking Scale (OCDS) and Beck Depression Inventory –BDI.
Results: Craving score were positively correlated with depression in females with alcohol-related disoder ($r=.602$; $p<0.01$). With respect to the influence of recurrent detoxifications, we found a significant correlation between the number of preceding detoxifications and the alcohol craving ($r=.599$; $p < 0.01$). No significant association was found for age, education and duration of abstinence.
Conclusions and Discussion: These findings suggest that depression can be important predictor of alcohol craving in females, which has important implications for treatment and prediction of treatment outcomes.

**REFERENCES:**

1. Zilberman ML, Tavares H, Hodgins DC, el-Guebaly N: The impact of gender, depression, and personality on craving. J Addict Dis 2007; 26:79-84.
2. Zilberman ML, Tavares H, el-Guebaly N: Relationship be tween craving and personality in treatment-seeking women with substance-related disorders. BMC Psychiatry 2003; 3:1.

**NR5-024**

## IS THERE ANY RELATIONSHIP BETWEEN HIPPOCAMPAL VOLUME, DHEAS/CORTISOL RATIO AND COGNITIVE FUNCTIONS IN ALCOHOLICS?

*Saliha Ozsoy, M.D. Erciyes UniversityMedical FacultyDepartment of Psychiatry, Kayseri, Turkey 38039, Ertugrul Esel,M.D., Ahmet Candan Durak,M.D., Tayfun Turan, M.D.*

**EDUCATIONAL OBJECTIVE:**

The study aimed to investigate probable alterations in dehydroepiandrosterone sulfat (DHEAS)/cortisol ratio, cognitive functions, and hippocampal volume and the relationship between these three in patients with alcoholism. The results might increase our understanding of the effects of chronic alcohol consumption on cognitive functions and hippocampal volume and whether hormonal alterations are related to cognitive impairments and hippocampal damage in

alcoholic patients.

**SUMMARY:**

Introduction: Hippocampal atrophy, which may give rise to such cognitive deficits, has been reported in alcoholic patients (1). Hypercortisolism is thought to be related to hippocampal volume loss in alcohol dependence (2). DHEAS, which has antagonist effect of cortisol, might show protective effect on hippocampus and cognitive functions.
Methods: Twenty-one male inpatients who fully met the DSM-IV criteria for alcohol dependence and 11 healthy male controls were included in the study. Cranial magnetic resonance imaging (MRI) and neuropsychological tests were performed within the fourth week of abstinence in the patients and in the controls. Hippocampal volumes from MRI scan data were measured by the radiologist blinded to the subjects' study group membership. Rey Auditory-Verbal Learning Test (RAVLT), Wechsler Adult Intelligence Scale-Revised (WAIS-R) Digit Span Subtest (DSS) were carried out in order to evaluate the cognitive functions. Baseline serum cortisol and DHEAS levels were measured in the morning of the same days as cognitive functions.
Results: The patients had significantly smaller right hippocampal volume than healthy controls, while no statistically significant differences were present between groups for left hippocampal volume. Immediate memory, attention and acquisition subtest scores of RAVLT and working memory (DSS) of the patients were inferior to those of controls. Serum DHEAS, cortisol levels and DHEAS/cortisol ratio did not differ significantly between the patients and the controls. There was a significant negative relationship between left hippocampal volume and the duration of alcohol consumption. There was no significant correlation between neuropsychological test scores, hormonal values and hippocampal volumes. Conclusions: These findings may corroborate the previous findings that chronic alcohol consumption have negative effects on hippocampus and cognitive functions, but not that hippocampal volume may be related to hypercortisolism.

**REFERENCES:**

1. Agartz I, Momenan R, Rawlings RR, Kerich MJ, Hommer DW: Hippocampal volume in patients with alcohol depen dence. Arc Gen Psychiatry 1999; 56(4):356-363.
2. Beresford TP, Arciniegas DB, Alfers J, Clapp L, Mar tin B, Beresford HF, Du Y, Liu D, Shen D, Davatzikos C, Laudenslager ML: Hypercortisolism in alcohol dependence and its relation to hippocampal volume loss. J Stud Alcohol 2006; 67(6):861-867.

**NR5-025**

## COGNITION AND DECISION-MAKING IN ABSTINENT PATIENTS WITH CANNABIS USE DISORDERS

*Serge Sevy, M.D. The Zucker Hillside Hospital 75-59 263rd Street, Glen Oaks, NY 11004, Sui Kwong Li, B.A., Katherine Burdick, Ph.D., Meredith Akerman, M.S.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to learn about assessments of cognition and decision-making as well as implications of our findings for treating patients with cannabis use disorders.

**SUMMARY:**

Introduction: Previous studies have shown mixed results regarding the presence of decision-making deficits in patients with cannabis use disorders during abstinence. Furthermore, there is a paucity of studies assessing the impact of cognition on decision-making in this population. Hypothesis: (1) Decision-making is impaired in patients with cannabis use disorders compared to healthy controls; (2) Decision-making impairment is independent of cognitive functioning. Methods: After signing informed consent, 11 subjects (9 males and 2 females) with DSM-IV diagnosis of cannabis use disorder (CUD) and 13 healthy controls (HC) (12 males and 1 female) were included in the study. CUD subjects were abstinent for at least 2 weeks (range=2-52 weeks). Groups were assessed for premorbid intelligence, attention, working memory, verbal fluency, processing speed, executive function, and motor performance using the following tests: WRAT-3, CPT-IP, COWAT, WAIS-III, CVLT, Trail Making A & B, WCST, Stroop Test, Finger Tapping, and Grooved Pegboard. Decision-making was assessed using the Iowa Gambling Task. Groups were compared using the Fisher's exact test for categorical data and the Mann-Whitney test for continuous data. Level of significance was $p<0.05$. Results: CUD and HC subjects did not differ for age, sex, or race, but CUD subjects had a lower level of education ($12.09\pm2.21$ vs. $13.77\pm1.17$ years, $p<0.02$) and lower score for premorbid intelligence ($89.91\pm14.65$ vs. $101.85\pm10.46$, $p<0.04$), visual attention and working memory than healthy controls. On the Iowa Gambling Task, CUD subjects performed worse than HC subjects. Conclusions: Preliminary results show impaired decision-making in patients with cannabis use disorders compared to healthy controls. CUD subjects also scored lower for premorbid intelligence, visual attention, and working memory. Data will be presented regarding the interaction of cognition and decision-making.

**REFERENCES:**

1. Bolla KI, Eldreth DA, Matochik JA, Cadet JL. Neural sub strates of faulty decision-making in abstinent marijuana users. NeuroImage 2005; 26: 480-492.
2. Quednow BB, Kuhn KU, Hoppe C, Westheide J, Maier W, Daum I, Wagner M. Elevated impulsivity and impaired deci sion-making cognition in heavy users of MDMA ("Ecstasy"). Psychopharmacology (Berl) 2007; 189: 517-530.

**NR5-026**

## TELESCOPING EFFECTS IN FFEMALE ALCOHOLIC PATIENTS IN KOREA

*Sung-Gon Kim, M.D. Pusan National University, Psychiatry,1-ga, Ami-dong, Seo-gu, Pusan, Korea 602-739, In-Bok Hwang, M.D., Young-Sung Choi, M.D., Ph.D., Jeong-Gee Kim, M.D., Ph.D., Hae-Gook Lee, M.D., Young-Myo Jae, M.D., Cheol-Joong Kang MD, PhD*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize that there is a telescoping effect in female alcoholic patients in Korea. Therefore, it is suggested that physicians, family members, and community members should pay more attention to female drinkers.

**SUMMARY:**

Introduction: Previous studies have shown that alcohol dependence develops in a shorter period of time in female

alcoholics than in male alcoholics, even though female alcoholics start drinking at an older age. Such a phenomenon is generally referred to as a telescoping effect. However, there has been no report of a telescoping effect in female alcoholics in Korea. The goal of this study was to investigate whether there are telescoping effects unique to female alcoholic patients by comparison with male alcoholic patients in Korea. Methods: A semi-structured interview was used to obtain information on the demographic characteristics and alcoholic histories of 229 alcoholics (167 male and 62 female alcoholics). Results: 1) Although there were no differences in the age at onset of alcohol-related problems (ARP) and the age at first admission to a psychiatric hospital for ARP between the female (hereinafter female group) and male (hereinafter the male group) alcoholic patients, the female group started drinking at a significantly older age than the male group ($p<.001$). 2) The period from the age at which drinking started to the age at onset of ARP or to the age at first admission to a psychiatric hospital for ARP was significantly shorter in the female group than in the male group ($p=.02$, $p<.001$). 3) In the female group, the average age of the patients was younger ($p=.04$), the average number of drinks per drinking day during the 12 months before the present admission was smaller ($p<.001$), the number patients with a family history of alcohol dependence in a first-degree relative was greater ($p=.04$), and the number of patients with a history of severe alcohol withdrawal symptoms was greater ($p<.001$) than in the male group. Conclusion: The results of the present study show that there is a telescoping effect in female alcoholic patients in Korea. Therefore, it is suggested that physicians, family members, and community members should pay more attention to female drinkers.

**REFERENCES:**


1. Piazza NJ, Vrbka JL, Yeager RD: Telescoping of alcoholism in women alcoholics. Int J Addict 1989; 24:19-28.
2. Randall CL, Roberts JS, Del Boca FK, Carroll KM, Con nors GJ, Mattson ME: Telescoping of landmark events associ ated with drinking: a gender comparison. J Stud Alcohol 1999; 60:252-260.


**NR5-027**

## HOUSECALLS FROM PSYCHIATRISTS: WHAT ARE THE OBSERVED BENEFITS?


*George D Annas, M.D. 57 Lake Avenue, Newton Centre, MA 02459,*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to have a more clear understanding of what has been examined in regard to the practice of Psychiatry and Home Visits and what research avenues still need to be explored.

**SUMMARY:**


Background and Purpose

The practice of home visits by physicians is not as common as it once was. However in regard to primary care- especially among Geriatric patients- there is data suggesting benefits in regard to reduced hospital stays and delays in nursing home placement. However there appears to be less data investigating Psychiatric home visits. The purpose of this poster is to examine the data on Psychiatric home visits and attempt to determine if this practice has shown benefits in regard to decreases in acute inpatient admissions. In addition I will look at studies examining the other potential benefits and challenges in this practiceMethodsArticles were searched via Medline and PubMed with the search strings “Home visits” and “Psychiatry” as well as related terms. All primary research articles were used, including Case reports and Case Series.ResultsWhile there is little data in regard to Psychiatry and home visits, the data thus far suggest that there is a benefit from periodic home visits from Psychiatrists.ConclusionsWhile there is a suggestion that home visits may decrease the number of acute psychiatric admissions for the chronically mentally ill, there is the need for more data in this regard. Studying this is a challenge due to the fact that there are many reasons for acute psychiatric inpatient stays as well as the fact that there is great heterogeneity in regard to social support systems from one patient to the next. Should future data show an irrefutable benefit of Psychiatric home visits, there still will be obstacles to overcome when advocating for this practice.


**REFERENCES:**


1. Kates N. Webb S. LePage P.: Therapy begins at home: the psychiatric house call. Canadian Journal of Psychiatry - Re vue Canadienne de Psychiatrie. 36(9):673-6, 1991 Nov.
2. Reding KM. Raphelson M. Montgomery CB:Title Home visits: psychiatrists’ attitudes and practice patterns. Commu nity Mental Health Journal. 30(3):285-96, 1994 Jun.
3. Ahrens C, Frey J, Knoedler WH, Senn-Burke SC.: Effect of PACT on inpatient psychiatric treatment for adolescents with severe mental illness: a preliminary analysis. Psychiatr Serv. 2007 Nov;58(11):1486-8


**NR5-028**

## COGNITIVE PERFORMANCE CORRELATES IN SCHIZOPHRENIA AND PSYCHOTIC MAJOR DEPRESSION


*Adel M Elsheshai, M.D., University Hospital Nariman Department of Psychiatry, Alexandria, 21557 Egypt, Ahmed Rady, M.D., Ismail Ramadan, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, participants will be able to: 1) identify cognitive impairment in schizophrenia using the WCST; 2) identify cognitive impairment in Psychotic depression using the WCST; 3) emphasis the VEP as an indirect tool for visuel processing assessment; 4) show Scizophrenia and Psychotic depression being distinct entities; and 5) highlight the potential profit of psychotic patients from cognitive rehabilitation.

**SUMMARY:**


Aim of the Work: to search whether psychotic major depression and schizophrenia reflect the same spectrum of disorders through a comparative study. Methods: 20 schizophrenic and 20 psychotically depressed patients were recruited randomly from the outpatient clinic of Alexandria University, aged between 18-50 yrs, diagnosed according to the *DSM IV* criteria and scoring 4 or more on CGI for severity. Both arms were subjected to Wisconsin Card Sorting Test WCST 128 computerized version and P100 of Visual Evoked Potential and scored on the BPRS. Results: Groups were matched as regards age, sex and severity; P100 on the Rt side was 104.55(SD 5.62)in schizophrenic patients compared to 95 (SD 5.27) msec in Psychotically

depressed patients, P100 on the Lt side was 105.8 (SD 5.41) in schizophrenics compared to 95.85 (SD 5.4) msec in Psychotically depressed patients, the difference was statistically significant ($p<0.0001$); Number of WCST trials administered was 128 (SD 0) and 118.4 (SD 19.7) in schizophrenic and psychotically depressed patients respectively with significant difference ($p<0.0001$); Percentage of errors was 47.2 (SD 10.79) and 34 (15.2) in in schizophrenic and psychotically depressed patients respectively with significant difference ($p<0.0001$); Percentage of perseverative errors was 30 (SD 11.14) and 18 (9.97) in in schizophrenic and psychotically depressed patients respectively with significant difference ($p<0.0001$). Conclusion: Though performance on WCST revealed poor executive functions in both schizophrenic and psychotically depressed patients there was a significant difference between both groups, a difference that has been also replicated by assessment of P100 of VEP in both Rt and Lt eyes. No linear correlation has been found between BPRS score and Cognitive impairment as assessed by the WCST or VEP in both schizophrenic and psychotically depressed groups.

**REFERENCES:**


1. Vishnu Y et al. First episode schizophrenia review of cogni tive deficits and cognitive remediation. Advances in psychiat ric treatmen 2005;11:38-44.
2. Van Swzden B et al. Impaired early visual processing in dis organized schizophrenia. Acta Neurol Belg 1998;98:17-20.


**NR5-030**

## ASENAPINE: A TRANSLATIONAL ANALYSIS OF RECEPTOR OCCUPANCY IN HUMAN AND RAT BRAIN WITH THERAPEUTIC IMPLICATIONS


*Brian Henry, Organon, a part of Schering-Plough CorporationC/O Philips Research Laboratories Rm 1.162 High Tech Campus 11, Eindhoven, Netherlands 5656 AE, Sarah Grimwood, Henrik J.M.M. de Greef, Mohammed Shahid*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) discuss the role that the dopamine D2 receptor plays in the clinical efficacy of antipsychotics and the onset of extrapyramidal symptoms; and 2) describe how D2 receptor occupancy modeling was used to predict effective doses of asenapine in preclinical and clinical studies.

**SUMMARY:**


Objective: The clinical and preclinical pharmacology of asenapine, a novel psychopharmacologic agent being developed for schizophrenia and bipolar disorder, was assessed in light of evidence that optimal antipsychotic efficacy is associated with 60–80% D2 receptor occupancy. Methods: The relationship between D2 occupancy and asenapine dose, as well as plasma and brain levels, in rat striatum was examined and human D2 receptor PET data was used to assess correlations of rat and human D2 occupancy with efficacy and potential liability for EPS. Results: Human PET analysis demonstrated plasma exposure-related increases in D2 occupancy (mean peak occupancy=79% at 4.8 mg) after sublingual asenapine (0.3–4.8 mg BID), with modeling suggesting 60–80% D2 occupancy at a therapeutic dose of 5 mg BID. Asenapine demonstrated dose (0.003–0.3 mg/kg) and plasma exposure (0.2–18 ng/mL) responses in rat brain, with an ED50 for D2 occupancy of 0.02 mg/kg (SC) and an anticipated 60–80% D2 occupancy at 0.03–0.1 mg/kg (SC). Based on these data, 0.03–0.10 mg/kg (SC) asenapine in the rat approximates clinically effective asenapine doses in humans. In support of this finding, 0.03–0.10 mg/kg (SC) asenapine was effective in rat models that predict antipsychotic activity, such as conditioned avoidance, apomorphine disrupted prepulse inhibition, and amphetamine-induced hyperactivity, with minimally effective SC doses of 0.1 mg/kg, 0.03 mg/kg, and 0.03 mg/kg, respectively. Comparable asenapine doses also increase prefrontal cortical dopamine and acetylcholine efflux, reverse cognitive deficits, and reverse the effects of chronic mild stress in rats. Higher asenapine doses are needed to induce catalepsy in rats (0.5 mg/kg, SC), an index of EPS liability. Conclusions: These rat data predict that asenapine has potent antipsychotic activity at doses without EPS liability, a prediction consistent with asenapine's clinical profile. This research was funded by Organon, a part of Schering-Plough Corp.


**REFERENCES:**


1. Potkin SG, Cohen M, Panagides J: Efficacy and tolerability of asenapine in acute schizophrenia: a placebo- and risperi done-controlled trial. J Clin Psychiatry 2007; 68:1492-1500.
2. Kapur S, Mamo D: Half a century of antipsychotics and still a central role for dopamine D2 receptors. Prog Neuropsycho pharmacol Biol Psychiatry 2003; 27:1081-1090.


**NR5-031**

## DIMENSIONAL VERSUS CATEGORICAL APPROACH TO PHENOTYPING IN RELATION TO SALIVARY BASAL CORTISOL LEVELS IN PATIENTS WITH MOOD AND ANXIETY DISORDERS


*Gerthe G Veen, M.S. Leiden University Medical Center Department of Psychiatry, PO Box 9600, 2300 RC Leiden, The Netherlands, RC, Irene M. van Vliet, M.D., Ph.D., Roel de Rijk M.Sc., Ph.D., Erik J. Giltay M.D., Ph.D., Frans G. Zitman, M.D., Ph.D*


**EDUCATIONAL OBJECTIVE:**

The present study demonstrates the importance of using a dimensional phenotypic approach to mood and anxiety disorders when doing neuroendocrine research. Associations between the phenotype and hypothalamic-pituitary-adrenal (HPA) axis (dys)regulation could be missed when investigating just categorical *DSM-IV* group differences.

**SUMMARY:**


Introduction:
The DSM-IV classification may fail to distinguish adequately neuroendocrine factors involved in the etiology of mood and anxiety disorders, as is shown by inconsistent and conflicting previous findings. Continuous psychological dimensions may be better correlates with underlying HPA-axis dysregulations. Hypothesis: A dimensional approach to phenotyping, i.e. the tripartite model of anxiety and depression, will show stronger associations with HPA-axis measures in basal conditions than categorical DSM-IV diagnoses of mood and anxiety disorders. Methods: The Mood and Anxiety Symptoms Questionnaire (MASQ) was used to measure the three dimensions of the tripartite model, i.e. anhedonic depression, anxious arousal, and general distress. The cortisol awakening response (CAR), and diurnal decline in cortisol over the day were assessed in outpatients with mood (n=36), anxiety (n=18), and comorbid

mood and anxiety (n=19) disorders and compared to 36 healthy controls. Results:Salivary cortisol levels during the CAR showed statistically significant non-linear relationships with two MASQ dimensions, i.e. anhedonic depression and general distress (p=.01 and p=.03, respectively), but no group differences between DSM-IV groups (p=.68). A lower CAR was found in patients with low and high scores on these dimensions, compared to a higher CAR in patients with scores lying in between. In contrast, the diurnal decline in cortisol was better modeled using the DSM-IV categorical then the dimensional approach. Higher cortisol levels were found in patients with a pure mood disorder compared to patient with a pure anxiety disorder (p=.03) and controls (p=.001).Conclusions: Although the present study design was cross-sectional, our finding of a U-shaped association between the CAR and the degree of severity within the anhedonic depression and general distress dimension, suggests that an increasing severity eventually leads to exhaustion of the HPA system, and as a consequence to lower cortisol morning levels.

**REFERENCES:**


1. Clark LA, Watson D: Tripartite model of anxiety and depres sion: psychometric evidence and taxonomic implications. J Abnorm Psychol 1991; 100: 316-336
2. Cameron OG: Anxious-depressive comorbidity: effects on HPA axis and CNS noradrenergic functions. Essent Psycho pharmacol 2006; 7: 24-34


**NR5-032**

## INHALED LOXAPINE RAPIDLY IMPROVES ACUTE AGITATION IN SCHIZOPHRENIC PATIENTS


*James V Cassella, Ph.D. Alexza Pharmaceuticals1020 East Meadow Circle Palo Alto, CA 94303, Michael Allen, M.D., Patrik Munzar, M.D., Dan Spyker, Ph.D, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize acute agitation in a schizophrenic population and understand a potential new treatment method for that condition.

**SUMMARY:**


This Phase 2 randomized, double-blind, placebo-controlled clinical study assessed the
efficacy and safety of inhaled loxapine in treating acute agitation in schizophrenic patients.Loxapine was administered via inhalation using the Staccato® system, which delivers thermally-generated drug aerosol to the deep lung for rapid systemic absorption with IV-like kinetics. Consenting male and female adults, 18 to 65 years of age, who met DSM-IV criteria for schizophrenia, schizophreniform disorder, or schizoaffective disorder, presenting with a relevant degree of agitation at baseline, were enrolled in the study and randomly assigned to treatment. A total of 129 patients received a single inhalation of either 0 mg, 5 mg, or 10 mg of loxapine in an in-patient treatment facility.The primary efficacy endpoint was the absolute change in Positive and Negative Syndrome Scale Excited Component (PEC) score from baseline to 2 hours following treatment. The primary endpoint following 10 mg Staccato Loxapine vs. placebo was statistically significant beginning at 20 min and continuing for the entire 24 hour assessment period. Clinical Global Impression-Improvement (CGI-I) at 2 hours post-dose and responder analysis for CGI-I were statistically significant for both the 5 mg and 10 mg doses vs. placebo. Differences in change from baseline BARS score,as well as the time to first rescue medication, for the 10 mg dose vs placebo were statistically significant. In conclusion, inhaled loxapine produced rapid and significant improvement in agitated schizophrenic patients in clinical settings. Statistically significant effects were observed as early as 20 minutes and continued through 24 hours post treatment with the higher dose. Superiority of the 5 mg dose on some but not all measures is consistent with a dose response effect. Staccato loxapine may provide a rapid, simple, less intrusive alternative for agitated patients.This research was funded by Alexza Pharmaceuticals.


**REFERENCES:**


1. Allen MH, Currier GC, Grogg A. Use of Restraints and Pharmacotherapy in Academic Psychiatric Emergency Ser vices. General Hospital Psychiatry, 2003, 26(1):42-49.
2. Allen MH, Currier GW, Carpenter D, Ross R and Docherty JP. Expert Consensus Guideline Series: Treatment of Behav ioral Emergencies. Journal of Psychiatric Practice 2005;11(Supp 1):1-108.


**NR5-033**

## CIPROHEPTADINE FOR THE TREATMENT OF POST TRAUMATIC STRESS DISORDER


*Manohar Shetty, M.D. 4608 Penn Avenue, Pittsburgh, PA 15224, Prabir Mullick, M.D., Sachin Saigal, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant will understand the efficacy of Ciproheptadine to reduce nightmares and to improve sleep quality and time in patients with post traumatic stress disorder.

**SUMMARY:**


Method: This prospective study is on going for the last 26 weeks focuses on female patients. Inclusion criteria: Females who meet the criteria for PTSD. History of sexual, physical or mental abuse at least 2 years prior to the study. New to Ciproheptadine. Target symptoms focused as a measure of treatment success: Sleep disturbance, nightmares and flash backs. As there are no specific measurable scales, we used presence or absence of symptoms as parameter of treatment success. Age group 20 to 40 years, average dose 6 mgm HS. Results: 80% of patients had total absence of target symptoms mentioned above. Remaining patients had improvement in sleep. No weight gain recorded. Daily social functioning improved with better compliance with therapy. There was improvent on patient's psyche being given a clinical diagnosis and treatment thereby had better outlook toward the future. Conclusion: We hypothesize that Cyproheptadine acts as a histamine 1 (H1) and serotonin 2 (5-HT2) receptor antagonist. Evidence indicates that 5-HT2 antagonists increase stages of slow-wave sleep without altering total sleep time and improve sleep outcome. Given the success we plan to extend the study to male population with PTSD secondary to violence. Weakness of the study is this is not a placebo controlled double blind study.


**REFERENCES:**


1. Ciproheptadine for Post Traumatic Nightmares, Am J Psy chiatry - September 2000.
2. Efficacy of cyproheptadine for nightmares associated with posttraumatic stress disorder. Comprehensive Psychiatry.

**NR5-034**

## METEOROPATHY AND METEOROSENSIBILITY IN A SAMPLE OF PATIENTS WITH BIPOLAR DISORDERS: CORRELATIONS WITH TEMPERAMENTAL AND CHARACTER DIMENSIONS

*Marianna Mazza, M.D. Largo F.Vito 1, Rome Italy 00136, Di Nicola M, M.D., Martinotti G, M.D., Ph.D., Catalano V, Bandini I, Cangi A, Hadjichristos A, M.D., Janiri L, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize a possible interaction between the periodic variations of climatic-environmental factors and the biological systems underlying a variety of disturbances.

**SUMMARY:**

Introduction: The term 'meteoropathy', from the Greek meteora (things high in the air) and pathos (illness, suffering), indicates every pathological dimension in some way related to weather conditions. This concept is referred to a set of temperature, humidity, barometric pressure and brightness. The difference between the terms 'meteorosensibility' and 'meteoropathy' is quantitative: 'meteorosensitive' are those biologically susceptible to feel the effect of particular atmospherical events on mind and body; 'meteoropathic' are those individuals who develop a specific illness or a worsening of the existing diseases as a consequence of these climatic changes.

Methods: A sample of 100 patients with a diagnosis of Bipolar Disorder (*DSM-IV-TR*) was administered a recently formulated questionnaire, the Q-METEO, in order to assess the sensitivity to climate changes, their impact on symptomatologic modifications and on phases of disease. The tool also include a structured checklist to identify the physical and psychological symptoms mainly related to climate variations. All patients were also administered the Temperament and Character Inventory-Revised (TCI-R) to evaluate personality profile, subsequently correlated with the scores derived from the questionnaire Q-METEO and the phase of disease. A control group consisting of 100 non-clinical subjects, matching for socio-demographic characteristics with the clinical group, was evaluated according to the same indicators of the experimental group and then compared with it. Results: Preliminary results have shown a greater presence in the experimental group of meteorosensibility and meteoropathy traits compared with the control group.

**REFERENCES:**

1. Lopez del Val LJ, Rubio E, Calatayud V, Lopez del Val JA, Sanchez E. Effect of atmospheric factors on the presentation of cerebrovascular accidents, published in Neurologia 1991 Feb;6(2):52-5.
2. Balsamo V, Sirtori PG, Miani A Jr, Di Francesco A, France schini R, Mauro F, Alberti G, Grassi G. Meteoropathy: a syn drome continuously on the increase. Clin Ter. 1992 Jul;141(7):3-8.

**NR5-035**

## GLUTATHIONE IN BLOOD AND CEREBROSPINAL FLUID

*Martin Samuelsson, M.D. Martin Samuelsson IKE/psykiatriHälsouniversitetet 58700 Linköping, Sweden, Linda Vainikka, M.Sc., Conny Nordin, M.D., Ph.D., Karin Öllinger, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to critically consider the glutathione (GSH) distribution in cerebrospinal fluid and its covariation with GSH in blood.

**SUMMARY:**

Background

Glutathione (GSH) is a tripeptide consisting of glutamic acid, cysteine and glycine. GSH is important for maintaining the redox balance in the body and for protecting the brain against oxidative stress and xenobiotics. An altered GSH balance has been observed in schizophrenic patients, indicating an impaired antioxidant function in the pathophysiology of the disorder. GSH might also be involved in the pathophysiology of melancholic major depression.The aim of the present study was to investigate the disposition of GSH in blood and cerebrospinal fluid (CSF).

Material and MethodsBlood samples were collected from 30 healthy male volunteers at 8.00 a.m., 12 noon, 4.00 p.m. and 8.00 p.m. On the following day, blood was drawn and a lumbar puncture was performed at 8.00 a.m. Three 6-ml CSF fractions were collected. Whole blood samples were acidified and the GSH concentration was determined by HPLC. In the CSF, total GSH was analysed spectrophotometrically.ResultsIn CSF, a disrupted gradient pattern (0-6 ml CSF < 7-12 ml CSF > 13-18 ml CSF) was found for GSH ($F_{2:58} = 12.52$; $P < 0.0001$). No overall difference in GSH concentration was found in blood ($F_{4:96} = 1.09$; NS). There was a correlation between the average GSH CSF level (mean of the three CSF fractions) and the blood level at the time of lumbar puncture ($F_{1:23} = 5.52$; $P = 0.0278$).DiscussionIn line with previous reports on, e.g., monoamine metabolites in the CSF, the disrupted gradient (with a peak in fraction two [7-12 ml]) might indicate that the CSF disposition of GSH is subjected to a diurnal rhythm. The correlation between the CSF and blood levels of GSH (at the time of lumbar puncture) might be in accord with an equilibrium at the blood-CSF barrier.

ConclusionThe disrupted CSF concentration gradient might indicate a diurnal rhythm pattern. The blood-CSF correlation suggests an equilibrium at the blood-CSF barrier. GSH in blood can be used to estimate the mean GSH level in 18 ml

**REFERENCES:**

1. Gysin R, et al: Impaired glutathione synthesis in schizophre nia: Convergent genetic and functional evidence. Proceedings of the National Academy of Sciences 2007; 104(42):16621-16626
2. Nordin C, Sjödin I: CSF monoamine patterns in pathologi cal gamblers and healthy controls. J Psychiatric Research 2006; 40:454-459

**NR5-036**

## BLOOD PRESSURE CHANGES WITH FIXED-DOSE DESVENLAFAXINE SUCCINATE: POOLED RESULTS FROM FIVE PLACEBO-CONTROLLED, STUDIES IN DEPRESSED OUTPATIENTS

*Michael E Thase, M.D. 3535 Market Street, Room 689, Philadelphia, PA 19104, Christine Guico-Pabia, M.D., Karen A. Tourian, M.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to describe: 1) mean changes in blood pressure associated with fixed-dose DVS treatment in outpatients with MDD; 2) the incidence of potentially clinically important blood pressure changes associated with fixed-dose DVS treatment in outpatients with MDD; and 3) the incidence of sustained hypertension by FDA criteria associated with fixed-dose DVS treatment in outpatients with MDD.

**SUMMARY:**
Objective: Serotonin-norepinephrine reuptake inhibitors (SNRIs) are known to produce increases in blood pressure. Blood pressure (BP) changes with desvenlafaxine succinate (DVS), a novel SNRI, were assessed during treatment for major depressive disorder (MDD). Methods: Data were pooled from all double-blind, 8-week trials of outpatients with DSM-IV MDD randomized to fixed-dose DVS (50, 100, 200, or 400 mg/d; n=1365) or placebo (n=636). Mean BP changes (mmHg) from baseline to final-on therapy (FOT) evaluation, incidence of potentially clinically important (PCI) and clinically important BP changes, and incidence of sustained hypertension (SBP =140 mmHg or DBP =90 mmHg for 2 or 3 consecutive visits) were assessed. Results: Mean increases from baseline in supine systolic BP (SBP) with DVS were statistically significant (50 mg: 1.2, p=.05; 100 mg: 2.0, p=.001; 200 mg: 2.5, p=.001; 400 mg: 2.1, p=.01); these changes were significant vs the mean decrease with placebo (–1.4, p<.001 vs each DVS group). Mean increases from baseline in supine diastolic BP (DBP) with DVS (50 mg: 0.7, NS; 100 mg: 0.8, p=.05; 200 mg: 1.8, p=.001; 400 mg: 2.3, p=.001) were significant vs the mean decrease with placebo (–0.6, p<.05 vs each DVS group). PCI sustained DBP increases (=10 mmHg from baseline, value =90 mmHg for 3 consecutive visits) were more common with DVS (50 mg: 1.3%; 100 mg: 0.7%; 200 mg: 1.1%; 400 mg: 2.3%) than placebo (0.5%). More DVS than placebo patients had postural DBP decreases (=15 mmHg last supine to first standing) (50 mg: 2.3%; 100 mg: 1.5%; 200 mg: 2.1%; 400 mg: 4.0%; placebo: 1.9%) and postural SBP decreases (=30 mmHg last supine to first standing) (50 mg: 1.6%; 100 mg: 0.5%; 200 mg: 1.8%; 400 mg: 2.7%; placebo: 0.8%). More DVS than placebo patients had clinically important increased BP (21 vs 5). Conclusion: Short-term DVS treatment was associated with small dose-related BP changes. Supported by Wyeth Research.

**REFERENCES:**

1. DeMartinis NA, Yeung PP, Entsuah R, Manley AL: A double-blind, placebo-controlled study of the efficacy and safety of desvenlafaxine succinate in the treatment of major depressive disorder. J Clin Psychiatry 2007; 68:677-688.
2. Septien-Valez L, Pitrosky B, Padmanabhan SK, Germain JM, Tourian KA: A randomized, double-blind, placebo-controlled trial of desvenlafaxine succinate in the treatment of major de pressive disorder. Int Clin Psychopharmacol 2007; 22:338-347.

**NR5-037**

## EFFECTIVENESS AND TOLERABILITY OF QUETIAPINE IN THE TREATMENT OF CHRONIC SOMATOFORM PAIN DISORDER

*Nitin Dharwadkar, M.D. SUITE 12, 140 Church Street, Richmond, Australia 3121, Darren R. Hocking, B.A. (Hons)*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to recognize that Quetiapine was shown to have favourable efficacy and was well tolerated in a preliminary pilot study when used as an adjunctive treatment for treatment of chronic pain disorder,but should be further evaluated in future research using double blind placebo controlled trials.

**SUMMARY:**
Chronic pain disorder is a condition for which pharmacological treatment is problematic and challenging. The purpose of this study was to investigate the effectiveness and tolerability of quetiapine, an atypical antipsychotic in the treatment of chronic pain symptomatology. This was an open label, naturalistic pilot study which monitored quetiapine use in 14 intention-to-treat patients who met the criteria for chronic (somatoform) pain disorder after follow-up time points at 4, 8 and 12 weeks of treatment. Quetiapine was administered over 12 weeks at a starting dose of 25mg daily subsequently adjusted every week according to the drug's efficacy and tolerability, in patients already on antidepressant medication and psychotherapy. The major outcome measures included a Visual Analogue Pain scale (VAS), Hamilton Depression Scale (HAM-D-17), Quality of Life Scale (QOLS), and Clinical Global Impression (CGI) of Severity scale. Results showed that mean pain ratings on the VAS decreased significantly from baseline and at each follow-up time point ($p < .001$), and there were significant reductions in severity of depression and illness over the 12 week period ($p < .001$). There were significant improvements in the quality of life of patients using quetiapine after 4, 8, and 12 weeks of treatment ($p < .001$). The significant improvements across all efficacy measures suggest s quetiapine may be a useful adjunctive treatment strategy for patients with chronic pain disorder, but should be further evaluated in future research using double blind placebo controlled trials.

**REFERENCES:**

1. Calandre, E.P. Morilla-Arques, P. Rodriguez-Lopez, C.M. Rico-Villademoros, F. & Hidalgo, J. : Pregabalin augmenta tion of quetiapine therapy in the treatment of fibromyalgia: an open-label, prospective trial. Pharmacopsychiatry 2007; 40(2), 68-71.
2. Hidalgo, J. Rico-Villademoros, F. & Calandre, E.P.: An open-label study of quetiapine in the treatment of fibromyalgia. Prog. Neuropsychopharmacol. Biol. Psychiatry 2007; 31(1), 71-77.

**NR5-038**

## DISCONTINUATION SYMPTOMS AND TAPER/ POSTSTUDY-EMERGENT ADVERSE EVENTS WITH DESVENLAFAXINE TREATMENT FOR MAJOR DEPRESSIVE DISORDER

*Stuart A Montgomery, M.D. 19 St Leonard's Rd., London, United Kingdom W13 8PN, Stuart A. Montgomery, M.D., F.R.C.Psych1; Maurizio Fava, M.D.2; M.D. Karen A. Tourian, M.D.3; Sudharshan K. Padmanabhan3; Christine Guico-Pabia, M.D.3 1.Imperial College School of Medicine, London, England; 2.Massachusetts General Hospital, Boston, Massachusetts; 3.Wyeth Research, Collegeville, Pennsylvania*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, participants should be able to:1)Describe discontinuation symptoms associated with short- and longer-term DVS treatment in adults with MDD; and 2) Describe taper/poststudy-emergent adverse events associated with short- and longer-term DVS treatment in adults with MDD.

**SUMMARY:**
Objective: This analysis assessed discontinuation symptoms using the Discontinuation-Emergent Signs and Symptoms (DESS) checklist and taper/poststudy-emergent adverse events (TPAEs) with desvenlafaxine succinate (DVS) treatment for outpatients with *DSM-IV* major depressive disorder (MDD).
Methods: Data were analyzed from 9 short-term (8-week), double-blind (DB), placebo (PBO)-controlled studies of DVS (50, 100, 200, or 400 mg/d) and 1 longer-term relapse prevention study, in which patients received 12-week, open-label (OL) DVS (200 or 400 mg/d); responders were randomized to 6-month, DB DVS or PBO. DESS was analyzed in treatment completers at the end of OL DVS and DB treatment.
Results: DESS scores in short-term studies (n=259 DVS 50-mg/d, n=239 DVS 100-mg/d, n=39 DVS 200 mg/d, n=34 DVS 400 mg/d, n=319 PBO) were significantly higher vs PBO with 50-mg/d DVS tapering to 0 mg (2.5 vs 1.0; P<0.001) and 100-mg/d DVS tapering from 50 to 0 mg (1.9 vs 1.1; P=0.028). After 12-week OL DVS (n=107 DVS 200 mg/d, n=266 DVS 400 mg/d), DESS scores were significantly higher at DB week 3 for PBO patients from the 400-mg/d (tapering from 100 to 0 mg; 2.2 vs 1.2, P=0.016) and 200-mg/d (0 mg/d at weeks 2-3; 2.3 vs .7, P=0.016) groups vs those continuing DVS; after week 3, patients tapered from DVS 400-mg/d had significantly higher DESS scores vs those continuing DVS (3.1 vs 1.1, P=0.022). After the DB phase (n=40 DVS 200 mg/d, n=78 DVS 400 mg/d, n=73 PBO), DESS scores were significantly higher vs PBO only for the 400-mg/d group tapering from 100 to 0 mg (1.8 vs .59, P=0029). The most common (? 5%) TPAEs among DVS patients were dizziness, nausea, headache, irritability, diarrhea, anxiety, abnormal dreams, fatigue and hyperhidrosis.
Conclusion: The maximum mean DESS score for DVS was 3.1.These results indicate there are discontinuation symptoms with cessation of DVS use in both short- and long-term treatment.
Supported by Wyeth Research

**REFERENCES:**

1. Montgomery SA, Huusom AK, Bothmer J: A randomised study comparing escitalopram with venlafaxine XR in primary care patients with major depressive disorder. Neuro psychobiology 2004; 50:57-64
2. Montgomery SA, Kennedy SH, Burrows GD, Lejoyeux M, Hindmarch I: Absence of discontinuation symptoms with agomelatine and occurrence of discontinuation symptoms with paroxetine: a randomized, double-blind, placebo-con trolled discontinuation study. Int Clin Psychopharmacol 2004; 19:271-280

**NR5-039**

**ALTERATIONS IN FRONTOLIMBIC SYSTEMS FOR EMOTION REGULATION IN MAJOR DEPRESSION AND GENERALIZED ANXIETY**

*Amit Etkin, M.D. 401 Quarry Road, Stanford, CA 94305, Jose M. Anguiano, B.S., Katherine E. Keller, B.S., Vinod Menon, Ph.D., Alan F. Schatzberg, M.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to explain mechanisms by which the brain controls the effects of strong emotional stimuli and identify in which these mechanisms are altered in major depression and generalized anxiety disorder.

**SUMMARY:**
Background: Mood and anxiety disorders are characterized in part by an inability to effectively cope with salient emotional stimuli. In a recent series of experiments, we investigated the neural mechanisms by which the brain normally deals with emotional conflict, even in the absence of a deliberate requirement for emotion regulation. We found that the resolution of emotional conflict was associated with activation of the rostral anterior cingulate cortex (ACC) and ventromedial prefrontal cortex (PFC), which were accompanied by a simultaneous and correlated reduction of amygdalar activity, while activity in the amygdala, dorsomedial and dorsolateral PFC and dorsal ACC reflected the amount of emotional conflict. Methods: We applied this novel emotional conflict protocol, which is based on the classic Stroop conflict task, to subjects with major depression or generalized anxiety disorder, along with matched controls. Results: Behavioral evidence of abnormalities in emotional conflict resolution was observed in patients. Analysis of the functional magnetic resonance imaging (fMRI) data focused on medial prefrontal regions involved in emotional conflict. Patients with major depression or generalized anxiety disorder exhibited alterations in both regions responsive to emotional conflict and in regions implicated in the resolution of this conflict. Conclusions: Reflexive emotion regulation in the absence of deliberate cognitive control of emotion involves a distinct medial prefrontal emotional control circuit, abnormalities in which are related to mood and anxiety disorders. The capacity to recruit this circuit may thus reflect an individual's day-to-day emotional coping mechanisms.

**REFERENCES:**

1. Etkin, A., Egner, T., Peraza, D. M., Kandel, E. R., and Hirsch, J. (2006). Resolving emotional conflict: a role for the rostral anterior cingulate cortex in modulating activity in the amyg dala. Neuron 51, 871-882.
2. Egner, T., Etkin, A., Gale, S., and Hirsch, J. (2007). Disso ciable Neural Systems Resolve Conflict from Emotional versus Nonemotional Distracters. Cereb Cortex.

**NR5-040**

**STUDY OF CHRONIC AND RESISTANT DEPRESSION IN RMN WITH ARTERIAL SPIN LABELING.**

*Bérengère Duhameau, M.D., SHU Psychiatrie Adulte- Pr MilletCentre Hospitalier Guillaume Régnier, 108 avenue du Général Leclerc, BP 60321 35703 RENNES cedex 7, France, Jean-Christophe Ferre, Bruno Millet, Ph.D., Pierre Jannin, Dominique Drapier, Ph.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to show the interest of RMN with Arterial Spin Labeling in

depression,to investigate with Arterial Spin Labeling functional abnormalities in psychiatric disorders.

**SUMMARY:**

Objective: The purpose of the study was to investigate the neural substrate that characterize resistant depressed patients using a new technique of non invasive IRM perfusion when compared to healthy volunteers. Methods: A consecutive series of 6 patients and 6 matched controls were included. The group of chronic depressed patients answered strict criteria of inclusion in particular in the field of resistance to the treatment. They have a chronic depressive episode (HDRS>15) evolving for at least two years. The innovating imagery technique is the Arterial Spin Labeling (ASL) : it allows to outpass the limitations of other techniques of functional neuroimagery since it directly reflects what happens in a basic state, without irradiation and injection of exogenic contrast products. To our knowledge, this is the first ASL study applied to psychiatry and to this population of patients. Results: Statistic analysis underlined several cerebral hyperperfusion among resistant depressed patients in comparison to the healthy volunteers. We found a statistically significant (p=0.001) bilateral hyperperfusion of the Cg25 (subgenual cingulair 25) area, which is in accordance with Mayberg previous findings (Mayberg et al, 2005). Other significant hyperperfusion areas also appeared: the left dorso-median prefrontal cortex (BA10), the left anterior cingular area (BA32) and left subcortical areas (putamen, palidum, amygdala). Conclusions: This preliminary study contributes to formulate the hypothesis that the Cg25 area is involved in the resistance to the treatment in depression. Other patients have to be included to confirm this results. ASL imagery technique appears to be an appropriate method for investigating functional abnormalities in psychiatric disorders.

**REFERENCES:**

1. MAYBERG HS, LOZANO AM, VOON V et al. Deep Brain Stimulation for treatment-resistant depression. Neuron 2005; 45: 651-660.
2. YE FQ, BERMAN KF, ELLMORE T et al. H(2)(15)O PET validation of steady-state arterial spin tagging cerebral blood flow measurements in humans. Magn Reson Med 2000; 44: 450-456.

**NR5-041**

## THE NEURAL SUBSTRATES OF AFFECTIVE FACE RECOGNITION IN ALEXITHYMIA: A VOXEL-BASED MORPHOMETRY AND FUNCTIONAL MAGNETIC RESONANCE IMAGING STUDY

*Byung-Joo Ham, Ph.D. 94-200 Youngdungpo-Dong, Youngdungpo-Gu, Seoul, Korea 150-719, Boung-Chul Lee, M.D., Sujung J. Yoon, M.D., In Kyoon Lyoo, M.D., Ph.D, Han Yong Jung, M.D., Ph.D., Ihn-Geun Choi, M.D., Ph.D., Byeong-Taek Lee, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand the functional and structural impairments of the cortico-striato-thalamo-cortico circuitry may play an important role in the pathophysiology of alexithymia.

**SUMMARY:**

Introduction: Alexithymia is a term used to describe deficits in the cognitive processing and regulation of emotions,, Although several theories have been proposed for the underlying neurobiology, the etiology of alexithymia remains to be further clarified. Methods: In this study, we explored the relationship between the degree of alexithymia and the volumes of cerebral gray and white matter. In addition, using functional magnetic resonance imaging (fMRI), we investigated brain activation in alexithymic individuals when presented with neutral, sad, or angry affective facial stimuli. Results: Our results showed that structural alterations of the left inferior orbitofrontal cortex (OFC), medial OFC, and right fusiform gyrus corresponded with decreased functional activities in those regions. In the voxel-based morphometry (VBM) analysis, the white matter volume of the left medial and inferior OFC, thalamus, and right fusiform gyrus significantly increased with the scores of alexithymia. We also found a decreased activity of bilateral caudate, rostral anterior cingulate cortex (ACC), fusiform gyri, left inferior OFC, and medial OFC in response to angry facial stimuli with the score of alexithymia. Conclusions: Our study provides evidence for the dysfunction with negative emotional processing within the rostral ACC, OFC, thalamus, caudate nucleus and fusiform gyrus in subjects with alexithymia. Furthermore, our data suggest that white matter volume of the OFC, thalamus and fusiform gyrus correlated with the degree of alexithymia. These results suggest that the functional and structural impairments of these regions (the cortico-striato-thalamo-cortico circuitry) may play an important role in the pathophysiology of alexithymia.

**REFERENCES:**

1. Taylor GJ: Recent developments in alexithymia theory and research. Can J Psychiatry 2000;45:134-142.
2. Parker JD, Taylor GJ, Bagby RM: Alexithymia and the recog nition of facial expressions of emotion. Psychother Psycho som 1993;59:197-202.

**NR5-042**

## FDG-PET STUDY OF FIRST EPISODE SCHIZOPHRENIA PATIENTS WITH AND WITHOUT AUDITORY VERBAL HALLUCINATIONS

*Guillermo Horga, M.D. Clinic Schizophrenia Program, Psychiatry Department, Clinical Institute of Neurosciences, Hospital Clínic Barcelona, Villarroel 170, Barcelona, 08036, Spain, Anna Mané, M.D., Francisco Lomeña, M.D., Ph.D., Emili Fernández-Egea, M.D., Mireia Font, Ph.D., Carles Falcón, Ph.D., Miquel Bernardo, M.D., Ph.D., Eduard Parellada, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to to have a greater understanding of the pathophysiology of auditory verbal hallucinations in schizophrenia.

**SUMMARY:**

Objective: Auditory verbal hallucinations (AVH) are a core symptom of schizophrenia. In order to avoid some of the limitations of previous neuroimaging studies, the current study was conducted in a homogeneous group of schizophrenia patients to assess whether the presence or absence of AVH is associated with differential regional cerebral glucose metabolism patterns. Methods: Sixteen dextral antipsychotic-naïve first-episode *DSM-IV* schizophrenia patients were examined during resting state using [18F]fluoro-deoxyglucose positron emission tomography (PET). SPM5 was employed to analyze statistical differences. A basal comparison of schizophrenic patients with AVH (n=9) versus patients without

AVH (n=7) was carried out using a two-sample t-test. Results: Patients with AVH had a significantly higher metabolic rate in the left superior and middle temporal cortices, the superior medial frontal cortex and the left caudate nucleus (p=0.005, corrected for multiple comparisons). Conclusions: AVH in schizophrenia may be mediated by an alteration of neural pathways responsible for normal language function, including those involved in the generation of inner speech and the ones implicated in the perception of external language. Moreover, our findings also suggest an important role of the dominant caudate nucleus in the pathophysiology of AVH, which could be related to the bilingual condition of our sample according to recent studies. Supported by funding from Janssen-Cilag and Fundació Marató TV3.

**REFERENCES:**

1. Stephane M, Barton S, Boutros NN: Auditory verbal hal lucinations and dysfunctions of the neural substrates of speech. Schizophr Res 2001; 50:61-78.
2. Allen P, Aleman A, McGuire PK: Inner speech models of auditory verbal hallucinations: evidence from behavioural and neuroimaging studies. Int Rev Psychiatry 2007 Aug; 19(4):407-15.

**NR5-043**

## SEXUAL AROUSAL RESPONSES IN DEPRESSIVE WOMEN USING BOLD-FMRI: PARTIAL RECOVERY AFTER ANTIDEPRESSANT TREATMENT

*Jong-Chul Yang, M.D. Department of Psychiatry, Chonbuk National University Hospital, Jeonju, South Korea 561-712, Ik-Keun Hwang.M.D.,Ph.D., Sung-Jong Eun.B.A., Gwang-Woo Jeong,Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to recognize the cerebral regions associated with sexual arousal in depressive women before and after treatment using blood-oxygenation-level-dependent (BOLD) functional magnetic resonance imaging (fMRI). Also, this presentation may help an understanding of neural mechanisms for sexual dysfunction in patients with depressive disorders.

**SUMMARY:**

Introduction: Some investigators have reported that depressive patients have difficulty in sexual arousal. But, there have been few clinical studies on neuroimaging. The purpose of this study was to assess the cerebral regions associated with sexual arousal in depressive women by BOLD-fMRI before and after antidepressant treatment. Methods: Nine healthy women (mean (SD) age, 40.3(11.6)) and seven depressive women with sexual dysfunction (mean (SD) age, 41.7(13.8): mean (SD) scores of BDI and HAMD-17, 35.6(7.1) and 34.9(3.1), respectively) were given a fMRI on a 1.5T MR scanner (GE Signa Horizon) before and after treatment. The fMRI data was obtained from 7 oblique planes using a gradient-echo EPI. Sexual stimulation paradigm began with 1 minute rest period with a non-erotic documentary film and 4 minute stimulation using an erotic video film. The data was analyzed by the SPM99 ($p<0.05$). The number of pixels activated by each task was used as an index of activation. All depressive women took the mirtazepine treatment (mean dosage, 37.5mg/day) for 8 to 10 weeks. Results: The regions significantly activated by visual sexual stimulation in healthy women were the middle occipital gyrus, middle temporal gyrus, inferior frontal gyrus, insula, hypothalamus, septal area, anterior cingulate gyrus, and parahippocampal gyrus. The regions in depressive women who showed lower than a 50% activity compared to healthy women were the hypothalamus (55.5% vs. 3.0%), septal area (49.6% vs. 8.6%), parahippocampal gyrus (18.2% vs. 5.8%) and anterior cingulate gyrus (23.5% vs. 11.0%). After treatment, the scores of the BDI and HAMD-17 were at least 50% below their baseline. Also, brain activations partially recovered in the areas of the hypothalamus (11.2%), septal area (27.8%) and parahippocampal gyrus (14.6%), significantly. Conclusion: These results suggest that the hypothalamus, septal area, and parahippocampal gyrus are associated with sexual arousal in depressive women.

**REFERENCES:**

1. Park K, Kang HK, Seo JJ, Kim HJ, Ryu SB, Jeong GW. Blood-oxygenation-level-dependent functional magnetic reso nance imaging for evaluating cerebral regions of female sexual arousal response. Urology 2001;57:1189-1194.
2. Yang JC. Functional neuroanatomy in depressed patients with sexual dysfunction: blood oxygenation level dependent func tional MR imaging. Korean J Radiol 2004;5:87-95.

**NR5-044**

## CAN BRAIN STRUCTURE CHANGE WITH MOOD? AN EXPLORATORY ANALYSIS OF MOOD-STATE RELATED CHANGES IN AMYGDALA VOLUME IN SUBJECTS WITH BIPOLAR DISORDER

*Lara C Foland, B.A. Laboratory of Neuro Imaging, Department of Neurology, UCLA School of Medicine 635 Charles Young Drive South, Suite 225, Los Angeles, CA 90095-7334, Lori L. Altshuler, M.D., Katherine L. Narr, Ph.D., George Bartzokis, M.D., Yasaman Alaghband, B.S., Jennifer Townsend, B.A., Arthur W. Toga, Ph.D., Paul M. Thompson, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, participants will be able to: 1) identify potential factors that may confound structural neuroimaging studies of bipolar disorder; and 2) recognize the importance of including mood state as a controlling variable in future studies.

**SUMMARY:**

INTRODUCTION: Previous structural neuroimaging studies of bipolar disorder have reported volumetric increases, decreases or no difference in the amygdala in patients relative to healthy subjects. As we and others have found that lithium likely increases size of limbic structures [1], the present study examined whether amygdala volume is altered in patients relative to healthy subjects when controlling for the effects of lithium. Effects of mood state were additionally assessed. METHODS: High resolution T1-weighted 3D MR images from 40 BP subjects (38.4±9.2yrs; 43% female; mood states at the time of scanning: 45% euthymic, 30% depressed, and 25% manic) and 12 healthy subjects (32.7±7.8yrs; 58% female) were collected on a 3T MR scanner. Amygdalae were traced on contiguous coronal slices by a trained observer blind to diagnosis and other demographic variables. Surface meshes were constructed for each subject and group differences in the regional structure of the amygdala were assessed using a point-wise analysis of variance while controlling for lithium status,

age, gender and total brain volume. Permutation testing was used to assess the probability that the overall pattern of effects did not occur by chance. RESULTS: Subjects with bipolar disorder showed non-significant reductions in amygdala volume compared to healthy subjects (1430mm3 vs. 1540mm3, p=0.21). Looking within the patient group, an exploratory analysis showed that depressed patients had significantly lower volume of the right amygdala compared to euthymic patients (1262mm3 vs. 1569mm3, p=0.021). DISCUSSION: Our results suggest that mood state may influence amygdala structure in bipolar disorder. Though preliminary, these findings may help to explain prior inconsistencies in the literature. Associations between mood state and brain structure may reflect fluctuations in physiological factors such as cortisol, a stress hormone causally linked to reversible changes in brain morphometry [2].

**REFERENCES:**


1. Foland L, Altshuler L, Sugar C, Leow A, Townsend J, Narr K, Asuncion D, Toga A, Thompson P: Increased volume of the amygdala and hippocampus in bipolar subjects treated with lithium. Neuroreport (in press).
2. Starkman M, Giordani B, Gebarski S, Berent S, Schork M, Schteingart D: Decrease in cortisol reverses human hippo campal atrophy following treatment of Cushing's disease. Biol Psychiatry 1992; 46:1595-1602.


**NR5-045**

## WHITE MATTER CHANGES IN OBSESSIVE-COMPULSIVE DISORDER REVEALED BY DIFFUSION TENSOR IMAGING


*Leonardo F Fontenelle, M.D. R Otavio Carneiro 93 601 Icarai, Niterói, Brazil 24230-190, Ivanei E. Bramati, Ph.D., Jorge Moll, M.D., Ricardo de Oliveira-Souza, M.D., Fernanda Tovar-Moll, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the involvement of the cingulate bundle, the corpus calosum, the internal capsule, the longitudinal superior fascicule in the pathophysiology of obsessive-compulsive disorder

**SUMMARY:**


OBJECTIVE: The aim of this study was to investigate white matter (WM) abnormalities in obsessive-compulsive disorder (OCD) using two approaches: (i) whole brain, tract-based spatial statistic (TBSS) and (ii) selected regions of interest (ROIs) analyses. METHODS: Conventional and DTI images were acquired in nine patients with OCD according to DSM-IV criteria and nine gender- and age-matched healthy volunteers (HVs). Whole brain voxel-wise statistical analysis of fractional anisotropy (FA) and mean diffusivity (MD) maps were performed using TBSS. A priori ROIs were placed onto the FA and MD maps in selected regions: corpus calosum (CC), internal capsule (IC), longitudinal superior fascicule (LSF) and cingulate bundle (CB). Differences in the ROI mean values between patients and HVs were examined using an ANOVA. Post-hoc independent t tests examined for group differences in the individual ROIs. RESULTS: TBSS analyses showed reduced FA and increased MD in regions of the IC (genu and posterior limb) and LSF in OCD patients compared to HVs. A priori ROIs analyses confirmed the changes observed with the voxel-wise method and, in addition, showed increased MD in the left CB ($p = 0.002$) and splenium of CC ($p < 0.05$) in OCD patients. CONCLUSION: Our findings support the involvement of the CB and additional WM tracts in OCD. The observed increased MD and decreased FA in these WM tracts are compatible with either reduced fiber density or myelination.


**REFERENCES:**


1. Cannistraro PA, Makris N, Howard JD, Wedig MM, Hodge SM, Wilhelm S, Kennedy DN, Rauch SL. A diffusion tensor imaging study of white matter in obsessive-compulsive disor der. Depress Anxiety. 2007;24(6):440-6.
2. Szeszko PR, Ardekani BA, Ashtari M, Malhotra AK, Rob inson DG, Bilder RM, Lim KO. White matter abnormalities in obsessive-compulsive disorder: a diffusion tensor imaging study. Arch Gen Psychiatry. 2005; 62(7):782-90.


**NR5-046**

## WHITE MATTER IN DYSLEXIA AND NORMAL READING: COMPARISON OF VOXEL BASED AND REGION OF INTEREST ANALYSIS OF STRUCTURAL INTEGRITY


*Marc J Dubin, M.D. 525 East 68th St., Box 140, New York, NY 10065, Sumit N. Niogi, Ph.D., Aziz Ulug, Ph.D., Bruce D. McCandliss, Ph.D.*


**EDUCATIONAL OBJECTIVE:**

After this session the participant will: 1) have an understanding of the connection between cerebral white matter tract integrity and reading ability; 2) learn how imaging fine structure within tracts may clarify pathogenetic mechanisms of dyslexia; understand the neuroimaging technique of diffusion tensor imaging and its utility for imaging white matter tracts in the brain; and 4) understand how to interpret region of interest and voxel-based analysis in neuroimaging.

**SUMMARY:**


Reading ability depends on a distributed network of cerebral structures. The left superior corona radiata (SCR) and centrum semiovale (CS) are white matter tracts whose structural integrity, as measured by fractional anisotropy (FA), is correlated with reading ability in children with dyslexia and in normal readers (Niogi and McCandliss, 2006). These authors measured FA using the Reproducible Objective Quantification Scheme (ROQS) algorithm applied to subjects' diffusion tensor imaging scans and reading ability by the Word ID test of the Woodcock-Johnson. ROQS, a region of interest (ROI) technique, uses edge detection between neighboring tracts to isolate a tract of interest and measure its average FA. Voxel based analysis, in contrast, relies on spatial registration of all subjects' scans, followed by a whole brain search for areas whose FA correlate with task performance. ROI analysis offers greater control over region definition while voxel based analyses efficiently search for tracts that might play a role in task performance. Inconsistencies have been reported between the two approaches (Dougherty, et al 2007). We asked if the two techniques agreed in their sensitivity to the left CS vs. Word ID correlation. We used Tract Based Spatial Statistics (TBSS), a tool in the FSL package, which registers subjects' brains along a "skeleton" of the center core voxels within each tract. The FA along the skeleton is then analyzed for its relationship to reading performance. Although TBSS differed from ROQS when TBSS

used only the skeleton, it confirmed the ROQS left CS vs. Word ID positive correlation when the search area was extended beyond the skeleton to include the full thickness of tracts. This suggests that changes in FA correlated with variation in reading ability tend to occur at the boundaries of tracts. Using both ROQS and thick-track TBSS in concert may reveal fine spatial variation within tracts that could provide clues for pathogenetic mechanisms.

**REFERENCES:**


1. Niogi SN, McCandliss BD: Left lateralized white matter microstructure accounts for individual differences in reading ability and disability. Neuropsychologia 44:2178-2188, 2006.
2. Dougherty RF, Ben-Shachar M, Deutsch GK, et al.: Tem pral-callosal pathway diffusivity predicts phonological skills in children. Proc Natl Acad Sci U S A 104:8556-8561, 2007.


**NR5-047**

## COGNITION IN CHRONIC FATIGUE SYNDROME AS COMPARED WITH MAJOR DEPRESSION


*Benoît Gillain, M.D. Clinique Universitaires Saint-LucAvenue Hippocrate 101200 Bruxelles, Belgium, Adam Stephane, Ph.D., Xavier Seron, Ph.D., Michel Lambert, M.D., Etienne Masquelier, Eric Constant, M.D*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand the differences in the cognitive impairments between chronic fatigue syndrome and major depression. He will be familiar with different cognitive tasks to assess attention, verbal and visual memory.

**SUMMARY:**


INTRODUCTION: Cognitive complaints are frequently reported in Chronic Fatigue Syndrome (CFS), particularly, memory and concentration problems. However, studies on cognition in CFS have reported conflicting results. Some, but not all studies, have found impairments in verbal and visual memory, attention and speed of information processing. There are methodological difficulties which plague the neuropsychological literature in CFS: heterogeneity in inclusion criteria, the lack of a control group, a comorbid depression which can also be associated with cognitive impairments. METHODS: Twenty five patients with CFS, 25 unipolar depressed patients and 25 healthy control subjects were investigated on standardised tests of verbal and visual memory, sustained attention, phasic alertness, as well as suggestibility, fatigue effect and effort/ simulation. RESULTS: On alertness subtest, there was no significant difference between the depressed group and the CFS group; but both differed from the control group that was quicker. On visual sustained attention, there was no significant difference about the quality of responses to the Working Memory subtest between the two patients groups; but both differed from the control group that was more effective. Nevertheless, on median reaction times of response, the CSF group was slower than the two other groups. On auditory sustained attention, there was no significant difference between the CFS group and the control group; but both differed from the depressed group that was less effective. On the visual memory task, the control group was more effective than the two patients groups. The hypothesis that CFS patients would be more sensitive to suggestibility was not confirmed and we did not observed a lack of effort/simulation on two different tests of verbal memory. CONCLUSION: In spite of their fatigue and their slowing on different cognitive tests, CFS patients keep a good quality of response and seem not to be more sensitive to ...


**REFERENCES:**


1. Grafman J, Johnson R, Scheffers M : Analysis of neuropsy chological functioning in patients with Chronic Fatigue Syn drome. J Neurol Neurosurg Psychiatry 1993;56:684-689.
2. DiClementi JD, Schmaling KB, Jones JF: Information pro cessing in chronic fatigue syndrome. A preliminary investiga tion of suggestibility. J Psychosom Res 2001;51:679–686.


**NR5-048**

## MEMANTINE DISCONTINUATION IN NURSING HOME RESIDENTS WITH ALZHEIMER'S DISEASE IS ASSOCIATED WITH INCREASED PSYCHOTROPIC DRUG USE AND DECREASED WEIGHT


*Constantine Lyketsos, M.D. Johns Hopkins Bayview Medical Center, 300 Alpha Commons Drive, Alpha Commons Bldg, 4th Floor, Baltimore, MD 21224, Howard Fillit, M.D., Robert K. Hofbauer, Ph.D. Juliana Setyawan, Pharm.D., M.S., E. Malca Resnick, Ph.D., Stavros Tourkodimitris, Ph.D., Moshe Fridman, Ph.D., M. Haim Erder, Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize that in nursing home residents with Alzheimer's disease, memantine discontinuation, compared to continuous treatment, can be associated with higher odds of increased psychotropic drug use and with significant weight loss.

**SUMMARY:**


Objective: This analysis examined the effect of discontinuation of memantine treatment on the utilization of psychotropic medications and change in body weight in nursing home residents with Alzheimer's disease (AD).

Methods: Data from medical charts of residents with AD, >/=50 years of age, and residing in nursing homes for >/=90 days, were collected from 113 US nursing home sites. Residents who took memantine continuously for at least 90 days were compared with those who took memantine for >/=30 days, then discontinued for >/= 60 days. Logistic regression models were used to estimate the odds of change in psychotropic drug utilization. In addition, separate models were estimated for use of antipsychotics, antidepressants, anticonvulsants, anxiolytics, and sedative hypnotics. Weight change from baseline was assessed using an analysis of covariance model.

Results: The data were collected from 521 residents: 248 who discontinued memantine treatment, and 273 who took memantine continuously. Overall, those who discontinued memantine therapy had a higher rate of psychotropic use (32.3% vs 16.5%; OR=2.49; p<0.001), and higher adjusted odds of utilizing antipsychotics (OR=2.46; p=0.005), anxiolytics (OR=2.46; p=0.01), antidepressants (OR=3.54; p<0.001), and anticonvulsants (OR=6.46; p=0.003). The effect was not significant for sedative hypnotics (OR=1.45; p=0.60). Residents who discontinued memantine experienced an adjusted mean (± SD) weight loss of 1.48 ± 5.0 kg, compared to a weight gain of 0.19 ± 4.9 kg in residents who were treated continuously (p<0.001).

Conclusion: In nursing home residents with AD, memantine

discontinuation, compared to continuous treatment, was associated with higher odds of increased psychotropic use (including antipsychotics, anxiolytics, antidepressants, and anticonvulsants) and with significant weight loss. This study and its presentation were sponsored by Forest Laboratories, Inc.

**REFERENCES:**

1. Narayanan, S et al. J Am Med Dir Assoc. 2006:7(1):12 – 16
Edward K et al. Clin Drug Investig. 2005:25(8):507-515

**NR5-049**

## REVERSIBILTY OF DELIRIUM IN TERMINALLY ILL PATIENTS AND PREDICTORS OF MORTALITY

*David J Meagher, M.D. University of Limerick Medical SchoolIreland, Limerick, Ireland, Republic of xx, Maeve Leonard, M.D., Banguru Raju, M.D., Marion Conroy, M.D., Sinead Donnelly, M.D., Paula T Trzepacz, M.D., Jean Saunders, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognise factors that predict reversibility of delirium in terminally ill patients.

**SUMMARY:**

Introduction: “Terminal delirium” lacks clear definition and its relevance to imminence of death is understudied. We evaluated factors related to delirium reversibility and mortality in palliative care patients. Method: Consecutive cases of DSM IV delirium occurring in a palliative care service were assessed with the Delirium Rating Scale Revised-98 (DRS-R98), Cognitive Test for Delirium (CTD), and Delirium Etiology Checklist (DEC). Patients were followed until recovery from delirium and / or death. Results: DSM-IV delirium developed in 121 patients (mean age 70.2 ± 11.7; mean contributing etiologies 3.5 ± ; mean number of medications 6.8 ± ). Mean time until death was 39.7 ± 69.8 days in 33 patients who recovered from delirium before death (“reversible”) vs 16.8 ± 10.0 days in 88 patients who had irreversible delirium ($p<0.01$). Age, medication use, and ease of ward management were similar between these groups. DRS-R98 and CTD scores were significantly higher at initial assessment in the irreversible group ($p<0.001$) with greater disturbances of sleep, language, long term memory, attention, vigilance, and visuospatial ability. Stepwise logistic regression found irreversible delirium associated with higher DEC scores, lower CTD attention, and higher DRS-R98 visuospatial dysfunction. Linear regression found survival time in all patients predicted by CTD cognitive impairment ($p<0.001$), age ($p=0.01$), and evidence of organ failure ($p=0.01$). Conclusion: Less reversible delirium was characterized by greater impairment of attention, vigilance and visuospatial function. Survival time in terminally ill patients developing delirium is related to patient age, greater severity of cognitive impairment, and evidence of organ failure.

**REFERENCES:**

1. Meagher DJ, Moran M, Raju B, Gibbons D, Donnelly S, Saunders J, Trzepacz PT (2007): Phenomenology of 100 con secutive adult cases of delirium. Br J Psychiatry 190:135-41.
2. Trzepacz PT, Meagher DJ. Neuropsychiatric Aspects of Delirium, Chapter 14 in American Psychiatric Publishing Textbook of Neuropsychiatry, edited by Yudofsky S, Hales RE, 5th edition, American Psychiatric Publishing, Inc,, Wash ington, DC, 2007.

**NR5-050**

## TESTING THE PREDICTIVE ABILITY OF A NEW MOTOR-BASED SUBTYPING SCHEME FOR DELIRIUM

*David J Meagher, M.D. University of Limerick Medical School Ireland, LimerickIreland, Republic of xx, Leonard M, M.D., Donnelly S, M.D., Conroy M, M.D., Trzepacz PT, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognise the usefulness of a new approch to clinical subtyping of delirium that identifies patient subgroups that have clinically meaningful differences.

**SUMMARY:**

Introduction”: Delirium is a complex and highly heterogenous neuropsychiatric syndrome. Efforts to identify clinically-relevant subtypes have been hampered by problems with definition and inconsistent methodology. We previously developed a new motor-based scheme based on previous methods but that emphasizes pure motoric features that are relatively specific to delirium when compared with non-delirious controls. We compared clinical profile in patients with motor subtypes defined by this new scheme. Method: Consecutive cases of DSM-IV delirium (n=89) occurring in a palliative care setting were assessed with the DRS-R98, MDAS, and CTD and allocated to motor subtypes according to the new scheme. Subtypes were compared in relation to delirium severity, non-motor symptoms, reversibility, survival time and medication exposure. Results: Patients with mixed motoric subtype had more severe delirium in relation to total scores on the DRS-R98, CTD and MDAS ($p<0.001$). Of specific DRS-R98 symptoms, mixed subtype patients had greater symptom fluctuation ($p=0.01$),disturbance of sleep-wake cycle ($p<0.001$), and disorientation ($p<0.001$). Exposure to opioids, benzodiazepines, corticosteroids and antipsychotics (measured in dose equivalents) was similar acroos subtypes but a trend towards greater use of benzodaizepines ($p=0.06$) and significantly greater use of antipsychotics ($p<0.001$) in patients with mixed motoric subtype. Patients with relative hyperactivity had a trend ($p=0.1$) towards longer survival time and had significantly more reversible delirium ($p<0.01$) that was of shorter duration ($p<0.01$). Conclusions: The new subtyping scheme identified patient subgroups that different significantly in relation to severity of non-motor symptoms, treatment exposure, and outcome. Further study in non-palliative care settings is warranted.

**REFERENCES:**

1. Meagher D, Moran M, Raju B, Gibbons D, Donnelly S, Saun ders J, Trzepacz P. A new data-based motor subtyping scheme for delirium. J Neuropsychiatry Clin Neurosci (in press).
2. Meagher D, Moran M, Raju B, Gibbons D, Donnelly S, Saun ders J, Trzepacz P. Motor Symptoms in 100 Cases of Deliri um vs. Controls: Comparison of Subtyping Methods. Psycho somatics (in press).

**NR5-051**

## RELIABILITY OF THE DELIRIUM RISK ASSESSMENT TOOL IN A COMMUNITY HOSPITAL

*Farhan Aslam, M.B.B.S Shifa International Hospital, sector F11,*

*Islamabad, Pakistan (west) 46000, Dr Attiya Haque*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to devise a screening tool for the assessment of risk of delirium upon hospital admission.

**SUMMARY:**

Introduction:
Delirium is a common, serious and potentially preventable cause of morbidity and mortality in hospitalized patients. Inouye et al reported a decrease in the incidence of delirium from 15 to 9.9% with their multi-interventional strategy in the controlled clinical trials. We devised a screening tool for the assessment of risk of delirium upon hospital admission. The tool included acute/ chronic confusion, limited mobility, impaired vision, impaired hearing, dehydration, interrupted sleep for more than 3 days, history of falls and at risk medications.
Methods:
An observational study was conducted. Two independent assessments were done at the time of admission using the same tool by the admitting doctor and the admission nurse. Data collected included risk scores and demographic data. Statistical calculations were done to assess the inter-operator agreement using kappa-statistic and Spearman rank correlation test.
Results:
The Spearman correlation was calculated as 0.684, which suggest that overall scores were similar. However kappa statistics of the individual item showed poor agreement for dehydration, vision impairment and sleep deprivation and fair agreement for mobility and history of falls.
Conclusion:
The Spearman correlation was calculated as 0.684, which suggest that overall scores were similar. However kappa statistics of the individual item showed poor agreement for dehydration, vision impairment and sleep deprivation and fair agreement for mobility and history of falls.

**REFERENCES:**

see text

**NR5-052**

## THE EVOLUTION OF THE ALZHEIMER'S DISEASE OCCURRENCE IN A GEOGRAPHICAL AREA. ETHIOPATHOGENIC RELEVANCY?

*Gavril Cornutiu, B.Ph. Clinica de PsihiatrieLouis Pasteur street, no 26, Oradea, Romania 410540, A. Fordon M.D., I. Olariu, M. Sferle, Oana Cornutiu*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand
etiological problems of Alzheimer Disease.

**SUMMARY:**

Hypothesis: The booming of the occurrence of Alzheimer disease in the last 25 years is well known. Objective: to verify the hypothesis in a county in northwest Romania (600,246 inhabitants in 2002). The method has been passive. The data were gathered form medical documents. The diagnosis was established according to ICD-X-R. The parameters of interest were: the annual number of new cases, sex, urban/rural ratio, general psychiatric hereditary charge. In terms of personal records: hospitalization, for depressive states, surgery with general anesthesia, toxic abuse, skull trauma, SNC infections, hysterectomies, associated chronic diseases. Diabetes mellitus acut and chronic psycho trauma. The period of time was 01.01.1980-31.12.2006 (27 years).
Results: Out of the 18 parameters of interest, with the exception of occurrence, none have suffered statistically significant changes and were stable within the 27 years. Yet the occurrence has risen dramatically between 1994 and1995 from an average of 10.7 cases (1.78)annually until 1994 to 19.6 (3.26) cases annually in 1994. Discussions and conclusions: The significant risk factors in this lot, were the factors which genetically and ontogenically affect the SNC but they did not vary significantly within the 27 years. There is no statistical difference between the existential comfort and the factors of psycho trauma. Therefore none of the biological, medical and existential factors analyzed here can explain the 1.83 fold increase of the Alzheimer occurrence within 27 years. Yet, there is an explanation.

**REFERENCES:**

1. Serge Gauthier Clinical Dignosis and Management of Alzheimer's Disease; second edition. Martin Dunitz 1999.
2. W.H.O.; The World Atlas of Ageing; Kobe; Center of Health Develpoment, 1998.

**NR5-053**

## SWAP: THE SAFETY AND TOLERABILITY OF SWITCHING ORAL DONEPEZIL TO RIVASTIGMINE PATCH IN ALZHEIMER'S DISEASE (AD)

*Gina Eagle, M.D. Novartis Pharmaceuticals One Health Plaza Building 701, 6th floor, East Hanover, NJ 07936, Gustavo Alva, MD, Martin Farlow, MD, Carl Sadowsky, MD*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should understand that switching from donepezil oral to rivastigmine patch immediately, or after a washout period appears to be very well tolerated in both patients on or off memantine combination therapy.

**SUMMARY:**

Introduction: Switching medications is common for many reasons, particularly safety/tolerability issues. The SWAP study (SWitch from Aricept to Patch) evaluates the safety/tolerability of two drug switching paradigms in AD: switching from donepezil to rivastigmine patch immediately versus after a 7-day washout. This study also evaluates the safety/tolerability of rivastigmine patch-memantine therapy.
Hypothesis: Switching from donepezil to rivastigmine patch is safe and tolerable with no statistical differences in adverse event rates between immediate switch and a 7-day wash out.
Methods: A 5-week, open-label study with a 20-week extension. Patients were randomized to an immediate switch from donepezil (5–10mg/day) to 5cm2 patch, or a switch following 7-day withdrawal of donepezil. Patients entering the study on concomitant memantine continued treatment. Primary evaluations included safety and tolerability.
Results: 262 AD patients were enrolled/243 completed. Primary reason for discontinuation was AE and withdrawal of consent (both 2.7%). Mean age was 78 years, with 58% female and 87% Caucasian. All received stable donepezil for =6 months, with 50% on stable memantine combination treatment. In

patients randomized to immediate switch the total AEs were 34 (26%) compared to delayed switch with 42 (33%). Most common AEs in the immediate switch group were nausea (5 patients 3.8%), decreased appetite (4 patients 2.3%) and fatigue (3 patients 2.3%). For those in the delayed switch group; constipation (5 patients 3.9%), agitation (4 patients 3.1%), and confused state (3 patients 2.4%). All other AEs in both groups were random and transient (occurred in <1.6% of patients). Conclusion: The results suggest that when switching from donepezil or donepezil-memantine combination therapy to rivastigmine patch there is little difference in an immediate switch or delayed switch with both regimens appearing very well tolerated.

**REFERENCES:**


1. Cummings J, Winblad B: A rivastigmine patch for the treat ment of Alzheimer's disease and Parkinson's disease demen tia. Expert Rev Neurother. 2007 Nov;7(11):1457-63
2. Figiel G, Sadowsky C.: A systematic review of the effective ness of rivastigmine for the treatment of behavioral distur bances in dementia and other neurological disorders. Curr Med Res Opin. Curr Med Res Opin 2008;1:157–166


**NR5-054**

## COMPARATIVE SAFETY AND TOLERABILITY OF ALZHEIMER'S DISEASE TREATMENTS


*Gustavo Alva, M.D. ATP Clinical Research3151 Airway Avenue, Suite T-3, Costa MesaCA 92626, Jeffrey L. Cummings, M.D., E. Malca Resnick, Ph.D., Michael Tocco, Ph.D., and Stephen M. Graham, Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to identify the differences in safety and tolerability between the four drugs approved for the treatment of Alzheimer's disease.

**SUMMARY:**


Background: In the US, mild to moderate Alzheimer's disease (AD) is treated with cholinesterase inhibitors (ChEIs), while moderate to severe AD is treated with the NMDA receptor antagonist memantine and the ChEI donepezil. This study reviews the safety and tolerability of the ChEIs and memantine, based upon data found in prescribing information (PI) documents. Methods: PI documents for donepezil, galantamine, rivastigmine, and memantine from American manufacturers' websites were accessed in July 2007, and adverse events (AEs) data were collected. The odds of each AE occurring in the active vs. placebo group were compared by means of odds ratios (OR). Safety data are presented without statistical analysis. Results: Odds ratio analysis of AEs experienced by >5% patients treated with the active drug suggests that, compared to placebo, donepezil was associated with significantly higher odds of diarrhea, muscle cramps, and nausea for patients with mild to moderate AD, and of anorexia, diarrhea, ecchymosis, nausea, and vomiting, for patients with severe AD. Galantamine was associated with significant OR for anorexia, dizziness, headache, nausea, vomiting, and weight decrease. Orally delivered rivastigmine had significant OR for abdominal pain, accident, anorexia, asthenia, depression, diarrhea, dizziness, fatigue, headache, nausea, and vomiting, but a recent study suggests improved tolerability with transdermal rivastigmine administration. For memantine, significant OR was found for headache. Conclusions: All approved AD treatments are safe and tolerable, including the co-administration of memantine and donepezil. It is difficult to compare drugs studied in different trials, but available data suggest that gastrointestinal AEs are typical of the cholinomimetics, but may be reduced by transdermal administration. Memantine provides a distinct tolerability profile. This study and its presentation were sponsored by Forest Laboratories, Inc.


**REFERENCES:**


1. Birks J. Cholinesterase inhibitors for Alzheimer's disease. Cochrane Database Syst Rev. 2006:CD005593.
2. McShane R et al. Memantine for dementia. Cochrane Data base Syst Rev. 2006:CD003154.


**NR5-055**

## EFFECTS OF RIVASTIGMINE IN ALZHEIMER'S DISEASE PATIENTS WITH AND WITHOUT HALLUCINATIONS


*Jeffrey L Cummings, M.D. UCLA Alzheimer's Center10911 Weyburn Ave., Suite 200, Los Angeles, CA 90095-7226, Murat Emre, M.D., Sibel Tekin, M.D., Nalina Dronamraju, Ph.D., Roger Lane, M.D., M.P.H.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize patients likely to obtain greater benefits from cholinesterase inhibitor therapy.

**SUMMARY:**


Introduction: Hallucinations are common in Alzheimer's disease (AD), and may indicate greater cortical cholinergic deficits. Rivastigmine, a dual inhibitor of acetylcholinesterase and butyrylcholinesterase, has shown particularly strong treatment effects versus placebo in Lewy body dementia and in Parkinson's disease dementia patients with hallucinations [1, 2]. Methods: Data were pooled from two randomized, double-blind, placebo-controlled, 6-month rivastigmine mild-to-moderate AD trials. Rivastigmine capsules were titrated up to a maximum of 12 mg/day. Co-primary efficacy parameters were Alzheimer Disease Assessment Scale-cognitive subscale (ADAS-cog) and Clinician's Interview-Based Impression of Change plus Caregiver Input (CIBIC-plus). The presence of any hallucinations at baseline was established using the BEHAVE-AD component of the CIBIC-plus. Efficacy data were analyzed for two subpopulations: those with and those without hallucinations at baseline. Results: 462 patients provided BEHAVE-AD data, of whom 106 (23%) had hallucinations at baseline. In patients with hallucinations, a mean rivastigmine–placebo difference of 4.2 points ($p < 0.001$) on the ADAS-cog was reported at 6 months, while non-hallucinators showed a treatment difference of 2.2 points ($p < 0.001$). In hallucinators, a significant rivastigmine–placebo difference was seen on CIBIC-plus at 6 months ($p < 0.001$) with 36% versus 10% improving and 37% versus 63% worsening. Non-hallucinators showed a modest treatment difference with 27% versus 19% improving and 34% versus 43% worsening at 6 months ($p = 0.004$). Conclusion: Hallucinations predicted stronger treatment responses to oral rivastigmine. A novel rivastigmine transdermal patch has recently become available, and may allow more patients to reach therapeutic doses, and provide easier access to sustained inhibition of acetylcholinesterase and

butyrylcholinesterase. This study was funded by Novartis.

**REFERENCES:**


1. McKeith IG, Wesnes KA, Perry E, Ferrara R: Hallucinations predict attentional improvements with rivastigmine in de mentia with Lewy bodies. Dement Geriatr Cogn Disord 2004; 18:94-100.
2. Burn D, Emre M, McKeith I, De Deyn PP, Aarsland D, Hsu C, Lane R: Effects of rivastigmine in patients with and with out visual hallucinations in dementia associated with Parkin son's disease. Mov Disord 2006; 21:1899-1907.


**NR5-056**

## NEUROCOGNITIVE CHARACTERISTICS OF THE DEMENTIA WWITH TRAUMATIC BRAIN INJURY


*Jin-Sung Kim, M.D. Daemyung Dong Nambu, DaeguSouth Korea 705-717, An-Na Kim, M.D., Wan-Seok Seo, M.D., Yeong-Hwan Noh, M.D., Sang-Jun Park, M.D., Dai-Seg Bai, Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand the neurocognitive characteristics of dementia with traumatic brain injury.

**SUMMARY:**


The purpose of this study was to assess the neurocognitive characteristics of the dementia with traumatic brain injury(TBI). Subject groups were composed of the dementia with traumatic brain injury patients, 117(26.0%), alzheimer's disease patients 80(17.8%), psychiatric patients 81(18.0%), brain disease patients without trauma 172(38.2%). All of patients were evaluated using strictly standardized neuropsychological test in Korea, including the attention, language and related functions, visuospatial functions, verbal and visual memory, frontal/executive function and the depression, ADL and CDR. In MMSE, TBI group showed lowest performance than other group with statistical significance. And TBI groups showed lowest performances with statistical significance in the attention, language and related functions, visuospatial functions. In assessment of memory ability, TBI group showed lower ability with statistical significance than other groups, but in Rey Complex Figure Test, TBI group did not showed difference with statistical significance to other group comparing verbal memory. In frontal/executive function assessment, TBI had showed lowest performance than other groups with statistical significance, but did not show statistically significant difference each other in cognitive inhibition like Stroop test, except for psychiatric patients group(lowest performance with statistically significance). In Depression, Barthel ADL and CDR showed lowest performance than other groups, also. Education level had affect on the neurocognitive ability in TBI group with statistical significance, persistently.


**REFERENCES:**


1. Raport MJ, Feinstein A: Outcome follwing traumatic injury in the elderly; a critical review. Brain Inj 14: 749-61, 2004.
2. ellinger KA: Head injury and dementia. Current Opinion in Neurology 17: 719-23, 2004.


**NR5-057**

## MEMANTINE PREVENTS WORSENING OF COMMUNICATION ABILITIES IN PATIENTS WITH MODERATE TO SEVERE ALZHEIMER'S DISEASE: MEAN CHANGE- AND RESPONDER ANALYSIS


*Pierre N Tariot, M.D. Banner Alzheimer's Institute901 E. Willetta Street, PhoenixAZ 85006, Judith Saxton, Ph.D., Michael Tocco, Ph.D. (presenting), Robert K. Hofbauer, Ph.D., E. Malca Resnick, Ph.D. , and Stephen M. Graham, Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the potential benefits of memantine treatment on verbal and functional communication in patients with moderate to severe Alzheimer's disease.

**SUMMARY:**


Objective: Memantine is approved for the treatment of moderate to severe Alzheimer's disease (AD). In a 24-week trial of memantine in donepezil-treated patients with moderate to severe AD, the memantine-donepezil group (n=202) significantly outperformed the placebo-donepezil group (n=201) on all outcome measures, including those assessing cognition (SIB), function (ADCS-ADL19), and behavior (NPI and BGP). In this post hoc analysis, the effects of memantine on verbal and functional communication were evaluated using the language items from the SIB and the functional communication items from the ADCS-ADL19 and BGP.

Methods: Selected SIB language items were used to create subscales of Naming, Reading/Writing, and Comprehension/ Repetition/Discourse. In addition, a Functional Communication score was calculated using several ADCS-ADL19 and BGP items. For each post hoc measure, the groups were compared in terms of (1) the mean change from baseline to weeks 12 (SIB subscales) and 24 (SIB subscales, Functional Communication score), and (2) the numbers of patients who demonstrated a decline from baseline at weeks 12, 24 and overall (all measures).

Results: At week 24, patients receiving memantine (20 mg/ day) significantly outperformed patients taking placebo on the Naming subscale (OC: P=0.009; LOCF: P=0.03; MMRM: P=0.02), and on the Functional Communication score (OC: P=0.004; LOCF: P=0.02; MMRM: P=0.004). Overall, there were significantly fewer memantine-treated patients than placebo-treated patients who declined on the SIB subscales of Naming (P=0.01) and Reading/Writing (P=0.02), as well as on the Functional Communication score (P=0.009).

Conclusions: In patients with moderate to severe AD, memantine-donepezil treatment was associated with statistically significant benefits in verbal and functional communication abilities, compared to treatment with placebo-donepezil.



This study and its presentation were sponsored by Forest Laboratories, Inc.


**REFERENCES:**


1. Tariot PN et al: Memantine treatment in patients with moder ate to severe Alzheimer disease already receiving donepezil: a randomized controlled trial. JAMA. 2004;291:317-24.
2. Schmitt FA et al: Cognitive response to memantine in moder ate to severe Alzheimer disease patients already receiving donepezil: an exploratory reanalysis. Alzheimer Dis Assoc Disord. 2006;20:255-62.


**NR5-058**

## CHANGES IN FOLATE, VITAMIN B12, AND HOMOCYSTEINE ASSOCIATED WITH INCIDENT DEMEN-

**TIA**

*Sung-Wan Kim, M.D. Dept. of Psychiatry, Chonnam National University Hospital, 8 Hak-dong, Dong-gu, Gwang-ju, South Korea 501-757, Jin-Sang Yoon, M.D., Il-Seon Shin, M.D., Jae-Min Kim, M.D., Joon-An Yoo, M.D., Jeong-Gon, Kim, M.D., Tak Youn, M.D., Su-Jin Yang, M.D., Yo-Han Lee, M.D., Woong-Jang Kim, M.D., Jeong-Hoon Lee, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize that changes in folate, vitamin B12 and homocysteine is associated with incident dementia.

**SUMMARY:**

Objectives: Prospective findings have not been consistent for folate, vitamin B12 and homocysteine concentrations as predictors of dementia. This study aimed to investigate both baseline concentrations of folate, vitamin B12 and homocysteine and changes in these concentrations as predictors / correlates of incident dementia. Methods: Of 625 elders without dementia at baseline, 518 (83%) were followed over a 2.4 year period and were clinically assessed for incident dementia and Alzheimer's disease (AD). Serum concentrations of folate, vitamin B12 and homocysteine were measured at both baseline and follow-up assessments. Covariates included age, sex, education, disability, depression, alcohol consumption, physical activity, vascular risk factors, serum creatinine concentration, vitamin intake, and weight change. Results: Only baseline lower folate concentrations predicted incident dementia. The onset of dementia was significantly associated with a relative decline in folate and vitamin B12 concentrations and an increase in homocysteine concentrations over the follow-up period. These associations were reduced following adjustment for weight change over the same period. Conclusions: Incident dementia is more strongly associated with changes in folate, vitamin B12 and homocysteine than with previous concentrations. These changes might be linked with other somatic manifestations of early dementia, such as weight loss.

**REFERENCES:**

1. Köseoglu E, Karaman Y : Relations between homocysteine, folate and vitamin B12 in vascular dementia and in Alzheimer disease. Clin Biochem 2007;40:859-63.
2. Boldyrev AA, Johnson P. Homocysteine and its deriva tives as possible modulators of neuronal and non-neuronal cell glutamate receptors in Alzheimer's disease. J Alzheimers Dis 2007;11:219-28.

**NR5-059**

**POLYMORPHISMS OF THE MCP-1 AND IL-10 GENES AND MOOD DISORDERS: AN ASSOCIATION STUDY**

*A. Carlo Altamura, M.D. Fondazione IRCCS Ospedale Maggiore Policlinico, Mangiagalli e Regina Elena, Department of Psychiatry, University of Milan, Milano, Italy 20122, Emanuela Mundo, M.D., Elisabetta Cattaneo, M.D., Sara Pozzoli, M.D., Beatrice Arosio, M.D., Daria Trabattoni, M.D., Mario Clerici, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to learn more about the role of the MCP-1 and IL-10 genes in conferring susceptibility to some Mood Disorders subtypes.

**SUMMARY:**

Introduction: Increased evidence has suggested that imbalance between pro-inflammatory and anti-inflammatory cytokines might play a role in the pathophysiology of Mood Disorders. Higher levels of pro-inflammatory cytokines have been found in patients affected by Major Depression. Anti-inflammatory cytokines serve to dampen the immune response and their production could be increased during antidepressant treatment. This immune activation characterized a condition called "Sickness Behaviour" defined by symptoms like reduced appetite, weight loss, fatigue, sleep disturbances, motor retardation, cognitive deficts or depressed mood that are usually observed during the course of a Major Depressive Episode. Objective: The primary aim of this study was to investigate the possible association between Major Depressive Disorder (MDD), Bipolar Disorder (BD) and polymorphisms of MCP-1 and IL-10 genes. Methods: The sample studied included 68 outpatients (21 men and 47 women) with *DSM-IV-TR* diagnosis of MDD (N=25), BD I (N=22) or BD II (N=21). All patients gave their written informed consent to participate into the study. Patients with other Axis I disorders, chronic immune or inflammatory diseases or organic mental disorders were excluded. The main demographical and clinical variables were collected for each patient. Genomic DNA was extracted from whole blood and polymorphisms of MCP-1 and IL-10 genes were genotyped with standard procedures. Allelic and genotypic associations were examined (chi-square tests).
Results: A significant association was found between the G Allele of the A-2518G polymorphism of the MCP-1 gene and MDD (?2=6.194; p=0.045); another significant association was found between the AA genotype of G-1082A polymorphism of the IL-10 gene and both MDD and BD II (?2=43.822, p<0.00001). Conclusions: The results from this preliminary study suggest a role of the MCP-1 and IL-10 genes in conferring susceptibility to some Mood Disorders subtypes.

**REFERENCES:**

1. Schiepers OJG, Wichers MC, Maes M: Cytokines and major depression. Prog Neuropsychopharmacol Biol Psychiatry 2005; 29(2):201-217.
2. O'Brien SM, Scully P, Scott LV, Dinan TG: Cytokines pro files in bipolar affective disorder: focus on acutely ill patients. J Affect Disord 2006; 90(2-3):263-267.

**NR5-060**

**ASSOCIATION OF HISTONE DEACETYLASE GENE WITH SCHIZOPHRENIA IN A KOREAN POPULATION**

*Byung-Kuk Lee, M.D. Heogi 1, Dong Dae Moon Gu, Seoul, KoreaKyung-Hee Medical Center, Dept. of Psychiatry., Seoul, Korea 130-702, Jong-Woo Kim, M.D., Tae Kim, M.D., Seo-Kyung Lee, M.D., Ji-Young Song, M.D.,Jong-Woo Paik, M.D., Geon-Ho Bahn, M.D. Su-Chin Moon, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to identify that genes of Histone deacetylase (HDAC) are associated with pathophysiology of schizophrenia.

**SUMMARY:**

Objective: Histone deacetylase (HDAC) is a pivotal enzyme in epigenetic modification or regulatory mechanisms of gene transcription. Based on previous assertions that the

pathophysiology of schizophrenia is associated with epigenetics, we hypothesized that polymorphisms of these genes might be related to schizophrenia.
Method: We recruited 278 patients with schizophrenia and 234 normal healthy controls. Clinical information for the group with schizophrenia was obtained from the Brief Psychiatric Rating Scale (BPRS), Scale for the Assessment of Negative Symptoms (SANS), and the Operational Criteria Checklist (OPCRIT). Three single-nucleotide polymorphisms (SNPs) in HDAC genes were finally selected and statistical analyses performed.
Results: In a case-control analysis, a SNP (rs1063639) of the HDAC4 showed an association with schizophrenia in codominant and dominant models (P = 0.016 and 0.013, respectively). Among the many clinical variables, the age at the onset of schizophrenia was significantly different among the genotype groups of rs1063639
(HDAC4) from the codominant and recessive models (P = 0.019 and 0.0057, respectively), and smoking was associated with rs2530223 (HDAC3) in the codominant and recessive models (P = 0.011 and 0.0028, respectively) in the group with schizophrenia. Other clinical data showed no association with all the SNPs.
Conclusion: Our results suggest that the HDAC gene might play a role in the pathophysiology of schizophrenia in Koreans.
Keywords: Histone deacetylase; Schizophrenia; Case-control study; Single-nucleotide polymorphism
**REFERENCES:**
1. Simonini MV, Camargo LM, Dong E, Maloku E, Veldic M, Costa E, Guidotti A : The benzamide MS-275 is a potent, long-lasting brain region-selective inhibitor of histone deacet ylases. Proc Natl Acad Sci U S A. ; 2006 : Jan 31;103(5):1587-92
2. Costa E, Grayson DR, Mitchell CP, Tremolizzo L, Veldic M, Guidotti A. : GABAergic cortical neuron chromatin as a puta tive target to treat schizophrenia vulnerability. Crit Rev Neu robiol. ; 2003 : 15(2) : 121-42

**NR5-061**

## A CILIARY NEUROTROPHIC FACTOR (CNTF) POLYMORPHISM AFFECTS ILOPERIDONE TREATMENT RESPONSE IN A PHASE III CLINICAL TRIAL

*Christian Lavedan, Ph.D. Vanda Pharmaceuticals Inc., 9605 Medical Center Drive, Rockville, MD 20850, Simona Volpi, Ph.D., Curt D. Wolfgang, Ph.D.*
**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to: 1) Demonstrate understanding of the potential role of the gene encoding ciliary neurotrophic factor (CNTF) in schizophrenia; 2) recognize the manner in which CNTF genotype may alter response to iloperidone and placebo in patients with schizophrenia.
**SUMMARY:**
Introduction: Genetics plays a critical role in disease susceptibility and treatment response. The rs1800169 polymorphism in the gene encoding ciliary neurotrophic factor (CNTF) is due to a G to A transition. The null allele (A) also referred to as FS63Ter results in the expression of an inactive form that may increase risk for schizophrenia. A prior study analysis suggested that response to iloperidone, a mixed D2/5-HT2 antagonist being developed for the treatment of schizophrenia, may be better in homozygotes for the rs1800169wild-type allele (G/G) than in non-G/G patients who carry at least one FS63Ter null allele, either heterozygotes (G/A) or homozygotes (A/A). This study prospectively evaluated CNTF rs1800169 genotype effects on response to iloperidone. Methods: A 28-day, phase III double-blind study randomized in patients with schizophrenia to iloperidone 12 mg bid, ziprasidone 80 mg bid, or placebo. Response measures included PANSS, BPRS, and CGI. A total of 417 patients (279 iloperidone; 138 placebo) were genotyped for rs1800169. Efficacy evaluation of iloperidone in rs1800169 (G/G) was a prospective step down primary endpoint. Results: Mean changes on all measures with iloperidone were similar in G/G and non-G/G patients, but non-G/G patients had better placebo response than G/G patients on all measures. When compared with placebo, iloperidone was associated with greater improvement in G/G than non-G/G patients on all measures. Conclusions: iloperidone was significantly more effective than placebo in rs1800169 G/G patients on all measures. CNTF rs1800169 non-G/G patients responded similarly to iloperidone and placebo. This study confirmed findings from a previous retrospective pharmacogenetic study of iloperidone. This is the first clinical trial report of CNTF polymorphism effect on schizophrenia treatment response. Markers such as CNTF may allow individualized treatment of schizophrenia. Vanda Pharmaceuticals sponsored this study.
**REFERENCES:**
1. Kalkman HO, Feuerbach D, Lotscher E, Schoeffter P. Func tional characterization of the novel antipsychotic iloperidone at human D2, D3, alpha 2C, 5-HT6, and 5-HT1A receptors. Life Sci 2003; 73:1151-1159.
2. Lin PY, Tsai G. Meta-analyses of the association between ge netic polymorphisms of neurotrophic factors and schizophre nia. Schizophr Res 2004; 71:353-360.

**NR5-062**

## ADHD AND ATTENTIONAL DEFICITS IN CHILDREN WITH 22Q11.2 DELETION SYNDROME

*Eva W Chow, M.D. Centre for Addiction & Mental Health1001 Queen Street West, Unit 4, TorontoCanada M6J 1H4, Andrew Ho, B.Sc., Sylvie Langlois, M.D., F.R.C.P.C., Anne Bassett, M.D., FRCPC, Donald Young, Ph.D., Ed.D.*
**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to gain an improved understanding of the prevelance and features of attentional disorders found in children with 22q11.2 Deletion Syndrome, also known as velocardiofacial syndrome.
**SUMMARY:**
22q11.2 Deletion Syndrome (22qDS) is a genetic syndrome associated with intellectual disabilities and high rates of attention deficit/hyperactivity disorders (ADHD) in childhood and schizophrenia (SZ) in adulthood. Attentional impairments are commonly found in youths at risk of schizophrenia but performance on tests of attention are not more impaired in 22qDS adults with SZ than in 22qDS adults without psychosis (Chow et al, 2006). A recent study reported that ADHD in 22qDS children differ from idiopathic ADHD on the frequency

of individual ADHD symptoms (Antsel et al, 2007) but did not measure inattention using cognitive tests. The current study compared the prevalence of ADHD and the performance on standardized tests of attention -- Digit Span (DS), Trails A (TA), Connors' continuous performance test (CPT) – in 29 22qDS children (14 M 15 F; mean age=10.2 years SD=1.9) and 12 of their unaffected siblings (5 M 7 F; mean age=10.9 years SD=1.5). We found similar high rates of ADHD between the two groups of subjects (33% in 22qDS vs. 25% in siblings) but more severe impairments in attention in 22qDS subjects as a group. This is mainly due to similarly moderate impairment in performance on tests of attention between 22qDS children with or without a diagnosis of ADHD. Results from this study support the high rates of ADHD and attentional problems previously reported in 22qDS children, but are also consistent with adult literature that attentional problems are prevalent in all individuals with 22qDS.

**REFERENCES:**


1. Chow EWC, Watson M, Young DA, Bassett AS (2006). Neu rocognitive profile in 22q11 deletion syndrome and schizo phrenia. Schizophr Res 87:270-8.
2. Antshel KM, Faraone SV, Fremont W, Monuteaux MC, Kates WR, Doyle A, Mick E, Biederman J (2007). Comparing ADHD in velocardiofacial syndrome to idiopathic ADHD: a preliminary study. J Atten Disord 11:64-73.


**NR5-063**

## IDENTIFICATION OF GENETIC MARKERS ASSOCIATED WITH EFFICACY OF ILOPERIDONE


*Louis Licamele, M.S. Vanda Pharmaceuticals Inc., 9605 Medical Center Drive, Rockville, MD 20850, Simona Volpi, Ph.D., C.M. Heaton, Kendra Mack, M.S., Rebecca Lannan, M.S., Jennifer B. Hamilton, M.S., Curt D. Wolfgang, Ph.D., Christian Lavedan, Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) recognize the potential benefits of pharmacogenomic analysis in individualizing treatment for patients with schizophrenia; and 2) demonstrate knowledge of SNPs predictive of response to iloperidone in patients with schizophrenia.

**SUMMARY:**


Introduction: Pharmacogenomic analysis provides the opportunity to discover genetic markers that predict therapeutic response. The objective of this study was to identify polymorphisms associated with response to iloperidone, a mixed D2/5-HT2 receptor antagonist with clinical efficacy for a broad range of schizophrenia symptoms and reduced potential for extrapyramidal and metabolic side effects. Methods: A whole genome association study (WGAS) was conducted in a randomized, double-blind, placebo- and ziprasidone-controlled, multicenter, phase 3 clinical trial that evaluated iloperidone 12 mg bid for 28 days in patients with acute exacerbations of schizophrenia. Genetic association with the change in the Positive and Negative Syndrome Scale total score (PANSS-T) between baseline and day 28 was tested for 334,563 single nucleotide polymorphisms (SNPs) in 407 patients. Results: SNPs associated with iloperidone efficacy were identified within the neuronal PAS domain protein 3 gene (NPAS3), close to a translocation breakpoint site previously observed in a family with schizophrenia. Five other loci were identified that include the XK, Kell blood group complex subunit-related family, member 4 gene (XKR4), the tenascin-R gene (TNR), the glutamate receptor, ionotropic, AMPA 4 gene (GRIA4), the glial cell line-derived neurotrophic factor receptor-alpha2 gene (GFRA2), and the NUDT9P1 pseudogene located in the chromosomal region of the serotonin receptor 7 gene (HTR7). Conclusions: These results demonstrate the potential of genetic markers to optimize the benefit-risk ratio for iloperidone therapy in individual patients. Vanda Pharmaceuticals sponsored this study.


**REFERENCES:**


1. Kalkman HO, Feuerbach D, Lotscher E, Schoeffter P. Func tional characterization of the novel antipsychotic iloperidone at human D2, D3, alpha 2C, 5-HT6, and 5-HT1A receptors. Life Sci 2003;73:1151-1159.
2. Nnadi CU, Malhotra AK. Individualizing antipsychotic drug therapy in schizophrenia: the promise of pharmacogenetics. Curr Psychiatry Rep 2007;9:313-318.


**NR5-064**

## ATTITUDES TOWARDS GENETICS AND PREDICTIVE TESTING FOR BIPOLAR DISORDER IN AFRICAN AMERICAN PATIENTS


*Mansoor Malik, M.D. Howard University Hospital,2401 Georgia Ave, NW, Washington, DC, 20060, Maria Mananita Hipolito, M.D., William B. Lawson M.D.,Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session the participant should be able to review the main findings in research exploring the attitudes towards genetics in minority populations. Participants should be able to recognize the impotence of attitudinal differences in genetics research.

**SUMMARY:**


As part of a larger "Genetics of Bipolar Disorder" study, bipolar probands and their relatives were asked a series of questions about their perception of genetic risk associated with Bipolar Disorder. They were asked a variety of questions ranging from their perception of genetic contribution in Bipolar Disorder to the risk and benefits of genetic testing. A total of 40 probands and their first degree relatives were interviewed by the "Questionnaire of Genetic Risk". All of the participants identified themselves as African Americans. Most of the participants identified genetic risk as an etiological factor but displayed negative attitude towards genetic testing citing difficulty in getting medical insurance, housing or other social consequences of having a mental disorder. These results support the existing evidence that patients form minority background view medical establishment with suspicion.


**REFERENCES:**


1. Smith LB, Sapers B, Reus VI et al, Attitudes towards bipolar disorder and predictive genetic testing among patients and providers, J Med Genet. 1996 Jul; 33(7): 544-9
2. Meiser B, Mitchell P, McGirr H, Implications of genetic risk information in families with a high density of bipolar disor der: an exploratory study, Social Sciences and Medicine, 60; 2005, 109-118

**NR5-065**

## AN OPEN-LABEL TRIAL OF ARIPIPRAZOLE IN THE TREATMENT OF AUTISM AND ITS CORRELATION TO AND SEROTONIN TRANSPORTER PROMOTER POLYMORPHISMS

*Meera Narasimhan, M.D. Department of Neuropsychiatry and BehavioralScience, 3555 Harden Street Extension,, ColumbiaSC 29203, Travis Bruce, M.D., Shilpa Srinivasan, M.D., Ashwin Patkar, M.D., Prakash Masand, M.D., Joan Amado, M.S.W., Frank Ballard, M.A., Anna Gordon, L.B.S.W., Maria Butkus*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to evaluate the correlation of response to aripiprazole and the effects of serotonin transporter gene promoter polymorphism (5-HTTPLR) as a predictor of treatment response.

**SUMMARY:**

Background: Autistic disorder (AD) is the fastest-growing developmental disability today. Research is currently under way to identify possible genes todevelop appropriate treatments. Genetic association studies linking serotonin transporter and psychotropic response in AD have yielded mixed results. Choice of a psychotropic agents that is efficacious and safe for treating behavioral aspects of autism would optimize treatment outcomes in autism. Aripiprazole has a unique pharmacological profile as a partial D2 receptor agonist with partial agonist activity at serotonin 5HT1A receptors and antagonist effects of 5-HT2A receptors and has a favorable side-effect profile. Clinical experience with this agent in autism has shown some promise in autism. Methods: A 12 week IRB approved study assessing the efficacy of aripiprazole for symptoms of AD was conducted at the University of South Carolina. Subjects between the ages of 6-17 years (n=120) with a DSM-IV TR diagnosis of AD confirmed by the Autism Diagnostic Inventory (ADI-R) were included. Blood was also drawn to obtain 5-HT transporter polymorphisms. Outcome measure included: Aberrant Behavior Checklist (ABC), the SNAP-IV, the Social Skills Questionnaire (SSQ), and the Repetitive Behavior Questionnaire (RBS)), CGI (S) & (I) severity and improvement were completed by the parents and research psychiatrist respectively. Subjects were assessed every two weeks for the duration of the study. Results: Responders did demonstrate an improvement in irritability, lethargy, stereotypy, hyperactivity, compulsive subscale on the ABC and RBS Scales. CGI (S) and CGI (I) did reach statistical significance ($p<0.019$ and $P< 0.007$ respectively). The 5HTTPLR (LS) genotype patients showed a moderate positive correlation between CGI-S (.209) and the ABC (.311) scores. Also, these patients tended to have lower scores in their CGI-I (-.258) with little or no correlation to the RBS outcomes.

**REFERENCES:**

1. McDougle CJ, Erickson CA, Stigler KA, Posey DJ.Neurochemistry in the pathophysiology of autism. J Clin Psychiatry. 2005;66 Suppl 10:9-18. Review.
2. Solomon M, Hessl D, Chiu S, Hagerman R, Hendren R.A genetic etiology of pervasive developmental disorder guides treatment.Am J Psychiatry. 2007 Apr;164(4):575-80. No abstract available.

**NR5-066**

## SPECIFICITY OF GENETIC MARKERS ASSOCIATED WITH ILOPERIDONE ENHANCED EFFICACY RESPONSE IN PATIENTS WITH SCHIZOPHRENIA

*Simona Volpi, Ph.D. Vanda Pharmaceuticals Inc., 9605 Medical Center Drive, Rockville, MD 20850, Louis Licamele, M.S., Kendra Mack, M.S., C.M. Heaton, Jennifer B. Hamilton, M.S., Rebecca Lannan, M.S., Curt D. Wolfgang, Ph.D., Christian Lavedan, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to: 1) demonstrate understanding of SNPs predictive of an enhanced response to iloperidone in patients with schizophrenia; 2) recognize that combined presence of favorable genotypes can increase the power of predictions of the response to iloperidone; and 3) Recognize that SNPs predictive of a response to iloperidone do not necessarily predict response to other antipsychotics.

**SUMMARY:**

Introduction: In a clinical study of the efficacy of iloperidone, a new antipsychotic developed for the treatment of schizophrenia with an improved profile for extrapyramidal symptoms and metabolic side effects, 6 single nucleotide polymorphisms (SNPs) were shown to be associated with efficacy. This study quantified the diagnostic value of these SNPs for iloperidone treatment and their effect on response to an active comparator and placebo. Methods: A pharmacogenomic study was conducted in a randomized, double-blind, multicenter, phase III clinical trial evaluating iloperidone (24 mg/day), ziprasidone (160 mg/day), and placebo for 28 days in subjects with schizophrenia. The primary efficacy variable was change from baseline in the Positive and Negative Syndrome Scale Total (PANSS-T) score. DNA samples (iloperidone 218; ziprasidone 103; placebo 105) were genotyped for >500,000 SNPs. Odds and likelihood ratios, specificity, sensitivity, and predictive values were calculated. Results: The 6 SNPs associated with iloperidone response showed odds ratios ranging from 2.43 to 3.57 for >=20% improvement in PANSS-T score. The highest specificity and positive predictive value were observed with rs11851892 (NPAS3), while the highest sensitivity and negative predictive value were seen with rs9643483 (XKR4). None of the 6 SNPs were significantly associated with response to ziprasidone. The combination of 6 markers defined several groups of patients with different probability of response to iloperidone. Close to 80% of the patients with the optimal genotype combination (27% of all patients) showed a >=20% improvement in PANSS-T score. Conclusions: This study shows that genetic markers could predict an enhanced response to iloperidone. These findings support the application of pharmacogenomics to differentiate medication options and improve individualized treatments for schizophrenia. Vanda Pharmaceuticals sponsored this study.

**REFERENCES:**

1. Kalkman HO, Feuerbach D, Lotscher E, Schoeffter P. Func tional characterization of the novel antipsychotic iloperidone at human D2, D3, alpha 2C, 5-HT6, and 5-HT1A receptors. Life Sci 2003;73:1151-1159.
2. Nnadi CU, Malhotra AK. Individualizing antipsychotic drug therapy in schizophrenia: the promise of pharmacogenetics.

Curr Psychiatry Rep 2007;9:313-318.

**NR5-067**

## LINKAGE ANALYSIS AND MUTATION ANALYSIS IN PAROXYSMAL KINESIGENIC CHOREOATETOSIS (PKC)

*Taeko K Kikuchi, M.D. Department of Pshychiatry, Nagasaki University Graduate School of Biomedical Sciences, Sakamoto 1-7-1, Nagasaki 852-8102, Japan, Naohiro Kurotaki, M..D., Ph.D., Akira Imamura, M..D., Ph.D., Koh-ichiro Yoshiura, ,M.. D., Ph.D.,Norio Niikawa, M..D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand the genetic mechanism of PKC. Also, they develop the possibility that phenotype of some psychiatric disorders including dissociative disorders may be influenced by neurological factors.

**SUMMARY:**

?Introduction?Paroxysmal kinesigenic choreoathetosis (PKC) is a paroxysmal movement disorder of unknown cause. From the characteristic symptoms, in occasion PKC has been misdiagnosed as dissociative disorders or other psychiatric diseases. Although the family study suggested that PKC is caused by gene disruption and PKC critical region (PKCCR) has been assigned to the pericentromeric region of chromosome 16, the causative gene has not yet been identified. To try to narrow the PKCCR and identify the causative gene, we performed linkage analysis and mutation analysis for candidate genes mapped around the PKCCR.?Methods?We performed linkage and haplotype analysis in seven newly collected families. In addition, we performed PCR-based mutation analysis in 1563 coding exons in 157 genes mapped at the PKCCR of five representative patients. As a next step, we performed real-time, quantitative PCR, using TaqMan probes, of six potential candidate genes in five patients. ?Results?The linkage/haplotype analysis revealed that PKC was assigned to a 24-cM segment between D16S3131 and D16S408, the result confirming the previously defined PKCCR but being unable to narrow it. In the mutation analysis, we detected two nonsynonymous substitutions, of SCNN1G and ITGAL, which were segregated with the disease in each one family. The real-time quantitative PCR analysis did not detect a duplication or a deletion within the six potential candidate genes.?Conclusion and Discussion?We failed to identify any causative mutations that can explain PKC. This may imply that PKC is caused by aberrations other than exoninc mutations. However, there is still possibility for usual exonic mutations in a novel gene not annotated in public databases. A chromosomal rearrangement is another possibility.

**REFERENCES:**

1. Paroxysmal kinesigenic choreoathetosis (PKC): Confirmation of linkage to 16p11-q21 but unsuccessful detection of muta tions among 157 genes at the PKC-critical region in seven PKC families. Kikuchi T, Nomura M, Tomita H, Harada N, Kanai K, Konishi T Yasuda A, Matsuura M, Kato N, Yoshiura K, Niikawa N. Journal of Human Genetics, 22(4):334-341. (2007)
2. Paroxysmal kinesigenic choreoathetosis: From first discovery in 1892 to genetic linkage with benign familial infantile convulsions. Nobumasa Kato, Miyuki Sadamatsu, Taeko Kikuchi, Norio Niikawa, Yukio Fukuyama (2006) Epi lepsy Res 70S: 174-184.

**NR5-068**

## A PROTECTIVE EFFECT OF GAD65 ANTIBODY FROM DIABETES MELLITUS AMONG PEOPLE WITH SCHIZOPHRENIA

*Tsuo-Hung Lan, M.D. 448 Chung-Hwa Road, Yu-Li, Hualien-Taiwan 981, Tsuo-Hung Lan,MD, Ph.D., Hsien-Jane Chiu, MD, Ph.D., El-Wui Loh, PhD, Tsung-Ming Hu, MD, M.Sc., Bo-Jian Wu, MD, M.Sc.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to the association of GAD65 antibody and DM in people with schizophrenia, and its clinical implications.

**SUMMARY:**

Objective: Diabetes Mellitus is more prevalent among people with schizophrenia and is considered as a sequence of both genetic and environmental factors. Positive serum GAD65 antibody has been found in some type II DM in past publications. This study is to explore the possible association between DM and GAD65 antibody among schizophrenic patients.

Method: This is an investigator-initiated, naturalistic study project. Here we enrolled 372 inpatients (282 males and 90 females) meeting DSM-IV criteria for schizophrenia or schizoaffective disorder from one psychiatric hospital in Taiwan. Descriptive data of age, sex, height, body weight, medical or surgical past history, education years, activity level, smoking and the antipsychotics used in the past two years were collected. Psychopathologic assessment was evaluated by using PANSS scale for each subject. DM or pre-diabetes definition is based on the diagnostic criteria suggested by ADA since 1997. Serum GAD65 antibody was measured by using IRMA Anti-GAD(Immunotech)method.

Results: After controlling for sex, age, education years, and PANSS total score, the absolute odds ratio of a positive GAD65 antibody compared to a negative finding is around 0.54 (95% CI :0.30 ~ 0.97, p-value =0.03) to get Diabetes Mellitus by using ordinary logistic regression model.

Conclusion: It is suggested that the protective effect of GAD65 antibody to get away from Diabetes Mellitus among our schizophrenic patients after adjusting their own psychopathologic characteristics. We need more replications to confirm this finding.

**REFERENCES:**

1. Eiji Kawasaki, et al. (1996): Detection of recombinant GAD65 and GAD67 antibodies using a simple radioimmuno assay. Diabetes Research and Clinical Practice 32, 61-69
2. Gaughran F, Howes OD, Chrisman L, Vincent A. Serum glutamic acid decarboxylase 65 antibody levels in people with schizophrenia and their families. Schizophr Res 2005 March 1;73(2-3):379-381.

**NR5-069**

## PREDICTORS OF IMPROVEMENT FOR COGNITIVE REMEDIATION

*Anzalee Khan, M.S. Manhattan Psychiatric CenterDunlap 1516 1 Wards Island Complex, New York, NY 10035, Jean-Pierre Lindenmayer, M.D., Anzalee Khan, M.S., Susan McGurk, PhD, Lisa Hoffman, PhD, Barbara Simon, M.S., Frances Alcantara, B.A., Edith Herrmann, M.S.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to:1) Identify factors that can predict improvement in a Cognitive Remediation Program; 2) Identify treatments for neurocogntive deficits in patients with schizophrenia or schizoaffective disorder; and 3) Provide a list of additional factors that can identify success in Cognitive Remediation.

**SUMMARY:**

Cognitive impairments are core to schizophrenia and related to poor functional outcomes. Cognitive Remediation Therapy (CRT) is designed to improve neurocognitive functions. CRT helps patients by repeated practice of cognitive functions using computer exercises and strategy coaching. CRT also show significant benefits on long-term outcomes with moderate effect sizes. AIMS: 1) To elucidate factors associated with good outcome in CRT; 2) To examine baseline differences for 'Improvers' and 'Non-Improvers.' METHODS: 74 DSM IV schizophrenia or schizoaffective inpatients were enrolled and used COGPACK, a computer software providing practice on a range of cognitive functions. 45 patients received 24 1-hour CRT sessions twice/week and 29 received 36 sessions 3 times/week for 12-weeks along with weekly discussion to facilitate cognitive skills to adaptive functioning. RESULTS: Of 74 patients, 46 were 'Improvers,' 28 were 'Non-improvers', based on greater than or equal to 20% improvement on processing speed and executive functioning. Measures of attention, higher WM scores, higher WRAT–III reading, lower PANSS – Positive (PANSS–P) scores, PANSS – Total (PANSS–T), more interaction with group leader, lower WCST perseverative errors, low Personal and Social Performance (PSP) for Socially Useful Activities were retained in the final step, resulting in 81.2% classification accuracy. The score on the PSP, PANSS-PS, WCST perseverative errors, and attention at baseline significantly predicted improvement in CRT. The overall fit of the 8 predictors was fairly good and reliable in distinguishing between improvers and nonimprovers (p=0.04). CONCLUSIONS: A positive response to CRT is likely to be predicted from baseline characteristics. These factors cover cognitive and psychopathological domains and need to be evaluated during screening to facilitate cognitive and functional improvement. Results support the feasibility of an emergent formula for prediction of treatment success.

**REFERENCES:**

1. Fiszdon JM, Cardenas AS, Bryson GJ, Bell MD. Predictors of remediation success on a trained memory task. J Nerv Ment Dis. 2005 Sep;193(9):602-8.
2. Reeder C, Smedley N, Butt K, Bogner D, Wykes T. Cognitive predictors of social functioning improvements following cognitive remediation for schizophrenia. Schizophr Bull. 2006 Oct;32 Suppl 1:S123-31.

**NR5-070**

**QEEG-ASSISTED PROSPECTIVE SELECTION OF AD/HD TREATMENT: ENHANCING OUTCOMES AND IMPROVING TOLERABILITY**

*Arnold W Mech ,M.D. 7500 San Jacinto Place, Plano, TX 75024,*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, participants should be familiar with the use of QEEG testing to enhance AD/HD treatment outcome and tolerability. The benefits of considering the QEEG-derived CZ site specific theta-to-beta ratio (TBR) in the selection of pharmacologic agents for the treatment of AD/HD will be reviewed.

**SUMMARY:**

Introduction: AD/HD remains both under-diagnosed and controversial. There are still legitimate concerns about treating children with psychotropic agents, especially Schedule II stimulants. Adverse events including increased anxiety, sleep and appetite suppression, mood instability and rare but serious cardiovascular concerns lead patients and to postpone or avoid treatment. QEEG testing has demonstrated benefit in assisting clinicians in the diagnosis of ADHD with a 90% selectivity in differentiating "stimulant-responsive" AD/HD patients from normal controls. Hypothesis: The QEEG-derived CZ site specific TBR could provide prospective insight in selecting patients for treatments that enhance DA or NE activity from a subset of AD/HD patients who often fail or do not tolerate stimulant treatment. Patients with normal TBRs may avoid AEs and fair better with an agent characterized by an alternative, non-DA, proposed mechanism of action such as modafinil. Method: QEEG testing was used to assist in the selection of psychotherapeutic agents in 360 adult, adolescent and child patients meeting DSM-IV diagnostic criteria for AD/HD. Patients were treated in an open label manner with either approved stimulant or non-stimulant agents for those patients (234) with an elevated TBR on QEEG testing (the subject of another ongoing study) or selected for treatment with modafinil in patients with a normal TBR (126). Results: 73% (92) of those patients treated with modafinil (mean dose 197.5 mgs. /day) achieved a remission score on the Barkley AD/HD inventory (<15). Tolerability was very good with no serious adverse events, rashes, weight loss, sleep disturbance or increased anxiety or mood instability. Conclusion: These data support the further use and study of QEEG testing as an additional piece of objective data to be considered when selecting treatment in the management AD/HD patients.Further study is needed to objectively differentiate sub-populations of AD/HD.

**REFERENCES:**

1. Monastra VJ, Lubar JF, Linden M: the development of a quantitative electroencephalographic scanning process for attention deficit-hyperactivity disorder: reliability and validity studies. Neuropsychology. 2001; 1591: 136-144.
2. Rugino, TA, Samsock, TC: modafinil in children with atten tion-deficit hyperactivity disorder. Pediatric Neurology. Au gust, 2003; 29:136-142.

**NR5-071**

**COMMUNITY COMPUTERIZED SCREENING FOR EARLY SIGNS OF DEMENTIA**

*David Darby, M.D. Level 7, 21 Victoria St, Melbourne VICAustralia 3000, Amy Fredrickson, B.A., Julia Fredrickson, B.A., Lynette Moore, Jack Sach, Paul Maruff, Ph.D., Michael Woodward,*

*F.R.A.C.P.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand practical issues involved in initiating a large scale community screening program for early dementia using a simple computerized cognitive battery.

**SUMMARY:**

Objective: With imminent new therapies for Alzheimer's disease (AD), early detection of prodromal stages becomes important to allow participation in research trials aiming to reduce consequent morbidity. Detection of cognitive decline is reported using a computerised battery as a biomarker for very early AD as evidenced by excess amyloid accumulation (Maruff et al 2004, Rowe et al 2007). This study used a computerized cognitive screening battery (CogHealth) in the community to determine whether concerned but healthy persons: (i) tolerate 3 monthly screening over a year, and (ii) show impairment or serial decline.

Methods: Community volunteers (=50 years) willing to undergo 3 monthly computerised testing over 12 months were recruited. A subgroup participated in focus groups after the first visit. Participants with demonstrated decline will be offered further medical assessment. Results of baseline (BL), 3 month (3M) and 6M were available.

Results: The first 301 volunteers were recruited from a total of 394 screened by telephone interviews. Mean age was 61.8 ± 7.2 years (88M, 213F). Focus group interviews suggested high participant enthusiasm for screening. At 6M, 253 (84%) had not dropped out (due to close illness or death). Of these, only 1 (0.4%) could not complete the tests, 18 (7%) failed integrity checks, and 9 (4%) were impaired on at least one task (beyond 2 sd's of age 50-59 normative data). Impairment by the same criteria was 12% at baseline and 3M. Evidence of decline was also present in 42 participants in tests of new learning.

Conclusions: Community interest in screening for early AD was high and the study appears to have attracted an enthusiastic cohort of which 84% have continued for at least 6 months. Results suggest tasks are generally well understood and tolerated, and sufficient to allow decline to be observed over time. Serial monitoring therefore appears possible as a strategy to detect decline, the significance of which in this cohort is yet to

**REFERENCES:**

1. Maruff P, Collie A, Darby D, Weaver-Cargin J, McStephen M: Subtle memory decline over 12 months in mild cognitive impairment. Dement Geriatr Cogn Disord 2004; 18(3):342-348
2. Rowe CC, Ng S, Ackermann U, Gong SJ, Pike K, Savage G, Cowie TF, Dickinson KL, Maruff P, Darby D, Smith C, Woodward M, Merory J, Tochon-Danguy H, O'Keefe G, Klunk WE, Mathis CA, Price JC, Masters CL, Villemagne VL: Imaging beta-amyloid burden in aging and dementia. Neurology 2007; 68(20):1718-25

**NR5-072**

## NEUROCOGNITION AND TEMPERAMENT OF PATHOLOGICAL GAMBLERS

*Heather A Berlin, Ph.D. One Gustave L Levy Place, Box 1230, New York NY 10029, Holly Hamilton, B.A., Eric Hollander, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand more about the neurocognitive and temperament/character profile of pathological gamblers.

**SUMMARY:**

Pathological gambling is an impulse control disorder characterized by recurrent gambling thoughts and behaviors that disrupt individuals' social, occupational, and emotional functioning. To elucidate the underlying neurobiology and cognitive deficits related to pathological gambling, we examined the neurocognitive and temperament/character profile of 17 pathological gamblers (PGs) compared to 25 healthy controls (HCs). Subjects completed a neuropsychological battery including the Iowa Gambling Task, a time perception task, subtests of the Cambridge Neuropsychological Test Automated Battery, and questionnaires related to impulsivity, personality, temperament/character, emotion, and frontal behavior (measuring behavior related to frontal lobe damage). PGs performed significantly worse than HCs on tests of executive function, including tests of working memory, decision making, and planning, and they had a faster subjective sense of time. Participants' cognitive deficits positively correlated with their frontal behavior scores, and their faster subjective sense of time correlated with higher frontal behavior and impulsivity scores. PGs reported significantly more impulsive and frontal behaviors, negative emotions, and neuroticism and were less happy, extroverted, agreeable, and conscientious than HCs. PGs scored higher in novelty seeking and harm avoidance and lower in social reward dependence, self-directedness and cooperativeness. These results suggest that PGs have cognitive deficits indicative of prefrontal cortex dysfunction, and that their impulsive behaviors may be related to a time perception deficit. Further, their temperament/personality profile implies that they are less sensitive to reward and seek out higher levels of stimulation, which may be related to their impulsivity and poor decisions. This study provides important information about the underlying neurobiology of PG, which may be useful for developing better treatment strategies.

**REFERENCES:**

1. Berlin HA, Rolls ET, Kischka U: Impulsivity, time perception, emotion, and reinforcement sensitivity in patients with orbitofrontal cortex lesions. Brain 2004; 127:1108-26
2. Cavedini P, Riboldi G, Keller R, D'Annucci A, Bellodi L: Frontal lobe dysfunction in pathological gambling patients. Biol Psychiatry 2002; 51:334-41

**NR5-073**

## THE RELATIONSHIP BETWEEN BRAIN VOLUME AND COGNITIVE AND CORE DOMAIN IMPARIMENTS IN ADULTS WITH AUTISM SPECTRUM DISORDER

*Jessica Kiarashi, B.A. Mount Sinai School of Medicine One Gustave L. Levy Place, New York, NY 10029, Jin Fan, Ph.D., Latha Soorya, Ph.D., Eric Hollander, M.D., Evdokia Anagnostou, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the relationship between white and grey matter

brain volume and core domain impairments as well as executive and memory functions.

**SUMMARY:**
Introduction: Autism Spectrum Disorder (ASD) is a neurodevelopmental syndrome characterized by social and language deficits and restrictive interests/repetitive behaviors. Although abnormalities in brain volume are the most well replicated finding in autism, there is little known about the relationship of brain volume and cognitive and core domain impairments. Hypotheses: Grey and white matter volumes will correlate with core symptom severity as well as with deficits in executive and memory functions. Methods: Eight adults ages 18-35 with *DSM-IV-TR* diagnosis of ASD, confirmed with the Autism Diagnostic Interview-Revised (ADI-R) and the Autism Diagnostic Observation Schedule-General (ADOS-G) and full scale IQ >80, had a Magnetization Prepared Rapid Gradient Echo (MPRAGE) on a 3T Allegra scanner. They were also tested using the Cambridge Neuropsychological Test Automated battery (CANTAB). Total brain and white and grey matter volumes were correlated with core domain severity as measured by the ADI and executive and memory function as measured by CANTAB. Results: There were statistically significant correlations noted between grey, white and total brain volume and the ADI repetitive behavior domain severity score (r=.818 p=.025, r=.868 p =0.011, r=.875, p=001 respectively). In addition, reverse correlations were noted with a measure of impulsivity (% error on 90sec time estimation task) (r=-.847 p =.033, r=-705 p=.118, r=-.801, p=.055). We also identified significant correlations between total brain volume and executive function measures, Intra/Extra dimensional Shift (I/ED) and Stockings of Cambridge (SOC) (r=-.777 p=0.04, r=.674, p=0.09) as well as spatial memory (Spatial span) (r=0.88, p=.009). Conclusions/Discussion: Our pilot data supports significant correlation between grey and white matter volumes and perseverative and impulsive behaviors in young adults with autism as well with as executive and memory function deficits.

**REFERENCES:**

1. Courchesne, E., Redcay, E., Morgan, JT, Kennedy DP: Au tism at the beginning: microstructural and growth abnormali ties underlying the cognitive and behavioral phenotype of au tism. Developmental Psychopathology 2005; 17(3):1413-1425.
2. Rojas DC, Peterson E, Winterrowd E, Reite ML, Rogers SJ, Tregellas JR: Regional gray matter volumetric changes in autism associated with social and repetitive behavior symt poms. BMC Psychiatry 2006; 6:56.

## NR5-074

### COGNITIVE CHANGES DURING PUBERTY IN INNER-CITY ADOLESCENT MALES

*Mark J Smith, M.D. 729 13th St, NE, Washington, DC 20002, M. Paula Gaudino, L.I.C.S.W., Kelley C. Mohondro, Psy.D., Sidney Binks, Ph.D., Megan Strange, L.P.C.,*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to understand the effect of puberty on cognition in inner-city adolescent males.

**SUMMARY:**
Objective: Puberty triggers sexual activity and behavioral and attitudinal changes. Non-sexual psychiatric disorders (conduct disorder, substance abuse) abruptly rise after puberty. We hypothesized that pubertal behavioral changes should correlate with changes in cognition, i.e., perception, attention, memory, reasoning, etc. We compared cognition in age-matched groups of inner-city adolescent males differing only in terms of pubertal maturation.
Methods: 133 inner-city males aged 11 to 15 (85% African-American, 12% Caucasian, 2% Hispanic) hospitalized for disruptive behavior underwent physical exams to determine Tanner stage of sexual development, blood levels of sex hormones & the Woodcock-Johnson III (W-J III): Tests of Cognitive Ability neuropsychological battery. Individual Tanner stages and hormone levels were compared to same-age group means, so that each value was either below, above, or at the group mean. Patients with a majority of values above the mean were put in the earlier puberty (mature) group (n=67); those with a majority of values below the mean were put in the (immature) (n=66) group. WJ-III scores included: General Intellectual Ability, Delayed Story Recall, Visual-Auditory Learning-Delayed, Concept Formation, Visual Matching, Numbers Reversed. Main outcome measures were analyses of variance with diagnostic group (mature vs. immature) as the between-subjects variable & WJ-III results as outcome variables.
Results: Significant differences were found for only the 12 & 13 year-old groups. Mature patients (n=26) had significantly higher scores for General Intellectual Ability, Visual-Auditory Learning-Delayed, Audio-Visual Learning, Concept Formation, and Numbers Reversed than the immature ones (n=24). Differences were sharper for 12 year-olds than 13 year-olds.
Conclusion: Puberty may correlate with cognitive changes involving different concepts than were allowed in childhood. Understanding this may lead to better treatment of adolescent males.

**REFERENCES:**

1. Halpern CT, Joyner K, Udry JR, Suchindran C Smart teens don't have sex (or kiss much either). J Adolesc Health. 2000;26(3):213-25.
2. Berg-Kelly K, Kullander K Gender differences in early ado lescence in factors related to outcome of healthy behaviours two years later. Acta Paediatr. 1999;88(10):1125-30.

## NR5-075

### A CONTROLLED TRIAL OF NORTRIPTYLINE, PAROXETINE CR AND PLACEBO IN PATIENTS WITH DEPRESSION AND PARKINSON'S DISEASE

*Matthew A Menza, M.D. 671 Hoes Lane, D207A, Piscataway, NJ 08836, Roseanne DeFronzo Dobkin, Ph.D., Humberto Marin, M.D. Margery Mark, M.D., Mike Gara, PhD, Steve Buyskee, Ph.D., Karina Bienfait, Ph.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to; 1)Recognize the relevance of depression for patients with Parkinson's disease; 2) Discuss the use of antidepressants in patients with Parkinson's disease and depression

**SUMMARY:**

Parkinson's disease is a common neurodegenerative disease affecting up to one million individuals in the US. Depression affects 40% to 50% of patients with PD and is associated with a variety of poor outcomes for these patients and their families. Despite this, there are few evidence-based data to guide the clinical care of patients with depression and PD. The current clinical practice appears to be to use an SSRI first and only 7% of patients are taking a tricyclic antidepressant. We now report an NIH-funded, eight week, randomized trial of paroxetine CR, nortriptyline and placebo in fifty-two patients with PD and major depression or dysthymia. The primary outcomes of the trial were change in Hamilton Depression Rating Scale and the percentage of patients who achieved response. Nortriptyline was superior to placebo in both primary outcomes and paroxetine CR was not. Response rates with nortriptyline were 62% compared to 22% with paroxetine and 37% with placebo. Both active treatments were well tolerated and there were no differences between groups in dropout rates or mean number of side effects. This trial raises significant questions about the current practice of using SSRIs as first line drugs for patients with PD and depression. This is the largest placebo controlled trial done to date in patients with PD and depression, and the only one that has compared a TCA to an SSRI. The trial was funded by the National Institute of Neurological disorders and Stroke (NINDS) and GlaxoSmithKline contributed paroxetine Cr and matched placeboClinical Trials Registration: Clintrials. gov Identifier: NCT 00062738

**REFERENCES:**


1. Jennifer SAM, Reijnders MA, Ehrt U, Weber WEJ, Aarsland D, Leentjens AFG. A systematic review of prevalence stud ies of depression in Parkinosn's disease. Movement Disor ders Published online: 6 Nov 2007.
2. Ghaxi-Noori S, Chung TH, Deane KHO, Rickards H, Clarke CE. Therapies for Depression in Parkinson's Disease. The Cochrane Database of Systematic Reviews 2003, Issue 2 Art. No.: CD003465. DOI: 10.1002/14651858. CD003465.


**NR5-076**

## ANXIETY, DEPRESSION AND QUALITY OF LIFE IN PARKINSON'S DISEASE


*Rosa Quelhas, M.D. Rua da Boa Nova, 153 1º DT-B 4050-101 Porto, Portugal 4050-101, Manuela Costa, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to; 1) recognize that depression and anxiety are associated with increased disability and worse quality of life in patients with Parkinson's Disease; 2)recognize that anxiety in Parkinson's Disease can occur as a symptom of dopaminergic insufficiency and/or independently of motor fluctuations; and 3) recognize the need of a multidisciplinary effort including, psychiatry clinicians, in the management of Parkinson's Disease.

**SUMMARY:**


Introduction ; Parkinson's disease (PD) is a chronic degenerative disease, with a 40 % mean incidence of depression, and a higher incidence of anxiety symptoms than in other chronic medical conditions.MethodsThe authors intended to examine the impact of PD severity, anxiety and depression in quality of life (QoL). This cross-sectional study included PD patients observed in a Movement-Disorders Consult; patients with atypical, drug-induced or vascular parkinsonism, dementia or functional impairment due to medical comorbidity were excluded. Assessment instruments included Hoehn&Yahr, SF-36 and HADS scales. Patients were questioned about psychiatric history, and current psychotropic medication. Statistical analysis was made by NCSS 2000.Results43 subjects were included, and baseline characteristics didn't showed significant differences in SF-36 score means. HY stage 2 was predominant (N=26; 60 %). Higher severity of disease significantly related with lower global and physical SF-36 scores. Scatter plot of HADS and SF-36 scores revealed parallel linear trend according HY stage, with higher impairment showing lower levels of QoL to same values of anxiety/depression. Spearman coefficients limited to subjects with HY stage 2 (N=26) showed a negative correlation between HADS scores and SF-36 total score. Only anxiety score correlated with physical domain of SF-36 (r=-0,43).Multiple linear regression revealed that the most important predictive factor of QoL was HADS score, followed by HY stage, together accounting for 42% of the variance of global QoL. HADS score, by its anxiety subscale, was a significant predictor of physical summary score.DiscussionThis study revealed that the strongest predictor of QoL in PD was HADS score. Anxiety significantly correlated with physical summary score, suggesting an additional relationship with neuropathological process of PD, and eventual usefulness in psychopatological assessment and dopaminergic replacement therapy eva


**REFERENCES:**


1. Journal Article Schrag A: Quality of life and depression in parkinson's disease. Journal of Neurological Sciences 2006: 248: 151-7.

   Book Chapter
2. Pincus JH, Tucker GJ: Movement, Mood, and Obsessive-Compulsive Disorders. In Behavioural Neurology - 4th Edi tion, edited by Oxford University Press, pp 177-194.


**NR5-077**

## PHENOMENOLOGICAL DIFFERENCES IN HYPO-ACTIVE AND HYPERACTIVE DELIRIUM


*Soenke Boettger, M.D. 641 Lexington Ave, New York, NY 10022, Christian Gibson, PhD, Anne Tremblay , MD, William Breitbart, MD*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the subtypes of delirium, be able to identify the specific symptoms of delirium and acquire the understanding that specific symptoms are not equally present in both types of delirium. Further discussion of the delirium pathophysiology and its implication on the presence of different phenomenological characteristics will be provided and treatment considerations based on the pathophsiology and findings will be presented.

**SUMMARY:**


Objective: To examine the different phenomenological characteristics of hypoactive and hyperactive delirium on the basis of the Memorial Delirium Assessment Scale (MDAS) items.

Methods: We conducted an analysis of our delirium database. Sociodemographic, medical variables and the MDAS subitems (1-10) were analyzed.

Results: We were able to retrieve 100 patients diagnosed with delirium. The mean age was 58.36 in delirum, in hypoactive and hyperactive delirium 60.70 and 55.89 years respectively. 53% were diagnosed hypoactive delirium and 47% hyperactive delirium. The delirium severity as shown by the MDAS scores were 18.68 in hypoactive delirium and 19.77 in hyperactive delirium. Hallucinations occurred at 50.9% in hypoactive delirium and 70.2% in hyperactive delirium respectively. Delusions occurred at 43.4% in hypoactive delirium and 78.7% in hyperactive delirium respectively. Moderate and severe hallucinations and delusions were present in 17.0% and 18.9% of hypoactive patients and 53.8% and 38.3% of hyperactive patients. The presence of disturbance of consciousness, cognition, psychomotor abnormalities and sleep wake cycle disturbances were equally present in the subsets of delirium.
Conclusion: Hallucinations and delusions were present in hypoactive delirium, but significantly more common - and with greater intensity - in hyperactive delirium. Abnormalities in disturbance of consciousness and impairment in cognition were similar. Implications will be discussed.

**REFERENCES:**


1. de Rooij SE, Schuurmans MJ, van der Mast RC, Levi M: Clinical subtypes of delirium and their relevance for daily clinical practice: a systematic review. Int.J.Geriatr.Psychiatry. 2005; 20:609-615
2. Stagno D, Gibson C, Breitbart W: The delirium subtypes: a review of prevalence, phenomenology, pathophysiology, and treatment response. Palliat.Support.Care. 2004; 2:171-179


**NR5-078**

**DELIRIUM IN DEMENTIA: DOES IT DIFFER?**


*Soenke Boettger, M.D. 641 Lexington Ave, New York, NY 10022, Steven Passik, PhD, William Breitbart, MD*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand that dementia poses a risk factor for delirium, that delirium may represent different and more intense than in patients without dementia. Further discussion of the delirium pathophysiology and its implication on interactions with dementia will be provided and treatment considerations based on the pathophsiology and findings will be presented.

**SUMMARY:**


Objective: To examine the different phenomenological characteristics of delirium in dementia compared to the phenomenological characteristics in delirious patients without dementia based on the Memorial Delirium Assessment Scale (MDAS) items.
Methods: We conducted an analysis of our delirium database. Sociodemographic, medical variables and the MDAS subitems (1-10) were analyzed in respect to differences between delirium in the demented (DD) and delirium in the non-demented (ND) as controls.
Results: We were able to retrieve 18 patients diagnosed with delirium and dementia (DD) and 82 patients diagnosed with delirium without dementia (ND). The mean age of the DD group was 66.87 years and in the ND group 56.12 years. In DD 50% had hypoactive delirium and hyperactive delirium each , while in ND 53.7% were diagnosed hypoactive delirium and 46.3% were diagnosed hyperactive delirium. The delirium severity as shown by the MDAS total score was 21.83 in DD and 18.63 in ND. Statistically significant differences between DD and ND were an increased level of disturbance of consciousness, disorientation, short term memory, concentration, disorganized thought process, psychomotor behavior and sleep wake cycle disturbance. Also the presence of more intense symptoms was more common in DD than in ND throughout the MDAS items. Hallucinations and delusions were present in both DD and ND at similar rates.
Conclusion: Delirium in dementia is phenomenologically different from delirium in the absence of dementia. The levels of disturbance in consciousness, disorientation, cognition, disorganization in thought process, psychomotor behavior and sleep wake cycle disturbance are more severe. Hallucinations and delusions may represent at similar rates compared to controls. Pathophysiological correlates and implications will be discussed.


**REFERENCES:**


1. Inouye SK: Delirium in older persons. N.Engl.J Med. 2006; 354:1157-1165
2. Margiotta A, Bianchetti A, Ranieri P, Trabucchi M: Clinical characteristics and risk factors of delirium in demented and not demented elderly medical inpatients. J Nutr.Health Aging. 2006; 10:535-539


**NR5-079**

**THE IMPACT OF CHILDHOOD SEXUAL ABUSE ON INDUCED IMMUNOLOGICAL OR INFLAMMATORY RESPONSE**


*Sandra Odebrecht Vargas Nnunes, M.D. Londrina State University, Av Adhemar de Barros, 625, Londrina, Brazil 86050190, R. Moriya, M.D, M.A.E. Watanabe, Ph.D., E.M.V. Reiche, Ph.D., H.K. Morimoto, Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this poster, the participant should be able to understand the inflammatory or immune processes in childhood sexual abuse, including: 1) how childhood sexual abuse alters the physiology; 2) the influence of childhood sexual abuse on activation of the autonomic nervous system and the hypothalamic-pituitary-adrenal(HPA) axis; 3) childhood sexual abuse and immune system; and 4) how childhood sexual abuse influences the central nervous system.

**SUMMARY:**


This study describes the report on experience of 50 cases of the role of childhood sexual abuse on immunological or on inflammatory response. The childhood sexual abuse influences of the central nervous, immune and endocrine systems. The three systems are linked and communicated through the activation of autonomic nervous system, and the hypothalamic–pituitary–adrenal (HPA) axis, and the immune system that can regulate the brain function through the immune mediators such as increase plasma proinflammatory cytokines. The childhood sexual abuse have been associated with the activation of the innate immune system by increasing the plasma proinflammatory cytokines, such as interleukin (IL)-6. The purpose of this paper is to review the inflammatory or immune processes in childhood sexual abuse. Specifically, this review will examine: How does childhood sexual abuse alter the physiology?, (1) Influences of childhood sexual

abuse on activation of the autonomic nervous system and the hypothalamic-pituitary-adrenal(HPA) axis (2) childhood sexual abuse and immune system, (3) childhood sexual abuse influences in some aspects of the central nervous system.

**REFERENCES:**


1. Laserman J. Sexual abuse history, health effects, mediators, and psychological treatment. Psychosomatic Medicine 2005;67: 906-907
2. Krug EG, Dahlberg L, Mercy J, Zwi A, Lozano R. Child abuse and neglect by parents and other caregivers. In: World Health Organization. World report on violence and health. Geneva: WHO; 2002. p.59-81


**NR5-080**

## ASSESSMENT OF RATER DRIFT IN CNS CLINICAL TRIALS


*David Daniel, M.D. United Biosource Corp., 6858 Old Dominion Dr., McLean, VA 22101, John J. Bartko, Ph.D., Michael H. Allen, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to demonstrate: 1) familiarity with the problem of rater drift (the tendency for raters to unintentionally redefine criteria and ratings standards over time) in clinical trials and the potential consequences with respect to inter-rater reliability, data quality and signal detection; and 2) familiarity with a simple rater training intervention to address rater drift and data addressing stability of ratings technique over time.

**SUMMARY:**


INTRODUCTION: Rater drift in CNS clinical trials describes the loss of inter-rater reliability over time and may be associated with diminished statistical power and poor signal detection. Little empirical evidence is available to document the magnitude of rater drift. We report a retrospective assessment of rater drift in 18 CNS trials.

METHOD: We hypothesized that measures of rater adherence to scoring would be. Significantly lower at study mid-point than at initiation and that rater drift would be worse with more complex instruments such as the PANSS compared to the YMRS and MADRS. At initiation raters were trained to rate these scales by viewing at least one training lecture and viewing and rating at least one videotaped subject interview using the scale, followed by feedback on rating methods. Raters were evaluated on their ratings of an additional videotaped subject interview. Approximately 9-16 months later, raters were required to complete a self-instructional review of rater scoring technique using internet based training or instructional CD and retested on their ability to properly score a videotaped interview. For purposes of this analysis rater performance was evaluated as passing if 80% of the scale items were scored within one point of the modal score or within 1 point of the expert consensus.

RESULTS: At study initiation, 83.2% of raters were concordant. This actually increased to 89% at midpoint (n=3199, chi-square=22.14, p=000003). When analyzed by therapeutic area, concordance rates remained statistically significantly higher at mid-study than at initiation for the YMRS and MADRS but not for the PANSS and NSA. DISCUSSION: There is a lack of evidence to evaluate the extent to which rater drift occurs in clinical trials. A retrospective analysis of 18 CNS clinical trials suggests relatively high levels of rater agreement may be sustainable 9-16 months after initial training with an instructional review at mid-study.


**REFERENCES:**


1. Wolfe EW, Moulder BC and Myford CM: Detecting Differen tial Rater Functioning over Time (DRIFT) Using a Rasch Multi-Faceted Rating Scale Model. J Appl Meas. 2(3):256-80 2001.
2. Perkins DP, Wyatt RJ and Bartko J: Penny-wise and pound-foolish: the impact of measurement error on sample size requirements in clinical trials. Biological Psychiatry, Volume 47, Issue 8, Pages 762-766.


**NR5-081**

## TOPIRAMATE: FINDINGS FROM A NATURALISTIC STUDY


*Adelto Gmelch, Hospital Universitario de Canarias.C/Ofra, s/ n.38320-La Cuesta. La Laguna. Santa Cruz de Tenerife, Spain, Chinea Cabello E.R., Cejas M.R.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to know that: topiramate is useful in the pharmacological treatment of the impulse-control disorders; it can be used during a prolonged time, well tolerated and safe along with other psychotropics; it helps to reduce the use of cannabis, alcohol, cocaine, tobacco and benzodiazepines; and the frequency of parasuicide episodes diminishes and helps to regulate the weight in subjects with obesity and thinness.

**SUMMARY:**


INTRODUCTION: Topiramate is an antiepileptic drug that has been used in the pharmacological treatment of the impulse-control disorders and its different psychiatric conditions(cluster B personality disorders, eating disorders and substance-related disorders). The objective is to asses the use of topiramate and its results in treating psychiatric conditions. METHOD: Cross-sectional, retrospective and naturalistic study. Sample of psychiatric outpatients (N=72) treated with topiramate during at least three months. Variables: sex, age, BMI(Body Mass Index), main diagnosis, psychiatric comorbidity, duration of treatment, dose range, side effects, CGI(Clinical Global Impression), frequency in the use of addictive substances using a Likert scale, benzodiazepine doses, parasuicide episodes and concomitant treatments. RESULTS: Sex:women 73.6 %, men 26,4%. Age:36±10,4 years. Duration of treatment:18±16,2 months. Dose range:311±180 mg/day. CGI-S:5,2±0,95 (markedly ill). CGI-I:2,3±1,04 (moderately improvement). Greater improvement in women (p=0,023). Subjects with initial BMI>30, lose weight (p=0,03). Subjects with initial BMI<20, gain weight (p=0,036).75% displayed some degree of impulsive-control disorder at the beginning of the treatment. After treatment, 50% did not show any abnormality, and reduction in the frequency of the disorder was found in the rest of the sample:tobacco (p<0,001), alcohol (p=0,001), cannabis (p=0,025), cocaine (p=0,02), and parasuicide episodes (p<0,001).72% subjects used benzodiazepines at the beginning (26% high doses). After treatment, 52% did not use benzodiazepines and the rest used smaller doses (p<0,001).80% subjects without significant side effects. CONCLUSIONS: After topiramate treatment, reduction in tobacco, alcohol, cannabis,

cocaine, benzodiazepines and less parasuicide events, was found. There was a tendency to regression to the mean of the weight based on the duration of the treatment. Topiramate was generally well tolerated.

**REFERENCES:**


1. Danilo Arnone. Review of the use of topiramate for treatment of psychiatric disorders. Annals of General Psychiatry 2005. 4:5.
2. Michopoulos I, Douzenis A, Christodoulou C. Topiramate use in alprazolam addiction. World J Biol Psychiatry 2006; 7 (4): 265-7.


**NR5-082**

## ANALYSIS OF DEPRESSIVE SYMPTOMS IN PATIENTS WITH MAJOR DEPRESSIVE DISORDER TREATED WITH DESVENLAFAXINE SUCCINATE OR PLACEBO


*Albena Patroneva, M.D. Wyeth 500 Arcola Rd., Collegeville, PA 19426, Susan G. Kornstein, M.D., Maurizio Fava, M.D., Qin Jiang, Saeeduddin Ahmed, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, participants should be able to: 1) describe outcomes in individual depressive symptoms in patients with MDD treated with DVS; 2) identify patterns of improvement in individual depressive symptoms in patients with MDD treated with DVS.

**SUMMARY:**


Objective: To examine the effect of treatment with desvenlafaxine succinate (DVS) on individual items of the 17-item Hamilton Rating Scale for Depression (HAM-D17) in patients with major depressive disorder (MDD). Methods: Data were pooled from 5 double-blind, placebo-controlled, 8-week studies of DVS in adult outpatients with *DSM-IV* MDD. Eligible patients were randomly assigned to fixed doses of DVS (50, 100, 200, or 400 mg/d: n=1342) or placebo (n=631). Scores on individual HAM-D17 items from the final on-therapy evaluation were compared between groups using analysis of covariance; differences in adjusted means (DVS vs placebo) are reported here. Results: Statistically significant improvements with DVS versus placebo were found in the following 12 individual HAM-D17 items for the pooled data set: depressed mood (-0.4; P<0.001), feelings of guilt (-0.2; P<0.001), suicide (-0.2; P<0.001), insomnia/late (-0.1; P=0.002), work and activities (-0.3; P<0.001), psychomotor retardation (-0.2; P<0.001), agitation (-0.1; P<0.001), psychic anxiety (-0.3; P<0.001), somatic anxiety (-0.1; P=0.032), general somatic symptoms (-0.2; P<0.001), genital symptoms (-0.1; P=0.002), and hypochondriasis (-0.1; P=0.04). No statistically significant differences between DVS and placebo for the pooled data set were found for the items of insomnia/early, insomnia/middle, gastrointestinal symptoms, loss of weight, and insight. For the individual dose groups, statistically significant improvements (P<0.05) were consistently seen at all DVS doses in the items of depressed mood, feelings of guilt, work and activities, psychomotor retardation, psychic anxiety, and general somatic symptoms. Conclusions: Short-term DVS treatment resulted in significant improvements compared to placebo on most individual HAM-D17 items in patients with MDD across a range of doses including the low dose 50 mg. Research supported by Wyeth Research.


**REFERENCES:**


1. Deecher DC, Beyer CE, Johnston G, Bray J, Shah S, Abou-Gharbia M, Andree TH. Desvenlafaxine succinate: A new serotonin and norepinephrine reuptake inhibitor. J Pharmacol Exp Ther 2006; 318:657-665.
2. DeMartinis NA, Yeung PP, Entsuah R, Monley AL. A double-blind, placebo-controlled study of the efficacy and safety of desvenlafaxine succinate in the treatment of major depressive disorder. J Clin Pyschiatry 2007; 68:677-688.


**NR5-083**

## POOLED ANALYSIS OF THE SAFETY AND TOLERABILITY OF DESVENLAFAXINE COMPARED WITH PLACEBO IN THE TREATMENT OF MAJOR DEPRESSIVE DISORDER


*Anita Clayton, M.D. University of Virginia, Charlottesville, VA 22908, Susan G. Kornstein, M.D., Gregory Rosas, Ph.D., Christine Guico-Pabia, M.D., Karen A. Tourian, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the most common TEAEs and potential changes in vital signs occurring during treatment with DVS in patients with MDD.

**SUMMARY:**


Objective: To characterize the safety and tolerability of the serotonin norepinephrine reuptake inhibitor (SNRI) desvenlafaxine succinate (DVS) in patients with major depressive disorder (MDD). Methods: Data from 5 double-blind, 8-week, fixed-dose studies in adult outpatients with DSM-IV MDD were pooled. Patients were randomly assigned to fixed doses of DVS (50, 100, 200, or 400 mg/d) or placebo. Vital signs, laboratory assessments, ECGs, and treatment-emergent adverse events ([TEAEs]; incidence =5% and at least twice that of placebo) were evaluated. Results: The overall safety population comprised 2001 patients (DVS: n=1365; placebo: n=636). Discontinuation rates due to adverse events (AEs) were 4% (50 mg), 9% (100 mg), 15% (200 mg), and 18% (400 mg) with DVS and 4% with placebo. The most frequently reported TEAEs included nausea, dry mouth, somnolence, hyperhidrosis, insomnia, dizziness, constipation, fatigue, decreased appetite, tremor, vomiting, mydriasis, anorgasmia and erectile dysfunction. Statistically significant (P<0.05) increases from baseline in mean systolic blood pressure (BP) (=2.5 mmHg) were observed with all DVS doses and in diastolic BP (=2.3 mmHg).with DVS 100, 200, and 400 mg. Small but statistically significant increases from baseline in mean pulse rate(=4 bpm; P<0.01) were observed for patients receiving 50, 100, or 400 mg DVS; statistically significant decreases in weight (=-1 kg; P<0.001) were observed for each of the dose groups. DVS was associated with dose-related mean increases in lipids that were statistically significant compared with decreases associated with placebo. Conclusions: DVS treatment exhibited a safety and tolerability profile that was generally consistent with the SNRI class. The most common AE was transient nausea. Research supported by Wyeth Research.


**REFERENCES:**


1. Stahl SM, Grady MM, Moret C, Briley M: SNRIs: their pharmacology, clinical efficacy, and tolerability in compari

son with other classes of antidepressants. CNS Spectr 2005; 10(9):732-747.
2. DeMartinis NA, Yueng PP, Entsuah R, Monley AL. A double-blind, placebo-controlled study of the efficacy and safety of desvenlafaxine succinate in the treatment of major depressive disorder. J Clin Pyschiatry 2007; 68:677-688.

**NR5-084**

## OBSESSIVE-COMPULSIVE SYMPTOMS IN PATIENTS WITH SCHIZOPHRENIA TREATED WITH CLOZAPINE OR HALOPERIDOL

*Antonio R Sa, M.D. 532 Artur de Azevedo StreetSão Paulo - Brazil, São PauloBrazil 05404001, Ana G. Hounie, M.D., Ph.D., Aline S. Sampaio, M.D., Euripedes C. Miguel, M.D., Ph.D., Helio Elkis, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the comorbidity schizophrenia and Obsessive-compulsive Disorder.

**SUMMARY:**

Objective: There is evidence that the prevalence of obsessive-compulsive symptoms (OCS) and obsessive-compulsive disorder (OCD) in patients with schizophrenia is increasing after the introduction of second-generation antipsychotics, especially in patients treated with clozapine. We conducted a cross-sectional investigation to compare the prevalence and the severity of OCS and OCD in patients with schizophrenia treated with clozapine or haloperidol.

Methods: SCID-P was used for the diagnoses of schizophrenia and OCD. All subjects (n= 60) completed the Dimensional Yale Brown Obsessive-Compulsive Scale (DY-BOCS) to assess OCS and the Yale Brown Obsessive-Compulsive Scale/Severity Scale (Y-BOCS/SS) in order to measure their severity. The severity of symptoms of schizophrenia was assessed by PANSS and CGI. Best Estimate Diagnoses were assigned by the first author and two senior psychiatrists to assure reliability. Chi-square test with Yates correction, Mann-Whitney U test, Kruskal-Wallis test and Pearson correlation coefficient were used for the statistical analyses.

Results: Among the 60 schizophrenia patients evaluated, 10 (16.7 %) patients met DSM-IV criteria for both schizophrenia and OCD;13 (21.7 %) patients had OCS but not OCD; and 37 (61.6 %) patients had neither OCD nor OCS. Patients with schizophrenia and OCD showed higher severity of psychotic symptoms when compared to patients with schizophrenia without OCS (P= 0.002). Patients treated with clozapine showed twice as higher comorbidity with OCD than patients using haloperidol, although not reaching statistical significance.

Conclusions: Although the haloperidol and clozapine groups had no difference regarding the presence of OCS, patients with schizophrenia and OCD showed a significantly higher severity of psychotic symptoms than patients with schizophrenia alone. Probably schizophrenia with OCD comorbidity have a distinct presentation,with a more severe clinical picture.

**REFERENCES:**

1. Poyurovsky M, Weizman A, Weizman R. Obsessive-com pulsive disorder in schizophrenia: clinical characteristics and treatment. CNS Drugs 2004;18:989–1010.
2. Elkis, H. Treatment-Resistant Schizophrenia . Psychiatr Clin North Am. 2007 30(3):511-33.

**NR5-085**

## OLANZAPIN TREATMENT DECREASES PLASMA OREXIN-A LEVELS IN FIRST EPISODE DRUG NAIVE PSYCHOTIC PATIENTS

*Cengiz Basoglu, M.D. GATA Haydarpasa Training Hospital, Kadikoy Istanbul, Turkey, 34668, Umit B.Semiz, M.D., Alpay Ates, M.D., Servet Ebrinc, M.D., Ayhan Algul, M.D., Cengiz Gunes M.D., Mesut Cetin, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should:
(1) recognize the effect of olanzapine on plasma orexin-A concentrations in first episode drug naive psychotic patients; and (2) understand that hormonal control of food intake may play a key role in determining weight gain, a major side effect of olanzapine treatment.

**SUMMARY:**

Objective: Clozapine and olanzapine have been implicated in weight gain and higher risk of diabetes and dyslipidemia. The mechanism of these adverse reactions remains unclear. The distribution of orexin peptides and their receptors suggests that they may play a role in energy homeostasis and regulation of food intake and appetite, as well as nociceptive processing, drinking, arousal and the sleep–wake cycle, cardiovascular regulation and neuroendocrine function. The purpose of this study was to examine the association between olanzapine-induced weight gain and plasma orexin A level. Methods: Twenty male drug naive inpatients with first episode non-affective psychosis were treated on a stable dose (20 mg/day) of olanzapine during six weeks. Subjects' PANSS, body mass index (BMI), and plasma orexin A levels were evalueted before and after 6-week olanzapine treatment. Baseline plasma orexin A levels of psychotic patients were also compared to that of 20 healthy controls. Results: Patients gained significant weight during the study. BMI increased from 21.99±2.19 to a mean degree of 24.38±2.44 ($F=41.9$, $p<0.001$). Plasma orexin-A levels did not significantly differ between patients and healthy control group. In the patient group, however, plasma orexin-A levels significantly decreased after 6-week olanzapine treatment ($p=0.015$). Conclusions: This is the first study which demonstrates that olanzapine treatment decreases plasma levels of orexin-A in first episode drug naive psychotic patients. Patients gained significant weight during 6-week olanzapine treatment. Our results suggest that there may be a relationship between decreased plasma levels of orexin-A and olanzapine-induced weight gain and food intake.

**REFERENCES:**

1. Adam JA,Menheere PPCA,van Dielen FMH,Soeters PB,Buurman WA and Greve JWM. Decreased plasma orexin-A levels in obese individuals. International Journal of Obesity (2002) 26, 274–276.
2. Dalal MA,Schuld A and Pollmacher T.Lower CSF orexin A (hypocretin-1) levels in patients with schizophrenia treated with haloperidol compared to unmedicated subjects, Mol Psychiatry 8 (2003), pp. 836–837.

**NR5-086**

## EFFECTIVENESS OF ANTIDEPRESSANT TREATMENTS IN PRE-MENOPAUSAL VERSUS POST-MENOPAUSAL WOMEN: A PILOT STUDY

*Chi-Un Pae, M.D. 505 Bapo-Dong, Seocho-Gu, SeoulSouth Korea 137-701, Laura Mandelli, M.D., Tae-Suk Kim, M.D., Hyun-Kook Lim, M.D., Changsu Han, M.D., Prakash S. Masand, M.D, Ashwin A. Patkar, M.D., Diana De Ronchi, M.D., Alessandro Serretti, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to learn that post-menopausal women gain less benefit from antidepressant treatments, as compared to pre-menopausal women, and old age independently predict a poor outcome, in line with previous evidences. Furthermore, they would find that high basal level of the FSH hormone significantly predicted the response to antidepressant treatments in post-menopausal women.

**SUMMARY:**

Introduction: To evaluate sex hormonal changes related to menopause influencing the response to antidepressant drugs in patients with major depressive disorder (MDD). Methods: Thirty-nine female patients (n=17 in pre-menopause; n=22 in post-menopause) with MDD based on DSM-IV criteria and those who were not on hormonal replacement therapies participated in the study, in order to prospectively evaluate the effect of menopausal status and its hormonal correlates on the effectiveness of antidepressants for 6-week. The Hamilton Depression Rating Scale-17 Item (HAMD), the Montgomery-Åsberg Depression Rating Scale (MADRS) and the Clinical Global Impression Severity scale (CGI-S) were administered at baseline, week 1, week 3, and week 6. The CGI-I scale was also assessed at weeks 1, 3, and 6. Results: After controlling for age, age at onset, baseline symptom severity, antidepressants' dosages and hormonal levels of Follicle Stimulating Hormone (FSH), Luteinizing Hormone (LH) and Estradiol (E2), postmenopausal women showed a poor response to antidepressants over six weeks of treatment, as compared to the response of pre-menopausal women. Old age and high levels of FSH were also associated with the efficacy of antidepressants in post-menopausal women. Conclusion: Sex hormones are known to interact with serotonergic, noradrenergic and dopaminergic systems. Despite methodological limitations, our study suggests that menopausal status and old age are predictors of a poor response to antidepressant treatment. Furthermore, the FSH may interfere in the mechanism of action of antidepressant agents. Hence subsequent larger, randomized and controlled trials are warranted to expand our understanding for this area.

**REFERENCES:**

1. Rajewska J, Rybakowski JK: Depression in premenopausal women: gonadal hormones and serotonergic system assessed by D-fenfluramine challenge test. Prog Neuropsychopharma col Biol Psychiatry 2003;27:705-709.
2. Schneider LS, Small GW, Hamilton SH, et al: Estrogen replacement and response to fluoxetine in a multicenter geriatric depression trial. Fluoxetine Collaborative Study Group. Am J Geriatr Psychiatry 1997;5:97-106.

**NR5-087**

## LAMOTRIGINE IN BIPOLAR DISORDERS - FIRST DEFINITION OF AN EFFECTIVE THERAPEUTIC REFERENCE CONCENTRATION

*Christine Greiner, Clinical Pharmacology, Department of Psychiatry, Psychosomaticsand Psychotherapy of the University of Regensburg, Universitaetsstrasse 84D-93053 Regensburg, Regensburg Germany 93053, Wolfgang Bader, Ekkehard Haen, Prof.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize, that lamotrigine, which is licensed for the treatment of epilepsy as well as for the treatment of bipolar disorders requires the application of different therapeutic reference concentrations. The retrospective data collection and interpretation should give a first evidence of an effective lamotrigine concentration when used as mood stabilizer in bipolar disorders.

**SUMMARY:**

Introduction: Since 2003, lamotrigine is indicated for bipolar disorders among its use as antiepileptic drug. There is no evidence for a target concentration, a toxic range or a valid therapeutic reference range. The question arises, if tentative therapeutic reference ranges used for lamotrigine as an antiepileptic drug can be adopted for its indication of prophylaxis in bipolar disorders, too [1]. We put our focus on the investigation, whether even lower concentrations of lamotrigine are effective. Method:
Lamotrigine serum specimens between 2005 and 2007 were evaluated, using our database KONBEST. We collected data on comedication, smoking habits and caffeine consumption, reasons for requesting monitoring, CGI score and event of side effects. A fixed dose for at least five days was assumed. Patients receiving UGT–inductors (carbamazepine, phenytoin) or UGT–inhibitors (valproic acid) concomitantly were excluded from calculation. The patients symptom reduction according to the CGI score was correlated with lamotrigine concentrations determined in our laboratory. A ROC analysis was conducted for defining a cut-off value regarding clinical non-response. Results: We found effective lamotrigine concentrations to be in a range of 2,15+/-1,22 µg/ml assuming that 68.3% of all patient samples meet this criteria (mean+/-standard deviation). This finding was confirmed by ROC analysis. Conclusion:
The investigation of a therapeutic reference range for lamotrigine used in the treatment of bipolar disorders is a first retrospective attempt using a small sample size of patients. Concentrations indicating efficacy are found to be in a dosing range of 25–200 mg lamotrigine /d being in the lower range of the tentative therapeutic reference range proposed by Morris et al. (3-14 µg/ml) for the use of lamotrigine in the treatment of epilepsy [1, 2]. We were unable to evaluate an upper concentration limit so far, since side effects were specified infrequently.

**REFERENCES:**

1. Morris, R. G., et al., Lamotrigine and therapeutic drug monitoring: retrospective survey following the introduction of a routine service. Br J Clin Pharmacol, 1998. 46(6): p. 547-51.
2. Morris, R. G., et al., Long-term follow-up using a higher

target range for lamotrigine monitoring. Ther Drug Monit, 2004. 26(6): p. 626-32.

**NR5-088**

## EFFICACY FOLLOWING SWITCH FROM VENLAFAXINE TO DESVENLAFAXINE IN RESPONDERS VERSUS NONRESPONDERS

*Christine Guico-Pabia, M.D. Wyeth 500 Arcola Rd., Collegeville, PA 19426, Saeeduddin Ahmed, M.D., Qin Jiang, Albena Patroneva, M.D., Philip T. Ninan, M.D., Michael E. Thase, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) understand the efficacy of DVS after switching from placebo in the treatment of MDD; and 2) understand the efficacy of DVS after switching from venlafaxine ER in the treatment of MDD.

**SUMMARY:**

Objective: To examine the efficacy of DVS in patients with major depressive disorder (MDD) who received short-term double-blind (DB) treatment with venlafaxine extended release (ven ER), DVS, or placebo (PBO). Methods: Outpatients with *DSM-IV* MDD who completed 8 weeks of randomized DB therapy with DVS, ven ER, or PBO in 2 prior studies were given the option to enroll in a 10-month, open-label (OL) extension study and treated with DVS (200–400 mg/day). Efficacy was separately assessed for patients switched to OL DVS from PBO (n=176), ven ER (n=175), or DB DVS (n=143). Efficacy variables included the HAM-D17 (primary) and response rates (CGI-I =2 or decrease =50% in HAM-D17 or MADRS). Patients who met any definition of response at the end of DB therapy were categorized as responders. Changes from DB baseline to the final on-therapy (FOT) evaluation for responders and nonresponders were summarized. Results: Among nonresponders (n=134), mean HAM-D17 scores at DB baseline for groups initially treated with PBO, ven ER, and DVS were 25.2, 26.5, and 25.2, respectively; OL baseline scores were 21.3, 21.8, and 20.5; on OL DVS the FOT scores were 10.5, 14.5, and 12.7, respectively. Responders (n=360) also had lower mean OL baseline and FOT HAM-D17 scores. Among nonresponders, FOT HAM-D response rates were 67%, 53%, 48% for groups initially treated with PBO, ven ER and DVS, respectively; these rates were 84%, 87%, and 83% for responders. Rates of withdrawal due to adverse events were 23%, 16% and 11% for groups initially treated with PBO, ven ER, and DVS, respectively. Conclusion: Following DB PBO, ven ER or DVS therapy, switching to OL DVS therapy maintained the improvement of responders and was associated with large gains among those who initially did not respond; the largest change was found in patients who had not responded to PBO. Data indicate that an immediate switch from VEN to DVS is generally well-tolerated.

Research supported by Wyeth Research.

**REFERENCES:**

1. Deecher DC, Beyer CE, Johnston G, Bray J, Shah S, Abou-Gharbia M, Andree TH. Desvenlafaxine succinate: A new serotonin and norepinephrine reuptake inhibitor. J Pharmacol Exp Ther 2006; 318:657-665.
2. DeMartinis NA, Yeung PP, Entsuah R, Monley AL. A double-blind, placebo-controlled study of the efficacy and safety of desvenlafaxine succinate in the treatment of major depressive disorder. J Clin Pyschiatry 2007; 68:677-688.

**NR5-089**

## ASSESSING THE EFICACY OF DESVENLAFAXINE FOR IMPROVING FUNCTIONING AND QUALITY OF LIFE MEASURES IN PATIENTS WITH MAJOR DEPRESSIVE DISORDER

*Claudio N Soares, M.D. 208 Queens Quay W #2711, Toronto, Canada M5J 2Y5, Michael E. Thase, M.D.; Susan G. Kornstein, M.D.; Claudine Brisard, M.D.; Lucia Septien-Velez, M.D.; Jean-Michel Germain, Ph.D.; Bruno Pitrosky, Ph.D.; Albena Patroneva, M.D.; Qin Jiang; Philip T. Ninan, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, participants should be able to: 1) identify patterns of improvement in well being and functional outcome measures in patients treated with DVS; and 2) describe well being and functional outcomes using various rating scales in patients treated with DVS.

**SUMMARY:**

Objective: To evaluate outcomes related to functioning and well being with desvenlafaxine succinate (DVS) in patients with major depressive disorder (MDD). Methods: Data from the Sheehan Disability Scale (SDS) and 5-item World Health Organization Well-Being Index (WHO-5) were pooled from 4 double-blind, placebo-controlled, 8-week DVS clinical trials (ie, all fixed dose trials that evaluated these outcomes) in outpatients with DSM-IV MDD. Patients were randomized to fixed doses of DVS (50, 100, 200, or 400 mg/d: n=1205) or placebo (n=551). Final on-therapy data were compared between groups using analysis of covariance; adjusted mean differences (DVS vs placebo) are presented here. Results: DVS was associated with significantly greater improvement versus placebo in the SDS total score in the pooled data set (-2.8; $P < 0.001$) and in the 50 mg (-2.6; $P<0.001$), 100 mg (-2.6; $P < 0.001$), 200 mg (-2.7; $P < 0.001$), and 400 mg (-3.2; $P < 0.001$) dose groups. Significant improvement ($P < 0.01$) in each of the 4 SDS domains compared with placebo (work, social life/leisure activities, family life/home responsibilities, and work/social disability) was also found for the pooled data set and each of the individual dose groups. For the WHO-5 total score, DVS was associated with significantly greater improvement versus placebo in the pooled data set (2.0; $P < 0.001$) and in the 50 mg (1.7; $P<0.001$), 100 mg (2.0; $P < 0.001$), 200 mg (2.3; $P < 0.001$), and 400 mg (2.4; $P < 0.001$) dose groups. Significant improvement ($P<0.05$) compared with placebo was also found for the pooled data set and the individual dose groups for each of the WHO-5 individual items (good spirits, calm/relaxed, active/vigorous, fresh/rested, and interested in activities). Conclusions: DVS effectively improved functioning and well being in patients with MDD across a wide range of doses including the low dose 50 mg. Research supported by Wyeth Research.

**REFERENCES:**

1. DeMartinis NA, Yeung PP, Entsuah R, Monley AL. A double-blind, placebo-controlled study of the efficacy and safety of desvenlafaxine succinate in the treatment of major depressive disorder. J Clin Pyschiatry 2007; 68:677-688.
2. Hirschfeld RM, Montgomery SA, Keller MB, et al. So cial functioning in depression: a review. J Clin Psychiatry.

2000;61(4):268-275.

**NR5-090**

**LAMOTRIGINE TREATMENT OF AFFECTIVE INSTABILITY IN BORDERLINE PERSONALITY DISORDER**

*D. Bradford Reich, M.D. Mclean Hospital115 Mill Street, Belmont, MA 02478, Mary C. Zanarini, Ed.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand the effectiveness of lamotrigine in the treatment of overall affective instability and its components in borderline personality disorder.

**SUMMARY:**

Bacground: Current research has suggested that lamotrigine may be effective in treating anger and other affective symptoms in borderline personality disorder(BPD). This study prospectively examined the efficacy of lamotrigine in treating affective instability in BPD. Methods: We conducted a 12-week, double-blind, placebo-controlled study of 28 subjects who met DIB-R and DSM-IV criteria for BPD. Subjects could not meet DSM-IV criteria for bipolar disorder. Subjects could continue one antidepressant during the study. Subjects were randomly assigned to flexible-dose lamotrigine (dose range 25-250mg/day) or placebo in a 1:1 manner. The primary outcome measures were: 1) the Affective Lability Scale(ALS); 2) the six subscales of the ALS; and 3) the Affective Instability and Anger items of the Zanarini Rating Scale for Borderline Personality Disorder(ZAN-BPD). Results: The study randomized 15 subjects to receive lamotrigine and 13 subjects to receive placebo. The age range of subjects was 18-50. Twenty-four subjects were female. Six subjects were taking antidepressants concurrently during the study. Compared with subjects receiving placebo, subjects receiving lamotrigine had significantly greater reductions in total ALS scores and in scores for the depression, elation, and bipolar subscales of the ALS($P<0.05$). Compared with subjects receiving placebo, subjects receiving lamotrigine had significantly greater reductions in the Affective Instability Item of the ZAN-BPD($P<0.05$). There was a trend toward subjects receiving lamotrigine to have greater reductions in the Anger Item of the ZAN-BPD. A secondary finding was that subjects receiving lamotrigine had significantly greater reductions in scores on the ZAN-BPD Impulsivity Item($P<0.005$). Results: Results of this study suggest that lamotrigine, either as monotherapy or adjunctive therapy, is an effective treatment for affective instability and for the general impulsivity characteristic of BPD.

**REFERENCES:**

1. Tritt K, Nickel C, Lahmann C, et al. Lamotrigine treatment of aggression in female borderline patients: a randomized, double-blind, placebo-controlled study. J Psychopharmacol. 2005; 19(3):287-91.
2. Nickel MK, Nickel C, Mitterlehner FO, et al. Topiramate treatment of aggression in female borderline personality dis order patients: a double-blind, placebo-controlled study. J Clin Psychiatry. 2004; 65(11); 1515-19.

**NR5-091**

**A SINGLE BLIND, NATURALISTIC COMPARISON OF RAPID DOSE ADMINISTRATION OF DIVALPROEX ER VERSUS QUETIAPINE IN PATIENTS WITH ACUTE BIPOLAR MANIA.**

*David Feifel, PA-C University of California, San Diego Medical Center200 West Arbor Drive, San Diego, CA 92037, Barbara Galangue, M.A., Kai Macdonald, M.D., Olga Becker, M.D., Jason Cooper, M.D., Christopher Zanto, B.S., Ana Dinca, B.S.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be familiar with evidence regarding the comparative safety and efficacy of rapidl dose administered divalproex ER and quietiapine in hospitalized patients with acute bipolar mania.

**SUMMARY:**

Objective: When treating acute bipolar mania speed of anti-manic onset is crucial. Although quetiapine and divalproex ER are widely used agents to treat acute mania, head-to-head trials have not been done in adults. Rapid dose administration regimens for divalproex ER(1) and for quetiapine(2)have been described. We are currently conducting a head to head comparison of the efficacy and safety of rapidly titrated divalproex ER and quetiapine in acutely manic inpatients, with the primary outcome differences in efficacy and tolerability within the first seven days. Method: Consenting bipolar patients with acute mania (YMRS >17 ) were admitted to UCSD medical center for a minimum period of 3 days and randomized to receive rapidly loaded divalproex ER (30 mg/kg/day)or rapidly titrated quetiapine(200 mg on day 1, raised by 200 mg/day up to 800 mg as tolerated). Assessments were made on day 1 (baseline), 3,7,14 and 21. Raters but not patients or treating physicians were blinded (single blind). Results: Preliminary results using a last observation carried forward (LOCF) analysis revealed that subjects receiving divalproex ER (n=8) had a greater reduction from baseline in YMRS compared to subjects receiving quetiapine (n=6) on day 3 (10.8 vs. 8.4) and on day 7 (17.4 vs. 10.8) although these differences did not reach statistical significance. Clinical Global Impression- Improvement (CGI –I) scores for divalproex and quetiapine-treated subjects, respectively, also favored divalproex on day 3 (2.8 vs. 3.25) and day 7 (3.0 vs. 3.25). Conclusion: Preliminary evidence indicates that rapid dose administration of both quetiapine and divalproex ER produce rapid improvement in acute mania within the first 7 days. Though underpowered to reveal statistically significant differences, this preliminary data reveal a potential advantage for rapid administration of divalproex ER. This study is funded by a research grant from Abbott Laboratories.

**REFERENCES:**

1. Miller, BP, Perry, W, Moutier, CY, et al. (2005). Rapid oral loading of extended release divalproex in patients with acute mania. General Hospital Psychiatry, 27(3), 218-21.
2. Hatim, A, Habil, H, Jesjeet, SG, et al. (2006). Safety and effi cacy of rapid dose administration of quetiapine in bipolar mania. Human psychopharmacology, 21(5), 313-8.

**NR5-092**

**ESCITALOPRAM VERSUS PLACEBO IN THE**

**TREATMENT OF DYSTHYMIC DISORDER**

*David J Hellerstein, M.D. Columbia University Department of Pschiatry, 180 Ft. Washington Ave., #256, New YorkNY 10032, Sarai Batchelder, Ph.D., Steven E. Hyler, M.D., Gony Weiss, M.D., Lisa Coram, M.D., Bachaar Arnaout, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to describe the results of a double-blind placebo-controlled study of an SSRI in dysthymic disorder.

**SUMMARY:**

Introduction: 17 double-blind studies (1) have assessed the efficacy of antidepressant, including SSRIs, in treating dysthymic disorder (DD). Escitalopram, the L-enantiomer of citalopram (2), has not been studied in treatment of DD. Method: Outpatients with SCID-diagnosed dysthymic disorder (DD) were randomly assigned to prospective double-blind escitalopram (maximum dose 20 mg/d) vs. placebo for 12 weeks. Inclusion criteria included age 18-65 years and Hamilton Depression Rating Scale (HDRS) score >12. HDRS, Cornell Dysthymia Rating Scale, CGI, BDI and other assessments were done at each visit. We hypothesized that escitalopram would be superior to placebo in: 1) HDRS-24 item total score; 2) the percentage of subjects classified as (a) responders and (b) remitters; and 3) secondary measures (CDRS, BDI, CGI). Response was defined as >50% decrease in HDRS and CGI-Improvement score of 1 or 2. Remission was defined as HRDS-17 item score < 7 and 0 on item 1 of the HDRS. Results: 36 subjects, age 23-65 (m+SD=44.7+11 years) were enrolled. Baseline HDRS-24 averaged 23.4+5.9. Escitalopram-treated subjects had significantly lower HDRS-24 scores at LOCF observation than placebo-treated subjects (10.6+5.9 vs. 16.3+7.0;t=2.44,df=28,p=.02). Significant between-group differences on HDRS and other ratings appeared at week 4. Responder and remitter analyses were not significantly different, however. Response rate was 43.8% for escitalopram vs. 33.3% for placebo (chi sq (df=1,n=31)=.35,p=.55); and remitter rate was 25% for escitalopram vs. 6.7% for placebo (chi sq (df+1,n=31)=1.92,p=.17). Effect size was in the small range (theta=.11) for response, and in the medium range (theta=.25) for remission. Conclusions: HDRS and other ratings suggest that escitalopram is superior to placebo in treatment of DD. Response and remission did not differ significantly; a larger sample size may demonstrate placebo-medication differences. Disclaimer: funded by Forest Laboratories.

**REFERENCES:**

1. Lima MS, Moncrieff J, Soares BGO. Drugs versus placebo for dysthymia. Cochrane Database of Systematic Reviews 2005, Issue 2. Art. No.: CD001130. DOI: 10.1002/14651858. CD001130.
2. Hellerstein DJ, Batchelder S, Miozzo R, Kreditor D, Hyler S, Gangure D, Clark J. Citalopram in the treatment of dys thymic disorder. International Clinical Psychopharmacology 2004;19:143-148.

**NR5-093**

**DOUBLE-BLIND PLACEBO-CONTROLLED RANDOMIZED CLINICAL TRIAL OF ETHYL-EICOSAPENTAENOIC ACID (EPA) MONOTHERAPY FOR MAJOR DEPRESSIVE DISORDER**

*David Mischoulon, M.D., Ph.D., 50 Staniford Street, Suite 401, Boston, MA 02114*

**Educational Objectives:**

At the conclusion of this session, the participant should be able to understand the efficacy of the omega-3 fatty acid eicosapentaenoic acid (EPA) for the treatment of depression.

**SUMMARY:**

Introduction: The omega-3 fatty acid eicosapentaenoic acid (EPA) has been studied for treatment of major depressive disorder (MDD), with encouraging results primarily as adjunctive therapy. We wished to examine EPA's efficacy as monotherapy for depression in a double blind, randomized placebo-controlled manner.
Hypothesis: Depressed subjects receiving Ethyl-EPA will display a greater response rate than those receiving placebo (PBO).
Methods: 57 subjects (65% female) with SCID-diagnosed MDD were randomized to either 1 gram/day of EPA or PBO and followed for 8 weeks. The main outcome measure was the 17-item Hamilton-D scale for depression (HAM-D-17).
Results: 35 subjects (63% female; 16 on EPA, 19 on PBO) were eligible for modified intent to treat (MITT) analysis. In the MITT sample, mean HAM-D-17 scores dropped from 21.56+/-2.73 to 13.19+/-18.54 for the EPA group ($p<0.05$), and from 20.47+/-3.61 to 15.00+/-8.24 for the PBO group ($p<0.05$). MITT response rates, based on 50% or greater decrease in HAM-D-17 score, were 50% (8/16) for the EPA group, and 37% (7/19) for the PBO group. Among the 13 completers (6 on EPA, 7 on PBO), mean HAM-D-17 scores dropped from 21.50+/-2.17 to 12.17+/-7.08 for the EPA group ($p<0.05$), and from 21.00+/-3.61 to 10.29+/-6.55 for the PBO group ($p<0.05$). Completer response rates were 50% (3/6) for the EPA group, and 43% (3/7) for the PBO group. Comparisons between EPA and PBO groups did not reach statistical significance ($p>0.05$).
Conclusions: There was a modest advantage for EPA over placebo that did not reach significance, likely because of the small sample size.
Discussion: EPA may be effective as monotherapy for depression. These results need to be replicated on a larger scale.
This work was supported by grant K23 AT001129 from the National Center for Complementary and Alternative Medicine (NCCAM). Ethyl-eicosapentaenoic acid and placebo were kindly provided by Amarin.

**REFERENCES:**

1. Peet M, Horrobin DF. A dose-ranging study of the effects of ethyleicosapentaenoate in patients with ongoing depression despite apparently adequate treatment with standard drugs. Arch Gen Psychiatry 2002;59:913-919.
2. Nemets B, Stahl Z, Belmaker RH. Addition of omega-3 fatty acid to maintenance medication treatment for recurrent unipo lar depressive disorder. Am J Psychiatry 2002;159:477-479.

**NR5-094**

**REDUCED SERUM BDNF LEVELS IN PATIENTS WITH CHRONIC SCHIZOPHRENIC DISORDER IN RELAPSE AND ON TREATMENT WITH TYPICAL OR ATYPICAL ANTIPSYCHOTICS**

*Emmanouil Rizos, M.D. 1 Rimini, Haidari, 2nd Psychiatric Department, Medical School, University of Athens "ATTIKON"*

*General Hospital., Athens, Greece 12462, Emmanouil N. Rizos, M.D., Athanasia Papadopoulou, M.D., Efstathios Laskos, M.D., Dimitrios Vasilopoulos, M.D., Konstantinos Katsafouros, M.D., and Lefteris Lykouras, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant, through measurements of serum BDNF levels of patients with schizophrenic disorder, should be able to treat with a possiblly neuroprotective antipsychotic medication. Treatment with an established neuroprotective antipsychotic agent may have implications for the outcome and prognosis of schizophrenic disorder.

**SUMMARY:**

Brain-derived neurotrophic factor (BDNF) as a member of neurotrophic family plays an important role in the neuronal development and synaptic plasticity of the central nervous system and may be implicated in the pathophysiology of schizophrenia. Decreased BDNF levels have been found in central nervous system and in serum of patients with schizophrenia. In our study we measured serum BDNF levels in 47 schizophrenic patients in relapse (14 on risperidone , 18 on haloperidol, 10 on olanzapine and 5 on amisulpride) and in 44 healthy volunteers. Serum BDNF levels of patients with schizophrenia were measured twice: a) At the time of their admission with their antipsychotic treatment discontinued at least three months earlier, and b) 6 weeks later under antipsychotic medication. Healthy controls showed significantly higher serum BDNF levels compared to the group of patients with chronic schizophrenic disorder ($p<0.005$). Serum BDNF levels for healthy volunteers were $27.5 \pm 8.2$ ng/ml. In the drug-free state serum BDNF of relapsed patients with schizophrenia were $19.3 \pm 8.6$ ng/ml. Following 6 week medication serum BDNF levels were $19.9 \pm 10.7$ ng/ml. Serum BDNF was increased significantly in the group of olanzapine after 6 weeks treatment ($15.0 \pm 4.8$ vs $21.0 \pm 4.3$ ng/ml, $p=0.028$). Our findings indicate a possible differential effect of olanzapine compared to haloperidol, risperidone and amisulpride in the level of possible neuroprotection and thus may have implications for the treatment outcome.

**REFERENCES:**

1. Grillo RW, Ottoni GL, Leke R, Souza D, Portela L, Lara D: Reduced serum BDNF levels in schizophrenic patients on clozapine or typical antipsychotics. J Psych Research 2007;41:31-35.
2. Yoshimura R, Hori H, Sugita A, et al: Treatment with ris peridone for 4 weeks increased plasma 3-methoxy-4-hy droxyphenylglycol (MHPG) levels, but did not alter plasma brain-derived neurotrophic factor (BDNF) levels in schizo phrenic patients. Progr Neuro-Psychoparmacol & Biol Psy chiatry 2007;31:1072-1077.

**NR5-095**

## ARIPIPRAZOLE IN THE TREATMENT OF TARDIVE DYSKINESIA INDUCED BY OTHER ATYPICAL ANTIPSYCHOTICS

*Emmanouil Rizos, M.D. 1 Rimini, Haidari, 2nd Psychiatric Department, Medical School, University of Athens "ATTIKON" General Hospital., Athens, Greece 12462, Lefteris Lykouras, M.D., Ph.D., F.I.C.P.M., Emmanouil Rizos, M.D., Rossetos Gournellis, M.D., Athanasios Douzenis, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to know how could treat tardive dyskinesia caused by an atypical antipsychotic. Aripiprazole through its particular dopaminergic action may be beneficial in the treatment of tardive dyskinesia.

**SUMMARY:**

We report the case of a female patient with a DSM IV schizoaffective disorder who developed tardive dyskinesia (TD) during treatment with quetiapine. Prior to that medication she had a history of short-term exposure to amisulpride, venlafaxine and mirtazapine. Aripiprazole as a monotherapy gradually improved TD up to full remission and during the next seven months of follow-up the patient no longer experienced TD symptoms and remained mentally asymptomatic. When atypical antipsychotics induce TD aripiprazole medication may be beneficial.

**REFERENCES:**

1. Witschy JK, Winter JK: Improvement in tardive dyskinesia with aripiprazole use. Can J Psychiatry 2005;50:188.
2. Duggal HS: Aripiprazole-induced improvement in tardive dyskinesia. Can J Psychiatry 2003;48:771-772.

**NR5-096**

## IMPACT OF SWITCHING TO ANOTHER SSRI FOR NON-MEDICAL REASONS ON HEALTH CARE UTILIZATION AND COSTS AMONG MDD PATIENTS INITIATED WITH ESCITALOPRAM

*Eric Q Wu, Ph.D. Analysis Group Inc.111 Huntington Avenue, Tenth Floor, Boston, MA 02199, Rym Ben-Hamadi, MSc, Marique Buessing, BA, Mei Lu, MD, Andrew P. Yu, PhD, Jackson Tang, MS, M. Haim Erder, PhD, Anjana Bose, PhD*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to; 1) Understand the economic burden of treating MDD patients in a managed care setting and evaluate the treatment cost components; and 2) Recognize that MDD patients who continue treatment with escitalopram have lower resource utilization and costs than similar patients who switch to another SSRI for non-medical reasons

**SUMMARY:**

OBJECTIVE: Compare health care utilization and costs of Major Depressive Disorder (MDD) patients who remained on escitalopram vs. MDD patients who were switched to another SSRI for non-medical reasons.

METHODS: Adult MDD patients on escitalopram for >= 90 days in the IHCIS National Managed Care Database (2003-2006) were put in 2 groups: 1) continued on escitalopram and 2) switched to another SSRI for non-medical reasons (no treatment failure, e.g., MDD-related emergency visit (ER) or hospitalization within 7 days prior to switching. Outcomes (all-cause and MDD-related) were analyzed over 3 months post index date and included rates and number of hospitalizations, rates of ER and health care costs. Outcomes were compared descriptively between the two groups and were further analyzed using regression analyses adjusting for differences in patient comorbidities and health care resource use at baseline. Costs

were inflation-adjusted to 2006 US dollars. RESULTS: The study included 3,768 matched pairs. Patients who switched to another SSRI had higher rates of all-cause and MDD-related hospitalizations (Relative Risk [RR]=1.5 and 2.4 respectively) and all-cause and MDD-related ER (RR=1.2 and 1.7 respectively, all P<=0.001). They also had on average 40% more all-cause hospitalizations visits and 50% more MDD-related hospitalization visits (all P<0.01). Compared to patients who remained on escitalopram, patients who were switched to another SSRI had on average $419 higher total costs (including $159 higher drug costs, all P<0.05). Results from multivariate regression analyses confirmed these findings.
CONCLUSION: Compared to MDD patients who remained on escitalopram, patients who were switched to another SSRI for non-medical reasons used more hospitalization and ER resources and had higher health care costs in the 3-month period post index date. This study and its presentation were supported by Forest Laboratories, Inc.

**REFERENCES:**


1. Bull SA, Hunkeler EM, Lee JY Rowland CR, Williamson TE, Schwab JR, Hurt SW: Discontinuing or switching selec tive serotonin-reuptake inhibitors. Ann Pharmacother 2002; 36: 578-584.
2. Kennedy SH, Andersen HF, Lam RW: Efficacy of escitalo pram in the treatment of major depressive disorder compared with conventional selective serotonin reuptake inhibitors and venlafaxine XR: a meta-analysis. J Psychiatry Neurosci 2006; 31: 122-131.


**NR5-097**

## ANTIPSYCHOTIC-INDUCED HYPERPROLACTINEMIA: A CROSS-SECTIONAL SURVEY


*Erik Johnsen, M.D. Haukeland University Hospital, Division of Psychiatry, Sandviken, Pb 23, N-5812 Bergen, Norway 5035, Rune A. Kroken, M.D., Mirsad Abaza, M.D., Henning Olberg, M.D., Hugo.A. Jørgensen, M.D, Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize antipsychotic-induced hyperprolactinemia as a potential health risk that may be present despite the lack of concomitant symptoms. Long-term complications to hyperprolactinemia may be osteoporosis and fractures, cancer, and cardiovascular disease.

**SUMMARY:**


Objectives: Elevated levels of prolactin are commonly associated with a number of troublesome symptoms. Recently, the attention has also been brought to serious long-term complications, such as osteoporosis. In 20-25% of hyperprolactinemic sera from endocrinology laboratories, however, the hyperprolactinemia is caused by a variant called macroprolactin with little or no bioactivity in vivo. Hyper-prolactinemia is a frequent, though under-recognized side-effect of many antipsychotic drugs. The prevalence of macroprolactinemia in an antipsychotic-medicated population is unknown. We have studied the prevalence of both hyperprolactinemia and macroprolactinemia in patients using antipsychotics, as well as explored the correlation between levels of prolactin and the presence of galactorrhoea, gynecomastia, diminished sexual desire and erectile dysfunction. These are regarded as common prolactin-associated symptoms.
Method: Applying a cross-sectional design, in- and outpatients in the catchment area of a major Norwegian mental hospital were included. These provided blood samples and selected self-ratings from the UKU side effects rating scale. All medications were registered.
Results: A total of 87 patients, 54 males and 33 females, were included. Thirty-six percent had hyperprolactinemia. None of these were caused by macroprolactinemia. Pearson correlation between prolactin level and symptoms revealed no association ($r = 0.033$; $p = 0.76$).
Discussion: The results suggest that macroprolactinemia is not frequently implicated in antipsychotic-induced hyperprolactinemia which consequently consisted of biologically active prolactin. The lack of correlation between hyperprolactinemia-associated symptoms and prolactin levels suggests that prolactin levels should be measured also in the absence of symptoms in order to prevent long-term complications of "silent" hyperprolactinemia.


**REFERENCES:**


1. Haddad PM, Wieck A. Antipsychotic-induced hyperprolacti naemia. Mechanisms, clinical features and management. Drugs 2004; 64 (20); 2291-324.
2. Gibney J, Smith TP, McKenna TJ. Clinical relevance of mac roprolactin. Clin Endocrinol 2005; 62: 633-43.


**NR5-098**

## MORPHINE REDUCES PTSD SYMPTOMS IN BURNED CHILDREN 1-4 YEARS OLD


*Frederick J Stoddard, M.D. SBH 610 Massachusetts General Hospital55 Fruit Street, Boston, MA 02114, J. Michael Murphy, Ed.D., Atilla Ceranoglu, M.D., Glenn Saxe, M.D., Erica Sorrentino, M.A., Jennifer Drake, M.A., Heidi Ronfeldt, Ph.D., Robert Sheridan, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to describe the current literature on pharmacological interventions, specifically morphine, on symptoms of posttraumatic stress among children with burns. In addition, the participant should be able to discuss the methodologies of the research within this topic and the future directions of extending this research to younger children with burn injuries.

**SUMMARY:**


Introduction: Building upon previous findings (Saxe et al., 2001) with 6-16 year old children, the current study sought in a sample of younger children to test the hypothesis that children who received higher does of morphine during hospitalization for acute burns would have significantly larger decreases in PTSD symptoms six months later. Methods: Eighty-four 12-48 month-old children with acute burns admitted to the Shriners Burns Hospital in Boston, MA and their parents participated in the study (Stoddard et al., 2006). Parents were interviewed at three time points: during their child's hospitalization, and one and six months after discharge. Measures included the parent-reported Child Stress Reaction Checklist (CSRC). Medical chart reviews were conducted to obtain children's morphine dosages during hospitalization. Mean equivalency dosages of morphine (mg/kg/day) were calculated to combine oral and IV

administrations. Participants on ventilators were excluded from analyses. Results: Eleven non-vented participants had complete six month data on the CSRC. The correlation between average morphine dose during hospitalization and amount of decrease in PTSD symptoms on the CSRC (r = -.32) was similar to that found in studies with older children. Although the correlation with overall symptom score on the CSRC failed to reach statistical significance in this small sample, the correlation with amount of decrease in symptoms on the PTSD arousal cluster was even stronger and did reach statistical significance (r = -.63, p < .05). Conclusions: Findings from the current study suggest that for young, as well as for older children, more aggressive pain management may be associated with a decreasing number of PTSD symptoms, especially those of arousal, in the months immediately after major trauma.

**REFERENCES:**


1. Saxe G, Stoddard F, Courtney D, Cunningham K, Chawla N, Sheridan R, King D, King L: Relationship between acute morphine and the course of PTSD in children with burns. J Am Acad Child Adolesc Psychiatry 2001; 40:915-921.
2. Stoddard F, Ronfeldt H, Kagan J, Drake JE, Snidman N, Murphy JM, Saxe G, Burns J, Sheridan RL: Young burned children: the course of acute stress and physiological and behavioral responses. Am J Psychiatry 2006; 163:1084-1090.


**NR5-099**

## RISPERIDON TREATMENT IN COMPLEX POST-TRAUMATIC STRESS DISORDER


*Grozdanko G Grbesa, M.D. Clinick for Mental HealthClinical Center NisDr. Zorana Djindjica 48 18000 Nis Serbia, NisYugoslavia 18000,*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to treat subject with chronic posttraumatic stress disorder with risperidon.

**SUMMARY:**


OBJECTIVE: Clinically the most relevant issues associated with complex posttraumatic stress disorder appear as problems with self-regulation, including affect and impulse dysregulation; transient dissociative episodes; somatic complaints and altered relations with self and others, as well as the symptoms of depression and anxiety. The study was designed to establishe the efficacy of risperidone in the treatment of complex posttraumatic stress disorder. METHOD: Male war veterans (n=40) with *DSM-IV* diagnosed PTSD completed 4 weeks prospective, open-labeled trial with risperidone (0,5-3mg per day). The reduction of the total and subscale scores on the Clinician Administrated PTSD Scale (CAPS) and Hamiltone Anxiety Scale (HAMA) were used as primary outcome measures. RESULTS: At treatment endpoint risperidone-treated patients showed decrease from baseline in total CAPS (54%) and HAMA scores ( 37%). CONCLUSION: Our data suggest that posttraumatic stress disorder improves after taking atypical antipsychotics and shed some light to the possible machanisms of actions of the atypical antipsychotics in severe forms of trauma-related psychopathology.


**REFERENCES:**


1. David D, At all Psychotic symptoms in combat-re lated posttraumatic stress disorder. J Clin Psychiatry. 1999 Aug;60(8):555-6.


**NR5-100**

## ATIPSYCHOTIC PRESCRIBING BEFORE CLOZAPINE IN A COMMUNITY PSYCHIATRIC HOSPITAL: A CASE NOTE REVIEW


*Hellme Najim, Mental Health Unit, Basildon HospitalBasildon-Essex SS16 5NL United Kingdom David Heath*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant will be able to: 1) highlight the management of treatment resistant schizophrenia; and 2) discuss the role of clozapine in the treatment of this disorder.

**SUMMARY:**


OBJECTIVES: To examine whether prescribing clozapine was delayed in individuals with evidence of Treatment Resistant Schizophrenia (RTS), and why?.METHODS: Prior prescribing was categorised as follows:-The number of episodes of antipsychotics used before first use of clozapine. Prior prescription of multiple antipsychotics was recorded. The main outcome measured was the maximum theoretical delay in starting clozapine.In analyses of factors associated with theoretical delay, mean values were compared using an unpaired, 2-sided Student t-test, after assuming normal distribution of data. The association between duration of illness and theoretical delay was analysed by scatterplot and Pearson correlation coefficient.Results:
Prescribing histories were obtained from 42 patients. Mean age of subjects was 40.1 years.Mean duration of illness 12.4 years. Mean duration of clozapine use was 10 years.The mean maximum theoretical delay in all patients was 5.0 years. Statistically significant difference in delay was found in patients aged over 30 years at the time of analysis , patients diagnosed with schizophrenia/schizoaffective disorder before the introduction of clozapine,patients who completed trials of two antipsychotics before the introduction of clozapine, and for patients completing a second trial of an antipsychotic before the introduction of risperidone.Delay was significantly shorter for those patients admitted to a psychiatric hospital as an inpatient on average more than once per year before starting clozapine. CONCLUSION: There is a strong indication that clozapine was not introduced at the earliest opportunity in individuals with evidence of TRS.Factors contributing to the delay in the use of clozapine, the patient's age, the practice of prolonged sequential antipsychotic trials, a "wait and see approach", and the failure to identify TRS. However the practice of earlier use of clozapine appears to have been adopted more in recent years.


**REFERENCES:**


1. Taylor, D., Young, C., Paton, C., Prior Antipsychotic Prescrib ing in Patients currently receiving clozapine: a case note review. J. Clin Psychiatry 2003; 64:30-34.
2. Szymanski, S., Masiar, S., Mayerhoff, D. et al. clozapine re sponse in treatment-refractory first-episode schizophrenia. Biol Psychiatry 1994; 35:278-280.


**NR5-101**

## DETECTION OF ARIPIPRAZOLE AND ITS METABOLITE BY USING CAPILLARY ELECTROPHORESIS

*Hsien-Jane Chiu, M.D. 448 Chung-Hwa Road, Hualien, Taiwan 981, Tsuo-Hung Lan,MD, Ph.D., El-Wui Loh, PhD, Tsung-Ming Hu, MD, M.Sc., Bo-Jian Wu, MD, M.Sc., Keh-Ming Lin, MD, MPH*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand aripiprazole concentration can be well detected by capillary electrophoresis technique.

**SUMMARY:**

Objective: Aripiprazole is a new antipsychotics with the characteristic of partial agonist on dopaminergic receptor. The relationship between serum concentration and clinical observation is not clear. This study is to explore the relationship between serum aripiprazole level and clinical efficacy; we need a reliable, accurate, and economic method to accomplish the quantities measurement.

Method: This is an investigator-initiated, naturalistic study project. We prepared aripiprazole standard powder, its major metabolite (dehydroaripiprazole),and internal standard (OPC-14714) diluted solution as 200 ug/ml in DMSO. The capillary electrophoresis (CE) system is composed of P/ACE System MDQ (Beckman, C.A.,USA), Photo Diode Array (PDA) Detector, and Milli-Q Academic System (Millipore Corporation USA). All information is analyzed by using the software 32 Karat 7.0 (Beckman, C.A.,USA).

Results: The standard calibration curve of aripiprazole by using capillary electrophoresis can be achieved appropriately. The best working condition is established by (1) Buffer:80mM 2-3% DMSO- Phosphate Buffer,pH3.0, (2) a 75µmID*60cm length capillary, and (3) 20? temperature. By using concentrating technique and re-harvesting, the serum aripiprazole can be detected and compatible with oral dosage of aripiprazole prescription. The measurement of aripiprazole level is correlated to GC/MS detection.

Conclusion: Our study suggests capillary electrophoresis might be an appropriate tool to detect serum aripiprazole under daily prescription level with advantages of low expense, acceptable reliability, and time saving. It can be applied to the future clinical observations after aripiprazole among schizophrenic people.

**REFERENCES:**

1. Masanori Kubo, Yasuo Mizooku, Yukihiro H irao, and Taka hiko Osumi.(2005)Development and validation of LC-MS/MS method for the quantitative determination of aripiprazole and its main metabolite, OPC-14857, in human plasma. Jour nal of Chromatography B;822:294-299
2. Huang HC, Liu CH, Lan TH, Hu TM, Chiu HJ, Wu YC, Tseng YL (2007) Detection and quantification of aripiprazole and its metabolite, dehydroaripiprazole, by gas chromatogra phy–mass spectrometry in blood samples of psychiatric pa tients. J Chromatogr B, 856(1-2):57-61

**NR5-102**

## PHARMACOLOGICAL TREATMENT OF PSYCHOTIC DEPRESSION, A RANDOMIZED, DOUBLE-BLIND STUDY COMPARING IMIPRAMINE, VENLAFAXINE AND VENLAFAXINE PLUS QUETIAPINE

*Jaap J Wijkstra, M.D. UMCUtrecht B01.206PB 855003508 GA Utrecht, The Netherlands, UtrechtNetherlands 3831kc, Huibert Burger, M.D., Ph.D., Walter W. van den Broek, M.D., Ph.D., Robbert J. Verkes, M.D., Ph.D., Tom K. Birkenhäger, M.D., Ph.D., Joost Janzing, M.D., Ph.D., Marco P.M. Boks, M.D., Ph.D., Marc L.M. van der Loos, M.D., Leonie M.T. Breteler, M.D., Guillaume M.G.I. Ramaekers M.D., M.Sc., Ph.D., Willem A. Nolen, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to demonstrate knowledge and understanding of the efficacy and safety of imipramine, venlafaxine and venlafaxine plus quetiapine in the treatment of psychotic depression.

**SUMMARY:**

Context: It is unclear whether the combination of an antidepressant and an antipsychotic is more effective that an antidepressant alone in the treatment of unipolar psychotic depression (APA, 2000; Wijkstra et al, 2006).

Objective: To compare in inpatients with unipolar psychotic depression the efficacy of imipramine (Im), venlafaxine (V), and venlafaxine plus quetiapine (VQ).

Design: Double blind randomized controlled study lasting 7 weeks.

Setting: 122 hospitalized patients in 8 centers in the Netherlands.

Patients: Major depressive disorder with psychotic features (SCID; *DSM-IV)*, aged 18 to 65 years, HAM-D(17) score: > 18 points.

Intervention: Im (dose adjustment to 200–300 ug/L), V (max. 375 mg) or VQ (max. 375 mg/max. 600 mg).

Outcome measures: Primary: response on HAM-D (=50% decrease and < 14). Secondary: response on CGI, change in HAM-D, change in CGI-severity, time to response, adverse effects, group differences especially with regard to previous treatment of current episode.

Results: One hundred of the 122 patients (82%) completed all 7 weeks of the study. Drop outs due to side effects were low: Im: 3/7 drop outs, V: 1/8 drop outs, and VQ: 2/7 drop outs. VQ was more effective than V alone ($p = 0.0036$), with no statistically significant differences between VQ and Im, nor between Im and V on the primary outcome measure; HAM-D response rates were 52.4% for Im, 33.3% for V and 65.9% for VQ (ITT analysis). On the continuous outcome measures the difference between VQ and V became apparent only after 5 weeks.

Conclusion: The combination of venlafaxine plus quetiapine was more effective than venlafaxine alone in the treatment of patients with psychotic depression. There were (non-significant) trends for a better effect of the combination versus imipramine as well as for imipramine versus venlafaxine alone.This study was supported by grants from Wyeth, Netherlands and Astra Zeneca, Netherlands, who both also provided the study medication.

**REFERENCES:**

1. Wijkstra J, Lijmer J, Balk FJ, Geddes JR, Nolen WA: Pharma cological treatment for unipolar psychotic depression: systematic review and meta-analysis. Br J Psychiatry 2006; 188:410-415.
2. American Psychiatric Association (APA): Practice guideline for the treatment of patients with major depressive disorder (revision), 2000.

**NR5-103**

## THE USE OF MULTIPLE ANTIPSYCHOTIC MEDICATIONS IN PSYCHIATRIC INPATIENTS:

*Retrospective Review of Treatment Strategies and Length of Stay*
*Jeffrey D Raynor, M.D. G.W. Bryan Psychiatric Hospital*
*220 Faison Drive, Columbia, SC 29203, Alice Teich, B.S., Christine Latham, R.Ph., Ronald E. Prier, M.D., John H. Magill, M.S.W., Richard K. Harding, M.D., Meera Narasimhan M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the issues related to combination therapy with multiple antipsychotic medications. Specifically, they will understand that, although commonly utilized, limited data exists regarding efficacy of this practice. They will learn the prevalence of this practice in psychiatric inpatients and the most common strategies employed.

**SUMMARY:**

Introduction: The efficacy of combining antipsychotic medications has not been extensively studied. This practice is often used in public psychiatric hospitals, where many patients are non responders or partial responders to monotherapy. The authors set out to examine this practice and its outcomes in a real world sample. Methods: Cases were selected from an acute state psychiatric facility. Using a computerized database, patients discharged on multiple antipsychotic over 18 months were reviewed. Average lengths of stay were calculated based on the medications, race, gender, and diagnosis. Patients on clozapine were not included. Results: 113 patients were discharged on multiple antipsychotics. 63% were discharged on a second and a first generation antipsychotic. 35% were discharged on two second generation antipsychotics. Overall length of stay was 92 days with no difference noted between treatment strategies. African Americans were 76% of both treatment groups with no length of stay differences were based on race. Lengths of stay were not different between treatment groups in psychotic or schizoaffective disorders. In the 8 patients with bipolar disorder, those treated with two second generation antipsychotics had a length of stay of 15.5 days compared to 55 days with a second and a first generation antipsychotic. Conclusions: Multiple antipsychotics are often used to treat psychosis in patients with extended hospitalizations. No treatment strategy was superior in shortening stays, but combining first and second generation agents was more common. Its statistical significance is limited by the small number of bipolar patients; the trends noted in this group may reflect mood stabilizing effects of second generation agents. Clinicians must consider individual patient needs in choosing antipsychotics as no one strategy appears to be more efficacious. Additional study of this treatment strategy is needed to guide clinicians' decisions.

**REFERENCES:**

1. Lelliot P, Paton C, Harrington M, Konsolaki M, Sensky T, Okocha C: The influence of patient variables on polypharmacy and combined high dose of antipsychotic drugs prescribed for inpatients. Psychiatric Bulletin 2002; 26: 411-414
2. Chakos M, Glick I, Miller A, Hamner M, Miller D, Patel J, Tapp A, Keefe R, Rosenheck R: Baseline use of concomitant psychotropic medications to treat schizophrenia in the CATIE Trial. Psychiatr Serv 2006; 57: 1094-1101

**NR5-104**

## PSYCHIATRISTS' ATTITUDE TO CLOZAPINE

*Jimmi Nielsen, M.D. Unit for Psychiatric Research Aalborg Psychiatric HospitalAarhus University Hospital*
*Molleparkvej 10, Aalborg, Denmark 9000, Dahm M., Lublin H., M.D., DMSc.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize that clozapine has an important role in treatment-resistant schizophrenia and the use of clozapine is depending on the doctor's knowledge, experience and attitude to the drug.

**SUMMARY:**

Background: Clozapine is still the drug of choice in patients with treatment-resistant schizophrenia but often the initiation of clozapine is delayed according to the treatment algorithms. Furthermore, pharmacoepidemiological studies have shown that the prescription rate of clozapine is varying between counties. We decided to investigate psychiatrists' attitudes to clozapine in order to achieve more knowledge about why clozapine treatment is delayed according to the use of algorithms and why the prescriptions rate differs. Methods: One-hundred psychiatrists from three counties in Denmark were interviewed by phone. The interview was structured and included demographic data, questions about experience, attitude, and knowledge about clozapine. Results: Seven out of 100 psychiatrists had never used clozapine, despite they had been working for a minimum 5 years in psychiatry and with an age above 40. In average the psychiatrists had the treatment responsibility of 8.9 patients treated with clozapine and only 31 % had prescribed clozapine within the last three months. The psychiatrists found the metabolic issue and the blood monitoring as the most problematic part of the treatment. Discussion: The psychiatrists' lack of knowledge and experience with clozapine is concerning due to the fact that clozapine has a major role in this patient group. There might be several explanations for that, e.g. no promotion of clozapine by drug companies in Europe because the drug is at a generic sale. Another reason might be that some psychiatrists are scared about the fatal side-effects of clozapine. Conclusion: Educating psychiatrists in the use of clozapine or gathering treatment-resistant patients with schizophrenia in specialized units might be beneficial.

**REFERENCES:**

1. Taylor DM: Prior antipsychotic prescribing in patients cur rently receiving clozapine: A case note review. J Clin Psy chiatry 2003; 64: 30-34.
2. Kane J: Clozapine for the treatment-resistant schizophrenics. Arch Gen Psychiatry vol 45, Sept 1998.

**NR5-105**

## EARLY IMPROVEMENT AS A PREDICTOR OF RESPONSE AND REMISSION FROM 10 PLACEBO-CONTROLLED ACUTE BIPOLAR I OR II DEPRESSION TRIALS

*Joseph R Calabrese, M.D. 11400 Euclid Avenue, Suite 200, Cleveland, OH 44106, Stephen J Ganocy, Ph.D.; Martin Brecher, MD; Berit X Carlson, Ph.D; Suzanne Edwards, Dr.P.H; James Eudicone, Ph.D.; Gary Evoniuk, Ph.D.; Wim T Jansen, Ph.D.; David E Kemp, M.D.; Robert McQuade, M.D.; Brian Millen, PhD;*

*Margaret Minkwitz, PhD; Randall Owen, M.D.; Andrei Pikalov, M.D., Ph.D.; Armin Szegedi, M.D.; Mauricio Tohen, M.D.; Estelle Vester-Blokland, M.D.; Arjen PP van Willigenburg, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand the clinical usefulness of early improvement as a predictor of later response or remission in the acute treatment of bipolar depression and understand the usefulness of sensitivity, specificity, positive predictive values, and negative predictive values.

**SUMMARY:**

Background:
In testing for differences between antidepressants and placebo in major depressive disorder (MDD), significant differences are usually not observed until week 3, leading to the belief that trials of antidepressants require 4-6 weeks. Survival analytic techniques (Stassen et al 2007) have been applied to short-term randomized controlled trials in MDD and suggest the probability of achieving response or remission in subjects experiencing early improvement is high. Similar analyses are presented below from patients enrolled into acute bipolar depression trials.
Methods:
Ten similarly-designed, multicenter, randomized, double-blind, placebo-controlled trials in 3,369 patients with bipolar I or II depression were blinded and used to determine if early improvement predicts later response and remission [2 aripiprazole, 5 lamotrigine, 1 olanzapine, olanzapine-fluoxetine combination (OFC) study, and 2 quetiapine studies]. Early improvement was defined as =20% reduction from baseline in MADRS total score at Week 2. Response was defined as =50% reduction in MADRS total score at endpoint (LOCF). Remission was defined as MADRS total score =10 at LOCF. Sensitivity, specificity, and positive (PPV) and negative (NPV) predictive values were calculated. To manage heterogeneous study outcomes, predictive power analyses were blindly pooled using LOCF, including 4 positive studies separating from placebo and the corresponding segregated placebo data, 6 negative/failed studies and the corresponding segregated placebo data, and pooled placebo data from all 10 studies.
Results: In all, 1,456 patients were randomized to placebo and 1,913 to active compounds in this 10 study analysis. The PPV for response in the positive experimental group was 86% and the NPV was 48%. Discussion: In contrast to MDD, lack of early improvement at 2 weeks in bipolar depression does not appear to provide useful information regarding the probability of later non-response.

**REFERENCES:**

1. Stassen HH, Angst J, Hell D, Scharfetter C, Szegedi A: Is there a common resilience mechanism underlying antide pressant drug response? Evidence from 2848 patients. J Cin Psychiatry 2007;68:1195-1205.
2. Szegedi A, Muller MJ, Anghelescu I, Klawe C, Kohnen R, Benkert O: Early improvement under mirtazapine and par oxetine predicts later stable response and remission with high sensitivity in patients with major depression. J Clin Psychia try 2003 Apr;64(4):413-20.

**NR5-106**

**VILAZODONE: EVIDENCE FOR EFFICACY AND TOLERABILITY IN THE TREATMENT OF MAJOR DEPRESSIVE DISORDER**

*Karl Rickels, M.D. University of Pennsylvania Department of Psychiatry Mood and Anxiety Disorders 3535 Market Street, Ste 670 Philadelphia, PA 19104-3309, Maria Athanasiou, Ph.D., Don Robinson, M.D., Michael Gibertini, Ph.D., Heidi Whalen, and Carol R Reed, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to evaluate and discuss 1) the results from this clinical trial supporting the efficacy of vilazodone for the treatment of adults with major depressive disorder and 2) the safety profile and tolerability of vilazodone.

**SUMMARY:**

Introduction: Vilazodone is a potent SSRI with partial 5HT1A receptor agonist properties. Here, we provide evidence of its efficacy vs. placebo in adult patients with Major Depressive Disorder (MDD) by comparing change in MADRS and HAM-D total scores from baseline to 1, 2, 4, 6 and 8 weeks of treatment at a target dose of 40mg/day. The safety profile suggests that vilazodone is well tolerated.
Methods: Patients with a *DSM-IV* diagnosis of MDD and with a baseline HAM-D17 score of greater than or equal to 22 (n=410) were randomized to vilazodone or placebo for 8 weeks of double-blind treatment. Efficacy measurements were performed at baseline and week 1, 2, 4, 6 and 8 and adverse events documented at each visit. The primary efficacy comparison between vilazodone and placebo was change from baseline in MADRS at week 8. Analyses were conducted with an ANCOVA model using last-observation-carried-forward methods (LOCF) in the intent-to-treat (ITT) population. A similar model was used for assessing response, defined as a decrease of at least 50% from the baseline total score at Week 8.
Results: The mean change in MADRS and HAM-D showed greater improvement with vilazodone than placebo ($p = 0.001$ and 0.02, respectively) and there were significantly more responders in the vilazodone group (adjusted $p = 0.02$). Changes in MADRS and HAM-D scores favored vilazodone as early as Week 1. More favorable responses with vilazodone were also noted for remission, HAM-A, CGI-S and CGI-I. Treatment-emergent AEs with an incidence of ~5% or greater and twice or more the incidence in placebo patients included diarrhea, nausea, and somnolence. Most AEs were mild or moderate in intensity. ASEX self-report scores were not different across groups on any dimension of sexual dysfunction.
Conclusions: Vilazodone is effective for the treatment of major depressive disorder in adults and is well tolerated at a dose of 40mg/day. This study was supported by a grant from PGxHealth.

**REFERENCES:**

1. Ferguson JM. SSRI antidepressant medications: adverse ef fects and tolerability. Prim Care Companion J Clin Psychiatry 2001; 3 (1): 22-7
2. Gardner DM, MacKinnon N, Langille DB, Andreou P. A comparison of factors used by physicians and patients in the selection of antidepressant agents. Psychiatr Serv 2007; 58 (1): 34-40

**NR5-107**

## THE EFFECT OF CYP2D6/3A5 GENOTYPES ON PLASMA CONCENTRATIONS OF ARIPIPRAZOLE AND HALOPERIDOL

*Kong K Bogeum, Ph.D. psychiatric Department Busan-Paik hospital Gaegeum-dong, Jin-gu, BusanKorea 614-735, Joo-Cheol Shim, M.D., Ph.D, Sang-Kyeong Lee, M.D.,Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to use antipsychotics effectively.

**SUMMARY:**

PURPOSE: To investigate the drug interactions between aripiprazole and haloperidol including the comparisons of plasma concentration of haloperidol and aripiprazole as genotypes of CYP2D6 and 3A4. METHODS: Fifty six patients with a confirmed DSM-IV diagnosis of schizophrenia were enrolled in this eight-week, double blind, placebo-controlled study. Twenty-eight patients received adjunctive aripiprazole treatment and twenty-eight patients received placebo while being maintained on haloperidol treatment. Aripiprazole was dosed at 15mg/day for the first 4 weeks then 30mg for next 4 weeks. The haloperidol dose remained fixed throughout the study. Serum haloperidol and aripiprazole levels were measured by high-performance liquid chromatography–tandem mass spectrometry (LC-MS/MS) at the baseline, week 1, 2, 4 and 8. *1, *5, and *10B alleles of CYP2D6 and *1 and *3 alleles of CYP3A5 were determined. The Student's T-test, Pearson's Chi-square test, Wilcoxon Rank Sum test and Logistic Regression analysis were used for data analysis. All tests were two-tailed and significance was defined as an alpha < 0.05. RESULTS: In the frequency of CYP2D6 genotype, *1/*10B type was a most frequent (37.7%) and *1/*1(30.2%), *10B/*10B (17.0%) types were followed. In the frequency of CYP3A5 genotype, *3/*3 type was found in 64.2% of subjects, and *1/*3 type and *1/*1 were 30.2% and 22.6% respectively. Plasma level of haloperidol and its metabolites did not demonstrate significant time effects and time-group interactions after adjunctive treatment of aripiprazole. Plasma levels of aripiprazole at week 8 was significantly higher than those at week 4 (p=0.0006). The concentration of haloperidol and aripiprazole were not significantly different among genotypes of CYP2D6 and 3A5. No serious adverse event was found affter adding aripiprazole on haloperidol. CONCLUSIONS: Genotypes of CYP2D6 and 3A5 did not affect concentration of both haloperidol and aripiprazole. Aripiprazole concentra

**REFERENCES:**

1. Shim JC, Shin JG, Kelly DL, Jung DU, Seo YS, Liu KH, et al. Adjunctive treatment with a dopamine partial agonist, aripiprazole, for antipsychotic-induced hyperprolactinemia: a placebo-controlled trial. Am J Psychiatry 2007;164(9):1404-1410.
2. Kubo M, Koue T, Inaba A, Takeda H, Maune H, Fukuda T, Azuma J. Influence of itraconazole co-administration and CYP2D6 genotype on the pharmacokinetics of the new antipsychotic ARIPIPRAZOLE. Drug Metab Pharmacokinet 2005;20(1):55-64.

**NR5-108**

## DIFFERENTIAL GENE EXPRESSIONS IN FRONTAL CORTEX OF RATS INDUCED BY CHRONIC RELEASE OF RISPERIDONE FOR ONE MONTH

*KwangSoo Kim, M.D. Department of Psychiatry, St. Mary's Hospital, The Catholic University of Korea,62, Yoidodong, Youngdeungpo-Gu, SeoulKorea 150-713, Gae Ho Jang, M.D., Jeong Ho Chae, M.D., Won Myong Bark, M.D., Ho-Jun Seo, M.D., Young Eun Jung, M.D.*

**EDUCATIONAL OBJECTIVE:**

This study results show that the chronic treatment of risperidone changes the expressions of several important genes that may be involved in the therapeutic effect mechanism, the mechanism of therapeutic leg time and the adverse effects of risperidone. Further studies for the correlation between the changes of gene expression by chronic treatment of risperidone and the clinical effect, the therapeutic leg time, and the adverse effect of risperidone are needed.

**SUMMARY:**

Risperidone is an antagonist of dopamine and serotonin receptor in the brain. But The exact therapeutic effect mechanism, and the mechanism underling the therapeutic leg time, and the adverse effects of risperidone are not still clear. The altered gene expression in the brain induced by chronic risperidone treatment may underscore the biological changes in the brain and the clinical therapeutic mechanisms. Therefore, we performed an analysis of the altered gene expressions in the rat frontal cortex induced by the chronic release form of risperidone. After 2 time injection of the chronic release form of risperidone(2mg/kg) with a 15 day-interval, total RNA was extracted from the frontal cortex of rats and cDNA was synthesized by reverse transcriptase. Differential expressed genes were screened by the ACP-based PCR method (Kim et. al., 2004) using the GeneFishing™DEG kits. The differentially expressed bands were re-amplified and extracted from the gel by using the GENCLEAN® II Kit, and directly sequenced with ABI PRISM® 3100-Avant Genetic Analyzer. The differential expression of DEG was confirmed by RT-PCR using gene specific primer pair.

This study shows that the expressions of Rattus norvegicus Resp18 gene for the regulation of corticotropes, Kcnq2 gene for the regulation of neuronal excitability, RaPrP gene for prion protein, Spna2 gene for the membrane organization, Protein kinase, cAMP dependent regulatory, type I, beta, mRNA, Potential phospholipid-transporting ATPase IIB, mRNA, and Ptpns1 gene for membrane signaling in the frontal cortex of rats are up-regulated after 1 month by chronic release of risperidone(2mg/kg) compared with those of control. But the expression of Neurofilament polypeptide NF-H C-terminus mRNA in the frontal cortex of rats is down-regulated after 1 month by chronic release of risperidone (2mg/kg) compared with those of control. Also Rattus norvegicus Erythrocyte protein band 4.1-like 4b (predicted) (Epb4.1l4b_predicted) mRNA , Nitrogen

**REFERENCES:**

1. Chen ML and Chen CH; Microarray Analysis of Differen tially Expressed Genes in Rat Frontal Cortex Under Chronic Risperidone Treatment. Neuropsychopharmacology(2005) 30, 268-277.

2. Fatemi SH, et al, Chronic Olanzapine Treatment Causes Differential Expression of Genes in Frontal Cortex of rats as Revealed by DNA Microarray Technique. Neuropsychophar macology(2006) 31, 1888-1899.

**NR5-109**

## DIVALPROEX SODIUM (EXTENDED RELEASE) FOR THE TREATMENT OF AGGRESSION/IRRITABILITY IN ADULTS WITH ASDS

*Nicole Feirsen, B.A. One Gustave L. Levy Place, New York, NY 10029, Evdokia Anagnostou, MD, Latha Soorya, Ph.D., Stacey Wasserman, MD, Danielle Halpern, Psy,D, William Chaplin, Ph.D., Eric Hollander, MD*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to learn to treat irritability in Autism Spectrum disorders.

**SUMMARY:**

Introduction: Autism is a neurodevelopmental disorder marked by impairments in social interaction, communication, and restrictive/repetitive behaviors. Individuals with autism often experience symptoms such as aggression and irritability. Hypothesis: Depakote ER will improve symptoms of irritability/ aggression in adults with ASDs.

Methods: 7 adults with autism, ages 18-35, were recruited at our center. The diagnosis was made using DSM-IV criteria and confirmed by the ADI-R and/or the ADOS-G. Patients were seen every 2 weeks for 12 weeks by the study physician to monitor side effects. Outcome measures included the CGI-I, OAS M, GAF, and the YBOCS-Compulsion subscale. Blood work was performed at baseline, weeks 2, 4, and 12 to monitor blood and liver function and valproate levels. The medication was titrated up to effect and/or valproate level between 50-120 mcg/ml.

Results: 72% of subjects were responders on the CGI-Improvement Irritability scale. There was statistically significant improvement in irritability measured by the OAS-M Irritability subscale (t=9.165, p=0.000), as well as in aggression measured by the OAS-M aggression subscale (t=2,797, p=0.031) and the Aggression Questionnaire (t=3.10, p=0.021). There was a trend level of significance on improvement in repetitive behaviors using the YBOCS (t=2.1, p= 0.08) and in general functioning using the GAF (t=2.29, p=0.06).There was no statistically significant improvement in emotional lability measured by the Affective Lability Scale. Findings from the Aberrant Behavior Checklist, and impulsivity measures will also be discussed. There were no abnormalities in blood and liver function and the medication was well tolerated.

Conclusion/Discussion: Depakote ER holds promise for the treatment of irritability/aggression in adult autism and was effective in reducing irritability in our sample. Strong trends for improvement were also noted in repetitive behaviors and general functioning. Funded by Abbott Laboratory

**REFERENCES:**

1. Hollander E, Dolgoff-Kaspar R, Cartwright C, Rawitt R, No votny S. An open trial of divalproex sodium in autism spec trum disorders. J Clin Psychiatry. 2001 Jul; 62(7):530
2. Hollander E, Tracy KA, Swann AC, Coccaro EF, McElroy SL, Wozniak P, Sommerville KW, Nemeroff CB. Divalproex in the treatment of impulsive aggression: efficacy in cluster B personality disorders.

**NR5-110**

## OPEN LABEL STUDY OF STATE HOSPITAL PATIENTS SWITCHED TO ZIPRASIDONE

*Nigel Bark, M.D. Albert Einstein College of Medicine Schizophrenia Research Unit, Bronx Psychiatric Center, 1500 Waters Place, Bronx, NY 10461, Eileen Trigoboff, R.N., D.N.S., Stephen Schwarzkopf, M.D., Rodica Varadi, M.D., Jeffrey Grace, M.D., Josie Olympia M.D., Renee Madathil, B.A., Nighat Sindhu, M.D., Josie Olympia, M.D., Jose Victor Ventura, M.D., Tom Watson, R.N., M.S.N., M.B.A., Nicholas Lawson, B.A., Mohamed El-Defrawi, M.D., Punyabrata Roy, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to switch the antipsychotic someone with chronic schizophrenia is taking to ziprasidone and minimize the chance of relapse and realize the metabolic advantages.

**SUMMARY:**

Background: Ziprasidone was introduced with studies that showed it to be effective with a better metabolic side effect profile. CATIE suggested olanzapine and risperidone were more effective but that what was switched from made a difference. Weiden etal found the method of switching made little difference. This trial aimed to study State Hospital patients switched to ziprasidone to see why it was not more widely used.

Method: Subjects from three State Hospitals who needed a change of antipsychotic participated. For reasons unrelated to this study one site (C) only recruited four subjects; a second (B) only recruited outpatients; the third (A) only recruited inpatients. All subjects were evaluated before the start and at weeks 1, 2, 4, 6 and 8. If on two antipsychotics one was stopped before starting Ziprasidone, the second halved three days after starting and stopped four days later. Ziprasidone (bid) was 80mg on day 1, 160 day 2 and could be increased to 240mg after three weeks.

Results: 39 subjects were recruited. The 17 outpatients from site B were very different from the 18 inpatients at site A: age 53 (32 at A), all but two white (all but two African-American and Hispanic at A) and baseline PANSS 69 (92 at A). Fourteen relapsed early. The inpatients that completed at site A barely improved (PANSS 90). At site B the completers improved significantly ending with PANSS of 56. Subjects as a group reduced their prolactin level (45 to 22), improved all metabolic measures but increased insulin (11 to 16) and prolonged their QTc (404 to 418).

Conclusion: Site B outpatients did well on ziprasidone. At all sites metabolic indicators improved. Continuing the original antipsychotic a few weeks could perhaps have prevented many relapses. The differences in outcome between sites A and B are most likely related to severity, consistent with prior experience at site A; or maybe more time was needed; or more food taken with it.

Supported by a grant from Pfizer Inc

**REFERENCES:**

1. Stroup TS, Lieberman JA, McEvoy JP, Swartz MS, Davis SM, Rosenheck RA, Perkins DO, Keefe RSE, Davis CE, Severe J, Hsiao JK for the CATIE investigators: Effective ness of olanzapine, quetiapine, risperidone, and ziprasidone in patients with chronic schizophrenia following discontinua tion of a previous atypical antipsychotic. Am J Psychiatry

2006; 163:611-622
2. Wieden PJ, Simpson GM, Potkin SG, O'Sullivan RL: Effec tiveness of switching to ziprasidone for stable but symptomat ic outpatients with schizophrenia. J Clin Psychiatry; 64: 580-588

**NR5-111**

## ETHNIC DISPARITIES IN DEPOT ANTIPSYCHOTIC SIDE-EFFECT PROFILES

*Omer S Malik, M.B.B.S Room # 208, Nockolds HouseLewisham University Hospital Lewisham High Street Lewisham London SE13 6LH, United Kingdom Sajish Pandaraparambil, M.B.B.S., M.D., M.R.C.Psych., Deepak Gupta, M.B.B.S., D.P.M., M.D., M.R.C.Psych., Nusrat Husain, M.C.P.S, M.P.H., D.I.Psych, M.D., Imran B Chaudhry, M.S., D.I.Psych., M.D., Sareer Badshah, MSc.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the impact of ethnicity on individual's sensitivity towards atypical and typical depots, in terms of dosage and severity of side - effects. Furthermore the participant should be able to appreciate side-effect profiles which could be specific to ethnic origin. However it is crucial to incorporate the cultural variations in expression of side-effects in different ethnic groups.

**SUMMARY:**

Objective :
To study the differences in side-effect profile, using Liverpool University Neuroleptic Side-Effect Rating Scale (LUNSERS), between Sub-continental Asian and Caucasian patients on depot anti-psychotic medications.
Method :
A total of 167 out of 191 patients attending 4 depot clinics spanning the East Lancashire region over a period of 1 year (2005-06), in a secondary care setting, completed self-administered LUNSERS over a span of 1 year (2005-2006). The non-parametric data was then analysed using Mann-Whitney U test and also correlation tests.
Results :Asian patients' mean age was lower than Caucasians [Z=-2.6112 ; p<0.01]. The chlorpromazine equivalent dosages were lower in Asians compared to Caucasians [Z=-3.46303;p <0.01]. Asians scored more in Total LUNSERS [Z=- 1.70647, p=0.08792(<0.1)] and had more Red-herring side effects [Z=-1.87391; P<0.1] than Caucasians. When data was split by ethnicity and on testing the correlation significance of Chlorpromazine equivalents and side effect profile among atypical and typical depots, the chlorpromazine equivalents (Mean ranks 33.3 vs 17.7; Z=2.41, p=0.016) were significantly higher for atypical depot (Risperidone) in both Asian and Caucasian patients. Autonomic side effects (mean rank=27.2, 16.0; z=1.94, p=0.05) were significant in Asian patients, controlling for chlorpromazine equivalents.Conclusions :
In the present study Asians developed more side-effects than Caucasians, possibly accounting for lower dose prescriptions. Furthermore the side effect profile differs in these two ethnic groups, having implications for monitoring of side-effects in clinical settings; e.g. atypical depots resulted in more autonomic side-effects in Asians.
Mre research is required in this area to delineate the exact differences in side-effect profiles between various ethnic groups and the mechanisms underlying this phenomenon.
Sponsor is Dr. Mike Isaac ( International member of APA )

**REFERENCES:**

1. Kuno E, Rothbard AB. Racial disparities in antipsychotic prescription patterns for patients with schizophrenia): Am J Psychiatry. 2002 Apr;159(4):567-72.
2. Shi L et al Characteristics and use patterns of patients taking first-generation depot antipsychotics or oral antipsychotics for schizophrenia. Psychiatr Serv. 2007 Apr;58(4):482-8.

**NR5-112**

## NEWER HYPNOTICS, AMNESIA AND BEHAVIORAL DISTURBANCES: SYSTEMATIC ANALYSES OF THE WHO VIGIBASE

*P. Murali Doraiswamy , M.D., DUMC-3018, Department of Psychiatry , Duke University Medical Center, Durham, NC 27710 Anders Viklund MSc Pharm, Ronald H. B. Meyboom, MD, PhD*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to; 1)Understand the literature on the links between amnesia and benzodiazepines;2)Understand the emerging links between amnesia and nonbenzodiazepine hypnotics; and 3) Know the strengths and limits of post-marketing databases to study adverse effects

**SUMMARY:**

Introduction
Newer hypnotics (such as zopiclone, zaleplon and zolpidem) have largely replaced benzodiazepines for treating insomnia. Recent case reports have renewed interest in the association between newer hypnotics and the occurrence of sudden abnormal behavioural adverse events together with amnesia for the event. Examples are of a patient who woke up with a paintbrush in her hand after painting the front-door while asleep, amnesic nightly emptying of the refrigerator, and even car driving while asleep.
Methods
Vigibase is the pharmacovigilance database maintained by the World Health Organisation in collaboration with 80 countries around the world and currently contains over 3.7 million reports. We systematically analyzed Vigibase through March 2007 to compute measures of disproportional reporting (termed the Information Component or IC) for 4 nonbenzodiazepine and 5 benzodiazepine hypnotics. The IC scores are computed relative to all other drug adverse event associations.
Results
Zolpidem (N=661, IC=4.4 with lower 95% confidence interval IC025=4.3) and triazolam (n=598, IC=4.8 and IC025=4.7) were comparable in terms of numbers of reports as well as their relatively higher reporting ratios for amnesia. Zopiclone (IC=3.1 and IC025=2.9) also had an elevated relative reporting ratio. In the majority of reports, the hypnotic was the sole suspected drug. 46% of zolpidem reports, 28% of zopiclone reports, 50% of zaleplon reports, and 43% of triazolam reports were accompanied by other behavioural problems.
Conclusions
Our findings suggest that amnesia reporting with newer nonbenzodizepine hypnotics appears similar to those previously reported for short-acting, rapid onset benzodiazepine hypnotics.

However, case reports are heterogeneous, varying as to source, documentation quality and the relationship between the drug and event under review, and secondary review may be difficult. But the striking amnesia and other behavioral effects ar

**REFERNCES:**


1. Meyboom RHB. The triazolam experience in 1979 in the Netherlands. A problem of signal generation and verification. In: Strom BL, Velo G (Edss). Drug Epidemiology and Post-Marketing Surveillance. Plenum Press, New York, 1992.
2. ADRAC. Zolpidem and bizarre sleep related effects. Aust Adv Drug React Bull 2007;26(1).


**NR5-113**

## AN OPEN-LABEL OVER EFFECTIVENESS AND TOLERABILITY OF RISPERDAL CONSTA AS A MAINTENANCE ADD-ON THERAPY FOR BIPOLAR AND SCHIZOAFFECTIVE DISORDERS


*Piero I Castro-Loli, M.D. Calle Calabria 145 Esc. Der. 3º 4º, Barcelona Spain 08015, Antonio Benabarre, M.D. Ph.D., Anabel Martinez-Aran, Ph.D., Jose Sanchez-Moreno, Ph.D., Manuel Salamero, Ph.D., Andrea Murru, M.D., Eduard Vieta, M.D. Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to evaluate tolerability, adherence and effectiveness of Risperdal Consta as a maintenance add-on therapy in bipolar and schizoaffective disorders relapse prophylaxis.

**SUMMARY:**


An open-label over effectiveness and tolerability of Risperdal Consta as a maintenance add-on therapy for Bipolar and Schizoaffective Disorders

Authors: Castro-Loli P, Benabarre A, Martínez-Arán A, Sánchez-Moreno J, Salamero M, Murru A, Vieta E.

INTRODUCTION: Besides mood stabilizers, a good number of bipolar and schizoaffective patients need a long-term therapy with antipsychotic drugs. A possible strategy in maintenance therapy could be the use of a long term atypical antipsychotic as long-acting Risperdal Consta, which could grant a better compliance, thus reducing frequency of relapses.

OBJECTIVE: To evaluate tolerability, adherence and effectiveness of Risperdal Consta as a maintenance add-on therapy in bipolar and schizoaffective disorders relapse prophylaxis.

METHODS: We included 22 patients of whom 14 were patients with bipolar disorder type I and 8 patients with schizoaffective disorder. 18 patients received 25mg of Risperdal Consta as initial dose treatment and 4 received 37.5 mg continuing all of them in addition to a mood stabilizer. In one case, there was the withdrawal of the drug on request of the pacient. Every patient was evaluated with following scales in scheduled visits along 40 weeks: Young and Hamilton scales, Clinical Global Impression (CGI) scale and adverse effects (UKU).

RESULTS: YMRS scores were significantly reduced from 10.5 (8.1) at baseline to 2.5 (1.5) at 9 months follow-up (p=0.001), whereas HAMD scores remained stable lower than 6. Statistical differences were observed between baseline and final visits on CGI (3.8±1.2 versus 1.5±0.6, respectively), with p<0.0001. Similar findings were found in CGI-Efficacy showing a significant clinical improvement from visit 2 to 3, and after that, scores on this subscale remained stable. Finally, a trend towards a lower number of side effects was identified through the UKU (p=0.056).

CONCLUSIONS: The use of Risperdal Consta as maintenance add-on therapy appears to be efficacious


**REFERENCES:**


1. SN Ghaemi, GS Sachs, CF Baldassano, CJ Truman. Ca nadian journal of psychiatry. Revue canadienne de psychiatrie (Can J Psychiatry) Vol. 42 Issue 2 Pg. 196-9
2. AB Smulevich, S Khanna, M Eerdekens, K Karcher, M Kramer, F Grossman. European neuropsychopharmacology : the journal of the European College of Neuropsychopharma cology (Eur Neuropsychopharmacol) Vol. 15 Issue 1 Pg. 75-84


**NR5-114**

## WEIGHT GAIN IN ASIAN PATIENTS TREATED WITH SECOND GENERATION ANTIPSYCHOTICS


*Rathi Mahendran, M.B.B.S Institute of Mental health/Woodbridge Hospital 10, Buangkok View, Singapore 539747*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognise that (1) weight gain liability varies across the different second generation antipsychotic agents and is consistent in different ethnic groups; (2) Clozapine and Olanzapine treatment is associated with the greatest risk of weight gain, with the other agents producing lower levels of risk; and 3) all patients started on second generation antipsychotics need regular weight monitoring and assessment for metabolic events

**SUMMARY:**


Introduction: Weight changes occur with various second generation antipsychotics (SGA). There is however little information on the risks for Asian patients. We studied weight gain liability in Asian schizophrenic patients started on SGAs in a tertiary psychiatric hospital between Sept 2005 and Aug 2007.

Method: These patients had weight monitoring at baseline, 4 weeks, 8 weeks, 12 weeks and 6 months. data was analysed with SPSS.

Results: 266 patients were started on SGAs, with females (65.8%) more than males (34.2%). Race distribution mirrored the population distribution (Chinese 80.1%, Malays 10.9%, Indians 6%, Others 3%). Age range was 19 to 89 years.

SGA use was a sfollows: Risperidone 61.3%, Olanzapine 16.9%, Clozapine 10.9%,Quetiapine 9.4%, Aripiprazole 1.1%, Amisulpiride 0.4%. Weight gain liability was in the following order: Clozapine 68.9%, Olanzapine 62.2%, Risperidone 60.1%, Quetiapine 54.2%, Aripiprazole 50%.161 (60.5%) patients had weight gain (range 0.1 Kg to 16 Kg) compared to baseline. The average weight gain was 2.05(± 1.73)Kg at 4weeks, 3.63(±2.94) at 8 weeks, 4.73(±4.86) at 12 weeks and 3.63(±3.28) at 6 months. Up to 12 weeks, the rate of increase was 0.34Kg/week (95%CI 0.192-0.493).

The maximum weight gain was seen at 12 weeks for Risperidone but earlier at 8 weeks for Clozapine (after which it tapers off), Olanzapine (which also had a second peak at 6 months)and Quetiapine (which showed a decrease thereafter). At 12 weeks the rate of increase with Risperidone was 0.37Kg/week (95%CI 0.1888-0.556). For Clozapine and Olanzapine at 8 weeks it was 2.62 kg/week (95%CI -0.203-5.445) and 2.78Kg/

week (95%CI -0.452-6.005).
Conclusion: Treatment with SGAs produces a range of increases in mean body weight over the short term. The highest risk of weight gain was seen with Clozapine and Olanzapine. This is consistent with findings in western populations and warrants close monitoring for metabolic adverse events in other ethnic groups.

**REFERENCES:**


1. Second generation (atypical) antipsychotics and metabolic effects. CNS Drugs 2005:19:1-93.
2. Ed.WW Fleischhacker. Adis International Ltd. NZ. Reist C, Mintz J, Albers LJ, Mazen Jamal M, Szabo S, Ozdemir V. Second generation antipsychotic exposure and metabolic-related disorders in patients with schizophrenia. j Clin Psychopharmacol 2007:27:46-51.


**NR5-115**

## MULTICENTER OBSERVATIONAL RESEARCH WITH BIPOLAR PATIENTS IN CLINICAL PSYCHIATRY: THE ROCK STUDY


*Ricardo Teijeiro, M.D. Twee, Steden Ziekenhuis Po 90107, Tilburg, Netherlands 5000 LA, Ed van Gent, M.D., Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the effects of quietiapine in treating the acute manic phase of bipolar disorder in the real pschiatric world. Participants will appreciate the approach of observational studies, which lack certain constraints that charatcerize randomized studies and are more apt if one wants to learn about the advantages and disadvantages of a medicine used in 'real-life' circumstances (= their effectiveness).

**SUMMARY:**


Aim: Determining the effect of Quetiapine (in bipolar disorder patients' (acute) manic phase. Also monotored are: degree of day-night rhythm recovery; estimate of patient compliance; adverse events rate. Method: Multicenter patients diagnosed with bipolar disorder and passing through moderate to grave manic phase. Demographical and social status was determined at patient's 1st visit; also weight, length, current medication, etc., CGI BP, and sleep rhythm. These parameters, plus adverse events and compliance estimate were checked at 2nd, 3rd, and closing visit (after 1-3-12 weeks). The sole contraindication for inclusion were severe somatic illnesses such as cancer, hepatic or renal insufficiency. Analysis: Analysis was made on the basis of the ITT (Intention to Treat) principle. Primary endpoint was the proportion of patients with a 1/3 score on the CGI BP at the closing visit. The secondary endpoints were CGIBP alterations between the 1st and 3rd week, and sleep rhythm alterations after 1-3–12 weeks. Results: 366 patients were included. At the end of the run, 79% of the patients had a score from normal to slightly ill for mania, against 7, 9% at the initial point of the study. 65% of the patients had a score from normal to light for the BPS as a whole, against 9, 8% at the initial point. Both changes demonstrate a significant amelioration. The scores for depression remained more or less the same throughout. The most effective dosage for Quetiapine was 400 mg dd and up. At the closing visit 74% of the patients reported a change for the better and 68% reported no sleep reduction. The reported adverse events are the known a.e. for Quetiapine. Compliance was estimated at 80% and had decreased slightly at the closing visit, as is usual. Conclusion Quetiapine, in proper dosage, is an effective and safe profile remedy for the acute manic phase of a bipolar disorder. This study was sponsored by Astra Zenica, The Netherlands.


**REFERENCES:**


1. Treatment of Bipolar Disorder: a Complex Treatment for a Multi-faceted Disorder. Fountoulakis KN, Vieta E, Siamouli M, Valenti M, Magiria S, Oral T, Fresno D, Giannakopoulos P, Kaprinis GS. Ann Gen Psychiatry 2007, 6:27
2. Practice Guideline For the Treatment of Patients with Bipolar Disorder. Second Edition APA April 2002.


**NR5-116**

## THE EFFICACY AND SAFETY OF L-METHIONINE, BETAINE AND FOLATE IN THE TREATMENT OF UNIPOLAR DEPRESSION; FINAL RESULTS


*Robert T Dunn, M.D. The Cambridge Health Alliance 1493 Cambridge Street, Cambridge, MA 02139, Lyvia S. Chriki, BA*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand the short-term effects of L-methionine, betaine and folate in the treatment of acute unipolar depression in both typical and atypical patients.

**SUMMARY:**


Objective: This study assessed the efficacy of L-methionine, betaine, and folate (MBF) as a novel combination treatment in patients with unipolar depression.
Method: An open-label, non-randomized, prospective 6-week study of 20 outpatients was conducted to examine the efficacy and tolerability of a combination of L-methionine, trimethylglycine (TMG), and folate in treating unipolar depression. Patients, ages 18-64, all met *DSM-IV* diagnostic criteria for Major Depressive Disorder or Depressive Disorder Not Otherwise Specified, and scored 18 or greater on the Hamilton Depression Rating Scale (HDRS). Outcomes were analyzed by intent-to-treat and last observation carried forward methods and by repeated measure ANOVAs with post-hoc tests of significance at distinct time points. The primary outcome measure was defined as 50% reduction in the HDRS score. Results: Twenty patients (8 men and 12 women) enrolled in the study. Patients were given MBF therapy at fixed doses for 6 weeks. Seventy percent of patients were deemed responders by the end of 6 weeks. HDRS-28 scores improved, with significant improvement from baseline seen at week 1 ($F(8,146) = 13.1$, $p < 0.001$). A secondary finding was the overall improvement in anxiety symptoms that was indicated by the ZAS. Adverse effects scales were not significantly worsened nor were mean laboratory values elevated during treatment. Overall mean termination hCy values were not elevated beyond the healthy range.
Conclusion: The MBF combination was found effective and safe in the treatment of depressive symptoms. This data suggests that this combination may also be beneficial in treatment of anxiety symptoms.


**REFERENCES:**


1. Alpert JE, Papakostas G, Mischoulon D, Worthington JJ 3rd,

Petersen T, Mahal Y, Burns A, Bottiglieri T, Nierenberg AA, Fava M: S-adenosyl-L-methionine (SAMe) as an adjunct for resistant major depressive disorder: an open trial following partial or nonresponse to selective serotonin reuptake inhibitors or venlafaxine. J Clin Psychopharmacol 2004; Dec;24(6):661-664
2. Baldessarini RJ. Alterations in tissue levels of tissue levels of S-adensylmethionine. Biochem Pharmacol 1966; 15:741-748

**NR5-117**

## LONG TERM OPEN LABEL STUDY OF OLANZAPINE PAMOATE: EFFICACY AND EFFECT ON WEIGHT

*Robert L Horne, M.D. 2915 W. Charleston Suite #4, Las Vegas, NV 89102, Deborah Martz, R.N.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to discuss the efficacy of olanzapine pamoate (OP) and the difference in weight gain between oral olanzapine and intramuscular OP long-acting depot in a small group of patients.

**SUMMARY:**

Introduction: Olanzapine pamoate (OP) is a new intramuscular depot formulation of olanzapine. It can be used for acute or maintenance treatment of psychosis. Injection frequency has been two to four weeks.
Aims: Observe the long term effect of Olanzapine pamoate in treating patients in an acute exacerbation of Schizophrenia, both with regard to efficacy (measured by the Positive And Negative Syndrome Scale and the Clinical Global Impression-Severity scale) and weight. Method: 12 consecutive patients were started on Olanzapine pamoate at a dose of 300 mg every 2 weeks. The dose could be reduced to 405 mg every 4 weeks (2 of 12). PANSS, CGI-S, weight and BMI were determined at Baseline, and every 6 months for 3 years. Results: The mean total PANSS at Baseline was 106. It dropped to 69 at 6 months, 62 at 12 months, 60 at 2 years, 59 at 3 years. The CGI-S dropped from severe (5.7) at Baseline to mild (3.2) by 6 months, and was maintained.(2.4 at 3 years). Hospitalizations dropped from 27 to 0 over 3 year periods pre and post BL. 11 of the 12 patients had been on oral Olanzapine for an average of 312 days prior to receiving OP. Their average weight gain was +23.0 pounds. 55% had gained >7% of body weight. None had lost 7%. Mean weight at OP Baseline was 204.9 pounds (93.1 kg). It dropped to 202.3 pounds (92.0 kg) at 6 months, 201.1 (91.4) at 12 months, 204.0 (92.7) at 24 months, 204.4 at 36 months. BMI dropped from 31.0 to 30.1, 30.3, and 30.4 at 1, 2, and 3 years. % of patients gaining >7% of weight at 1, 2 and 3 years after BL was 25, 50, 42. The % of patients losing >7 of weight at 1, 2, and 3 years after BL was 42, 33, 42 at 1, 2, and 3 years after BL. Mean weight change at 3 years was +0.6 %. Conclusions: Olanzapine pamoate was highly effective in reducing psychosis. Unlike oral olanzapine, this olanzapine formulation has produced little change in average weight over 3 years in this group of 12 schizophrenics. This study was supported by Eli Lilly.

**REFERENCES:**

1. Allison DB et al.: Meta-Analysis of Weight Gain af ter 10 Weeks of Antipsychotic Therapy. Am J Psychiatry 1999;156:1686–1696
2. Lilly E.:Olanzapine Pamoate Depot Versus Oral Olanzapine on Treatment Outcomes in Outpatients With Schizophrenia. http://www.druglib.com/trial/89/NCT00320489.html

**NR5-118**

## SAFETY AND TOLERABILITY OF FLIBANSERIN IN PREMENOPAUSAL WOMEN WITH HYPOACTIVE SEXUAL DESIRE DISORDER (HSDD): RESULTS FROM THE ROSE STUDY

*Robert Pyke, M.D. Boehringer Ingelheim Pharmaceuticals, Inc., Ridgefield, CT, 06877, Evan Goldfischer ,M.D.., F.A.C.S. , Jaromir Mikl, M.S.P.H.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should understand that the Rose (Researching Outcomes on Sustained Efficacy) study showed that flibanserin has a good safety and tolerability profile in premenopausal women with Hypoactive Sexual Desire Disorder (HSDD) over 48 weeks and that no withdrawal reactions were seen on switching from flibanserin to placebo.

**SUMMARY:**

INTRODUCTION: Flibanserin, a novel 5-HT1A agonist/5-HT2A antagonist, is being investigated as a potential treatment for Hypoactive Sexual Desire Disorder (HSDD).
OBJECTIVE: The objective of this analysis was to assess the long-term safety and potential withdrawal effects of flibanserin in premenopausal women with generalized acquired HSDD in the Rose (Researching Outcomes on Sustained Efficacy) study.
METHODS: 738 women were treated with open-label, flexible-dose flibanserin (50 mg or 100 mg/day) for 24 weeks. At week 24, patients meeting enrichment criteria were randomized to 24 weeks' continued flibanserin therapy at optimized dosage (n=163) or placebo (n=170). Safety parameters were monitored throughout the study and for 4 weeks post-treatment.
RESULTS: In the open-label phase, AEs occurred in 69.2% of patients (88% of whom experienced a mild or moderate AE) and led to discontinuation in 11.2% of patients. In the double-blind phase, the proportion of patients experiencing an AE was similar in the flibanserin (62.0%) and placebo (63.5%) groups. The proportions of patients experiencing an AE leading to discontinuation were 2.5% and 4.1% in the flibanserin and placebo groups, respectively. The following AEs were noted more frequently (=2% difference) with flibanserin than with placebo: diarrhea (3.7% vs 0.6%) and urinary tract infections (6.1% vs 3.5%). The following AEs were noted more frequently (=2% difference) with placebo than with flibanserin: dizziness (2.9% vs 0.6%), hypertension (2.4% vs 0%), nausea (4.7% vs 2.5%) and sinusitis (7.1% vs 4.9%). No withdrawal reactions occurred on switching from flibanserin to placebo or following abrupt treatment discontinuation at week 48.
CONCLUSIONS: Flibanserin was well-tolerated in premenopausal women with HSDD over 48 weeks and no withdrawal reactions occurred on switching from flibanserin to placebo.
The Rose study was funded by Boehringer Ingelheim.

**REFERENCES:**

1. Paik A, Laumann EO: Prevalence of women's sexual prob lems in the USA. In Women's Sexual Function and Dysfunc tion: Study, Diagnosis and Treatment, edited by Goldstein I et

al, London, Taylor & Francis, 2006, pp 23-33.
2. American Psychiatric Association: DSM-IV: Diagnostic and Statistical Manual of Mental Disorders (4th ed. text revision), Washington, DC, American Psychiatric Association, 2000.

**NR5-119**

## FLIBANSERIN: A NOVEL CENTRALLY ACTING AGENT THAT IS NOT AN EFFECTIVE ANTIDEPRESSANT BUT HAS POTENTIAL TO TREAT DECREASED SEXUAL DESIRE IN WOMEN

*Robert Pyke, M.D. Boehringer Ingelheim Pharmaceuticals, Inc., Ridgefield, CT, 06877, D. Cotton M.S., S. Kennedy M.D., FRCPC., D.J. Lewis-D'Agostino R.N., B.S.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should understand that flibanserin, a novel 5-HT1A agonist and 5-HT2A antagonist, is not an effective antidepressant, but showed some evidence of efficacy on sexual symptoms, especially improving sexual desire as assessed by ASEX score and HAMD Genital Symptoms/sexual desire item score, in women with Major Depressive Disorder and low sexual desire.

**SUMMARY:**

INTRODUCTION: Flibanserin is a 5-HT1A agonist and 5-HT2A antagonist being investigated in Phase III trials to treat Hypoactive Sexual Desire Disorder (HSDD) in women.
OBJECTIVES: (1) Summarize antidepressant clinical trials (2) Evaluate sexual effects of flibanserin in depressed women with loss of sexual desire.
METHODS: Patients (523 females, 369 males) in the US, Canada and Europe, with a DSM-IV diagnosis of Major Depressive Disorder (MDD) were randomized to 6 weeks' treatment with flibanserin 100 mg, fluoxetine 20 mg, or placebo (two trials), or to 8 weeks' treatment with flibanserin 100-200 mg, paroxetine 20-40 mg, or placebo (two trials). Change in the 17-item Hamilton Rating Scale for Depression (HAMD) was the primary endpoint. The Arizona Sexual Experiences Scale (ASEX) was used to monitor sexual effects.
RESULTS: Flibanserin and fluoxetine were not statistically significantly different from placebo on the primary endpoint. Paroxetine was superior to placebo in two trials. In one of the paroxetine-comparator trials, flibanserin improved the HAMD Genital Symptoms/sexual desire item in women with a low sexual desire item at baseline. Superiority to placebo began at day 28 (p=0.03); on ASEX, flibanserin was superior to placebo and paroxetine (p=0.01 and p=0.07, respectively) on day 56.
CONCLUSION: Flibanserin was not shown to be effective for treating depression in MDD patients, but showed some evidence of efficacy on sexual symptoms, especially improving sexual desire as assessed by ASEX score and HAMD Genital Symptoms/sexual desire item score, in women with MDD and low sexual desire.
This research was funded by Boehringer Ingelheim.

**REFERENCES:**

1. Borsini F, Evans K, Jason K, Rohde F, Alexander B, Pollen tier S: Pharmacology of flibanserin. CNS Drug Rev 2002;8:117-142.
2. McGahuey CA, Gelenberg AJ, Laukes CA, Moreno FA, Delgado PL, McKnight KM, Manber R: The Arizona Sexual Experiences Scale (ASEX): Reliability and validity. J Sex Marital Ther 2000; 26: 25-40.

**NR5-120**

## MEMANTINE ADJUNCTIVE TREATMENT TO ANTIPSYCHOTICS FOR THE COGNITIVE IMPAIRMENTS IN SCHIZOPHRENIA: A 12-WEEK, DOUBLE-BLIND, PLACEBO-CONTROLLED TRIAL

*Sae-Woom Lee, M.D. Department of Psychiatry, Haeundae Jamyung Hospital San-141, U 2-dong, Haeundae-gu, Busan, South Korea, Busan South Korea 612-022, Jung-Goo Lee, M.D., Ph.D., Dong-Wook Jeon, M.D., Jun-Hyung Baek, M.D., Myung-Jin Joo, M.D., Ph.D., Young-Hoon Kim, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to answer whether currently useful NMDA antagonist could be useful as a cognitive enhancer for the patients with chronic schizophrenia.

**SUMMARY:**

Objective: To study the effects of N-methyl-D-aspartate (NMDA) receptor antagonists on cognition of patients with schizophrenia, we investigated the impact of memantine administration on the cognitive impairments in patients with chronic schizophrenia.
Methods: A 12-week, double-blind, placebo-controlled trial of memantine (20mg) as an add-on treatment to conventional antipsychotic drugs was conducted in total 26 patients with schizophrenia. 26 subjects stabilized on conventional antipsychotic drugs (chlorpromazine equivalent dose 1,145 mg/day) for a minimum of 3 months were entered into this study. The subjects were evaluated at baseline, and after 6 and 12 weeks using the Korean version of Mini Mental State Examination (K-MMSE), Positive and Negative Symptom Scale (PANSS), 17-item Hamilton's Rating Scale for Depression (HAM-D), and a standard neuropsychological battery.
Results: Compared to placebo, memantine did not produce significant improvement on cognitive measures. However, the score for Digit Symbol Substitution Test (DSST) improved more in patients given memantine than placebo (P = 0.0632). Of the several domains of cognitive functions assessed, memantine tends to improve the score for immediate and delayed recall on the HVLT, color on Stroop Tests, Trail Making Tests Part A, and Boston Naming Test, although it did not approach the statistical significance. The scores on the PANSS negative subscale improved more in the memantine group, but did not change significantly. The changes of other psychiatric symptoms were not significant. Memantine was well tolerated.
Conclusions: Addition of memantine to patients with schizophrenia did not improve measures of cognition or psychopathology. Further studies that include larger sample sizes need to investigate the role of memantine as a cognitive enhancer in schizophrenia.

**REFERENCES:**

1. Krivoy A, Weizman A, Laor L, Hellinger N, Zemishlany Z, Fischel T: Addition of memantine to antipsychotic treatment in schizophrenia inpatients with residual symptoms: a pre liminary study. Eur Neuropsychopharmacology 2007 Aug 27; [Epub ahead of print]
2. Lee SW, Lee JG, Lee BJ, Kim YH: A 12-week, double-blind, placebo-controlled trial of galantamine adjunctive treatment to conventional antipsychotics for the cognitive impairments

in chronic schizophrenia. Int Clin Psychopharmacol 2007;22:63-68

**NR5-121**

## AN OPEN-LABEL STUDY CHANGING GENERIC CLOZAPINE FORMULATION TO FAZACLO® (CLOZAPINE, USP) ORALLY DISINTEGRATING TABLETS IN STABLE PATIENTS WITH SCHIZOPHRENIA OR SCHIZOAFFECTIVE DISORDER

*Sashank Kaushik, M.D. Manhattan Pscyhiatric Center 1 Wards Island Complex, New York, NY 10035, Jean-Pierre Lindenmayer, M.D., Sashank Kaushik, M.D., Anzalee Khan, M.S., Saurabh Kaushik, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1.) Recognize the bioequivalence of Fazaclo as compared to generic clozapine in patients on established and stable regimens of clozapine tablets.; and 2.) Identify factors associated with the substituion of FazaClo for generic clozapine on a milligram-for-milligram basis.

**SUMMARY:**

Clozapine has demonstrated efficacy in treatment-refractory schizophrenia. FazaClo is an orally disintegrating clozapine formulation which dissolves in the mouth, effectively addressing poor compliance as it cannot be “cheeked”. FazaClo has been shown to be bioequivalent to Clozaril® tablets, but similar data on conversion of generic clozapine to Fazaclo is not available. METHOD: 16 treatment-refractory schizophrenia or schizoaffective inpatients enrolled for a 17 day open label study. Mean total PANSS = 72.81 (5.49). Patients were on stable dosages of generic clozapine b.i.d and on concomitant psychotropic medication/s for at least 28 days. Trough concentrations for clozapine and desmethyl clozapine were obtained on Days 1, 3,4, 10 and 17; patients were switched to Fazaclo on Day 4. Pre-dose clozapine and desmethyl clozapine trough concentrations were obtained on Days 10 and 17. RESULTS: 15 patients completed the study and 1 patient withdrew consent on Day 10. Clozapine plasma levels at Days 1, 3 and 4 did not show significant differences to Days 10 and 17 (Range 500.7 – 536.2 and 515.5 – 527.5, respectively). Desmethyl clozapine levels did not show significant differences at Days 1, 3, and 4 to Days 10 and 17 (Range 294.1 – 321.7 and 265.7 – 288.0 respectively). There was a significant difference in the clozapine/desmethyl clozapine plasma ratio at Day 10 compared to Days 1 – 4. Liver function for SGOT indicated no significant change, SGPT levels indicated a decrease (36.3 to 31.1), but no significant differences were observed. BMI, ANC and WBC did not show significant changes. No study drug side effects were observed; 1 patient had anxiety, not deemed study drug related. CONCLUSIONS: FazaClo is bioequivalent to generic clozapine, and both FazaClo and generic clozapine were tolerated similarly. FazaClo may be substituted for generic clozapine on a mg-for-mg basis. Further investigation is underway with a larger sample (current effect size = .348).

**REFERENCES:**

1. Lam F, Ereshefsky L, Tony G, Gonzalez C. Brabded vs. generic clozapine: Bioavailability comparison and inter changeability issues. J Clin Psychiatry; 2001;62: 18-22.
2. Kelleher JP, Centorrino F, Albert MJ, Baldessarini RJ. Advances in atypical antipsychotics for the treatment of schizophrenia: new formulations and new agents. CNS Drugs. 2002;16(4):249-61

**NR5-122**

## EFFECTS OF PANAX GINSENG AUGMENTATION IN NEGATIVE SYMPTOMS AND NEUROCOGNITIVE DEFICITS IN SCHIZOPHRENIA: A MULTI-SITE RCT STUDY

*Simon Chiu, M.D. Regional Mental Health Care, ST. Thomas siteSt. Joseph Health Care(London), St. Thomas, Canada N5P3V9, Zack Cernovsky, Ph.D.,Jason Carr, Ph.D., Mariwan Husni, M.D.FRCP(C), Robbie Campbell Jr., M.D. F.R.C.P.(C), John Copen M.D, M.Sc. FRCP(C), Amarundra Singh M.B.B.S., D.P.M, Jenny O’Gorman, RN; Liz Goble B.A., Jin Hyatsu Jr., B.S.C., and Yves Bureau, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the end of the session, the participant should be able to: 1) recognize the pharmacological challenges of managing negative symptoms and neurocognition in schizophrenia; 2) understand the rationale of targeting neurosteroids; 3) evaluate the risk-benefit ratio of combining herbal supplements with atypical antipsychotics in schizophrenia; and 4) delineate the neuroprotective and neurotropic mechanisms of Ginseng in neurodegenerative and neuro-psychiatric disorders.

**SUMMARY:**

Introduction: Evidence suggests neuroactive steroids are involved in schizophrenia. We hypothesize the phyto-neurosteroid, Panax Ginseng, modulating GABAa and NMDA systems, is efficacious in augmenting antipsychotics in schizophrenia. Objective: to evaluate the efficacy and tolerability of Panax Ginseng (PG)augmentation in schizophrenic patients exhibiting persistent negative symptoms & neurocognitive impairment Method: Randomized placebo-controlled ,2 wk-Placebo-lead-in and 2 wk-cross over. Patients diagnosed as DSM-IV-R schizophrenia with SANS (Scale for Assessment of Negative Symptoms)score >24 while maintained on optimal dosages of atypical antipsychotics were randomized to one of the four groups[Group I: PG 100mg 8 wks-Placebo 8 wks; II: Placebo 8 wks-PG 100 mg 8 wks; III: PG 200 mg 8 wks-Placebo 8 wks; IV: Placebo 8 wks-PG 200 mg 8 wks]. Standardized PG: Ginsana-115 & placebo were from Pharmaton, Switzerland. We administered computerized Neuro-cognitive Screening (NCS), PANSS, SANS, BPRS, HAM-D at regular intervals. Safety was monitored with adverse events checklist, AIMS, vitals and metabolic screen.Results: We randomized 65 subjects: age 39.6 +/-11.9 yrs. Three-factor ANOVA (group x time x sequence) showed significant cross-over effect (F value 51.64 df 1.00, p =0.00) and time effect (F value 19.14; df 3.0, p =0.00). Between-subject t-test showed PG 200 mg significantly ($p< 0.05$) reduced Flat Affect of SANS: effect size rpb =0.43 and depressive symptoms of HAM-D: effect size rpb = 0.45. Within-subject t-test showed PG200 mg significantly ($p< 0.05$) reduced total SANS, Flat Affect, Alogia, Avolition & Anhedonia SANS subscales, total PANSS and Negative PANSS subscale. PG 200 mg reduced HAM-D & BPRS ($p< 0.05$).PG 100 mg exerted non-significant effects. NCS measures were unaffected by Ginseng. Side effects were minor: 7% constipation. Conclusion: Ginseng appears safe and

promising in improving negative & depressive symptoms in schizophrenia. Supported by SMRI USA.

**REFERENCES:**


1. Marx CE, Stevenes RD, Shampine LJ, Uzunova V, Trost WT, Butterfield MI, Massing MW, Hamer RM, Morrow AL, Lieberman JA . Neuroactive steroids are altered in schizo phrenia and bipolar disorders: relevance to pathophysiology and therapeutics. Neuropsychopharmacology 31(6): 1249-63.
2. Radad K, Gille G, Liu L, Rausch WD. Use of ginseng in medicine with emphasis on neurodegenerative disorders. J. Pharmacol. Sci. 100(3): 175-86.


**NR5-124**

## ALLERGY TO ANTIPSYCHOTIC AGENTS: REPORTED RATES IN A STATE HOSPITAL


*Steven J. Schleifer, 185 South Orange Avenue, Newark, NJ 07103, Jeffry R. Nurenberg, M.D., Steven J. Schleifer, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to better appreciate the likely prevalence of clinically identifiable allergy to antipsychotic agents in patients with chronic psychiatric disorders. The participant will be better able to recognize differences between reported and clinically confirmable histories of allergy and thereby treat patients more effectively.

**SUMMARY:**


In reviewing pharmacy records at a NJ State Psychiatric Hospital, high rates of "allergy" to antipsychotic and other psychotropic agents were noted. We hypothesized that this may often reflect non-allergic phenomena. METHODS: A randomly selected daily pharmacy database in January, 2006 listed 51.5% of 585 patients as having medication allergies; 23.6% had allergies to antipsychotic agents. 11.1% showed allergies to haloperidol, 6.0% chlorpromazine, 4.8% fluphenazine, 4.1% risperidone. To begin to clarify true allergy prevalence, two psychiatrists (JN, SS) together reviewed clinical chart summaries and interviewed all patients with “allergy” to antipsychotics. Determination was made of: 1) any data suggesting true allergy (e.g., possible drug rash); 2) evidence of a non-allergic adverse reaction (ADR) to the same agent. An even lower clinical threshold, accepting highly unlikely or vague evidence, was added to define an upper range of clinically reported allergy. RESULTS: Of 138 patients listed with antipsychotic allergies, 51 were no longer in hospital for interview, 8 refused/were unable to participate. Of the 79 interviewed patients, 7 (8.9%) had evidence of allergy and 12 (15.2%) a remote possibility of allergy. No clinical evidence was elicited for 60 patients (75.9%). Of the 7 patients with evidence of allergy, 3 reported evidence for haloperidol, 3 chlorpromazine, 2 clozapine, 1 risperidone, 1 quetiapine. Of those with no evidence of allergy, 57% reported a non-allergic ADR that may have accounted for the “allergy” assignment; 32% reported possible such symptoms. DISCUSSION: Allergy to antipsychotic agents may be much less common than suggested by clinical/pharmacy records. Patients may label unpleasant medication experiences as allergy and be denied access to effective treatments. Focused clinical histories, even with very low thresholds for determining allergy, would likely expand the pool of available medications for many patients.


**REFERENCES:**


1. Stoppe G, Muller P, Fuchs T, Ruther E: Life-threatening al lergic reaction to clozapine. British Journal of Psychiatry. 1992; 161:259-61
2. Terao T, Kojima H, Eto A:. Risperidone and allergic reac tions. Journal of Clinical Psychiatry 1998; 59:82-3


**NR5-125**

## AN INTEGRATED ANALYSIS OF THE EFFICACY OF DESVENLAFAXINE COMPARED WITH PLACEBO IN PATIENTS WITH MAJOR DEPRESSIVE DISORDER


*Susan G Kornstein, M.D. PO Box 980710, Department of Psychiatry Virginia Commonwealth University, Richmond,VA 23298, Susan G. Kornstein, M.D.1; Michael E Thase, M.D.2; Raj Tummala, M.D.3; Jean-Michel Germain, Ph.D.4; Qin Jiang3; Philip T Ninan, M.D.3; Christine Guico-Pabia, M.D.3*

*1Virginia Commonwealth University, Richmond, Virginia; 2University of Pittsburgh School of Medicine, Pittsburgh, Pennsylvania; 3Wyeth Research, Collegeville, Pennsylvania; 4Wyeth Research, Paris, France*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, participants should be able to: 1) Understand the efficacy of DVS in treatment of MDD in short-term, placebo-controlled studies; 2) Describe outcomes using various rating scales and methods of analysis in clinical studies of DVS in patients with MDD

**SUMMARY:**


Objective: To assess the efficacy of desvenlafaxine succinate (DVS) in patients with major depressive disorder (MDD).

Methods: Data from 5 double-blind, 8-week studies in outpatients with *DSM-IV* MDD were pooled. Patients were randomized to fixed doses of DVS (50, 100, 200, or 400 mg/d; n=1342) or placebo (n=631). The primary efficacy variable was the 17-item Hamilton Rating Scale for Depression (HAM-D17). Other variables included the HAM-D6, Montgomery-Åsberg Depression Rating Scale (MADRS), and rates of response (defined as Clinical Global Impression-Improvement [CGI-I] score of =2 or decrease =50% in HAM-D17 or MADRS scores from baseline) and remission (defined as HAM-D17 score =7). Final on-therapy data were evaluated using ANCOVA; differences in adjusted means (DVS vs placebo) are reported here.

Results: Significantly greater improvement with DVS vs placebo treatment on the HAM-D17 total score was observed for the pooled data set (-2.3; P<0.001) and the 50 mg (-2.2; P<0.001), 100 mg (-2.4; P<0.001), 200 mg (-2.2; P<0.001), and 400 mg (-2.3; P<0.001) dose groups. In the pooled data set, significant differences (P<0.001) in rates of response (HAM-D17: 55% vs 42%; MADRS: 55% vs 40%; CGI-I: 61% vs 46%) and remission (HAM-D17: 34% vs 25%) were found in the DVS vs placebo group. Significant differences from placebo for the pooled data set were also observed for the HAM-D6 (-1.6; P<0.001) and MADRS (-3.4; P<0.001). Significant differences vs placebo were observed with all individual dose groups on the secondary efficacy variables. Discontinuation rates due to adverse events increased with dose: 50 mg (4%), 100 mg (9%), 200 mg (15%), and 400 mg (18%).

Conclusions: In short-term clinical trials of MDD, DVS

demonstrated superiority to placebo on standard depression rating scales and measures of global severity and improvement across a wide range of doses including low dose 50 mg. Research supported by Wyeth Research.

**REFERENCES:**


1. DeMartinis NA, Yeung PP, Entsuah R, Monley AL. A double-blind, placebo-controlled study of the efficacy and safety of desvenlafaxine succinate in the treatment of major depressive disorder. J Clin Pyschiatry 2007; 68:677-688 Stahl SM,
2. Grady MM, Moret C, Briley M: SNRIs: their pharmacology, clinical efficacy, and tolerability in comparison with other classes of antidepressants. CNS Spectr 2005; 10(9):732-747


**NR5-126**

## PET-MEASURED OCCUPANCY OF THE NOREPINEPHRINE TRANSPORTER BY EXTENDED RELEASE QUETIAPINE FUMARATE (QUETIAPINE XR) IN BRAINS OF HEALTHY SUBJECTS


*Svante Nyberg, AstraZeneca SodertaljeSE-151 85, Sodertalje Sweden SE-151 85, Akihiro Takano, Aurelija Jucaite, Per Karlsson, Dennis McCarthy, Matts Kågedal, Chi-Ming Lee, Christer Halldin, Lars Farde*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, participants should be aware that norquetiapine (the major active quetiapine metabolite) demonstrates high occupancy of the norepinephrine transporter and that this occupancy may contribute to the broad range of efficacies demonstrated for quetiapine.

**SUMMARY:**


Introduction: Quetiapine offers a broad spectrum of efficacy in psychiatric disorders that was not predicted from its preclinical in-vitro pharmacology. Recent research shows that quetiapine and its major active human metabolite, norquetiapine, have moderate/high affinity in vitro for neuroreceptors, including D2-dopamine and 5HT2A receptors, as well as the norepinephrine transporter (NET) (1). A positron emission tomography (PET) study in non-human primates found that quetiapine and norquetiapine induced dose-dependent occupancy of D2 and 5HT2A receptors and norquetiapine but not quetiapine induced high occupancy at NET, even at low plasma concentrations (2). The aim of the current study was to measure NET occupancy during exposure to clinically relevant doses of extended release quetiapine fumarate (quetiapine XR) in healthy subjects. Methods: Nine volunteers (20-45 years) were examined with PET using the radioligand (S,S)[18F]FMeNER-D2 for the NET (2), before and after quetiapine XR treatment (150-300 mg/d for 6-8 days). Regions of interest were defined for the thalamus, using the caudate as a reference region. Receptor occupancy was calculated with a late time ratio method. Plasma levels of quetiapine and norquetiapine were monitored. Results: Maximal norquetiapine levels were ~90 and ~30 ng/mL, respectively, with quetiapine XR doses of 300 and 150 mg/d. Treatment with quetiapine XR produced a dose-dependent reduction of radioligand uptake. Mean NET occupancy in the thalamus was 35% and 19%, respectively, with quetiapine XR doses of 300 and 150 mg/d. Conclusions: Data in humans support previous findings in monkeys of dose-dependent NET occupancy by norquetiapine at clinically relevant quetiapine XR doses. Inhibition of NET is accepted as a mechanism of antidepressant activity. Our findings suggest NET occupancy during quetiapine treatment may provide an explanation for the broad spectrum of efficacy of quetiapine. Supported by AstraZeneca Pharmaceuticals LP.


**REFERENCES:**


1. Goldstein J, Christoph G, Grimm S, et al. Quetiapine's antide pressant properties: direct and indirect pharmacologic actions on norepinephrine and serotonin receptors. Eur Neuropsy chopharmacol. 2007;17(suppl 4):S401. Abstract P.2.h.006.
2. Nyberg S, Takano A, Grimm S, et al. PET-measured D2, 5-HT2, and norepinephrine transporter (NET) occupancy by quetiapine and N-desalkyl-quetiapine in non-human primates. Eur Neuropsychopharmacol. 2007;17(suppl 4):S254-S255. Abstract P.1.c.022.


**NR5-127**

## COMPARATIVE MORTALITY ASSOCIATED WITH ZIPRASIDONE VS. OLANZAPINE IN REAL-WORLD USE: THE ZIPRASIDONE OBSERVATIONAL STUDY OF CARDIAC OUTCOMES (ZODIAC)


*Sybil M Eng, Ph.D. 235 East 42nd Street, New York NY 10017, Brian L. Strom, M.D., M.P.H., Gerald Faich, M.D., M.P.H., Robert F. Reynolds, Sc.D., Ralph B. D'Agostino, Ph.D., Jeremy Ruskin, M.D., John M. Kane, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to compare the risks of clinically meaningful events associated with ziprasidone vs. olanzapine in real-world use as studied in this landmark drug safety study.

**SUMMARY:**


Background. Although ziprasidone has been used for treatment of schizophrenia since 2000, its modest QTc-prolonging effect's impact on cardiovascular event risk is unknown.
Methods. The Ziprasidone Observational Study of Cardiac Outcomes (ZODIAC), an open-label, randomized, postmarketing study, enrolled patients with schizophrenia from routine clinical practice settings in 18 countries. The primary outcome was non-suicide mortality in the year after initiation of assigned treatment. A total of 18,154 subjects were randomized to either ziprasidone or olanzapine and dosed per enrolling physician's clinical judgment. A physician-administered baseline questionnaire collected information on demographics, medical and psychiatric history, and concomitant medication use. Brief follow-up questionnaires elicited data on hospitalization since last study visit, vital status, study medication continuation, and concomitant antipsychotic medication(s) use.
Results. ZODIAC study subjects reflected the general population of patients with schizophrenia. The incidence of nonsuicide mortality within one year of initiating therapy was 0.91% for the ziprasidone group and 0.90% for the olanzapine group (both N = 9077), relative risk (95% confidence interval [CI]) of 1.01 (0.75, 1.37). This finding was robust in numerous secondary analyses. Regarding secondary endpoints, risks of all-cause mortality and cardiovascular mortality were similar among ziprasidone and olanzapine users; the incidence of all-cause hospitalizations was higher among ziprasidone users. The proportion of patients remaining on treatment at six months was significantly lower for the ziprasidone group.

Conclusions. ZODIAC is one of the largest randomized studies conducted to date of patients with schizophrenia. With substantial statistical power, its results suggest that ziprasidone's effect on the QTc interval does not translate into an increased risk of clinically meaningful events.

Supported by Pfizer Inc

**REFERENCES:**

1. Daniel DG, Zimbroff DL, Potkin SG, Reeves KR, Harrigan EP, Lakshminarayanan M, Ziprasidone Study Group. Zipra sidone 80 mg/day and 160 mg/day in the acute exacerbation of schizophrenia and schizoaffective disorder: A 6-week pla cebo-controlled trial. Neuropsychopharmacol 1999;20:491-505.
2. Keck PE, Reeves KR, Harrigan EP, Ziprasidone Study Group. Ziprasidone in the short-term treatment of patients with schizoaffective disorder: results from two double-blind, placebo-controlled multicenter studies. J Clin Psychophar macol 2001;21:27-35.

**NR5-128**

## SURVIVAL RATES OF MAINTENANCE TREATMENT WITH VENLAFAXINE ER IN PATIENTS WITH SOMATIC SYMPTOMS

*Tae-Youn Jun, M.D. # 62, Youido-Dong, Youngdeungpo-Gu, Seoul Korea 150-713, Tae-Youn Jun, M.D., Ho-Jun Seo, M.D.,Won-Myong Bahk, M.D.,Y oung Sup Woo,M.D.,Jeong-Ho Chae, M.D.,Han Yong Jung, M.D.*

**EDUCATIONAL OBJECTIVE:**

Subjects with depression showed the trend of long maintenance periods without recurrence, but it was not statistically significant. Subjects with somatic symptoms had longer maintenance period without recurrence than subjects without somatic symptoms in venlafaxine ER treatment.

**SUMMARY:**

In current study, we evaluate the clinical factors that affects maintenance periods of patients with venlafaxine ER treatment and present a comparison in patients who complain of somatic symptoms and not, to evaluate the efficacy of venlafaxine ER in patients with somatic symptoms.The recruitment was conducted within outpatients who had received psychiatric treatment with venlafaxine ER. Patients were excluded who used psychotropic agents except venlafaxine ER and benzodiazepines. It was assessed whether the subjects complained somatic symptoms or not at the point of initiation of venlafaxine ER treatment. The duration from initiation to the point when medication was changed due to recurrence of any symptoms and side effects was assessed and compared in two groups. The maintenance periods of the two groups were analyzed using Kaplan-Meier method, and relations with several clinical variables of subjects were with Cox's proportional hazard model.Forty eight patients fulfilled inclusion criteria during the study periods. 27 patients (56.3%) were divided to 'with' somatic symptoms group and 21 patients were 'without' somatic symptoms group. Survival rates of 'with' somatic symptoms group (median survival time =79 weeks) were higher than that of 'without' somatic symptoms group (median survival time =12weeks; Breslow test, p= 0.036). When analyzed by multivariate analysis used Cox's proportional hazard model, it also showed that somatic symptoms affected survival rates of maintenance treatment significantly (odd ratio=2.837, p=0.024). Subjects with somatic symptoms had longer maintenance period without recurrence than subjects without somatic symptoms in venlafaxine ER treatment.

**REFERENCES:**

1. Stahl SM, Grady MM, Moret C, Briley M. SNRIs: their phar macology, clinical efficacy, and tolerability in comparison with other classes of antidepressants. CNS Spectr. 2005 ;10:732-747.
2. Kroenke K, Messina N 3rd, Benattia I, Graepel J, Musgnung J. Venlafaxine extended release in the short-term treatment of depressed and anxious primary care patients with multiso matoform disorder. J Clin Psychiatry. 2006;67:72-80.

**NR5-129**

## METABOLIC INTERACTIONS BETWEEN RISPERIDONE AND ADDITIONALLY APPLIED THERAPEUTICS IN SCHIZOPHRENIC PATIENTS

*Wolfgang Bader, Clinical Pharmacology / Psychopharmacology, Clinic and Policlinic for Psychiatry, Psychosomatics and Psychotherapy of the University at the Bezirksklinikum Regensburg, Universitaetsstr. 84, D-93053 RegensburgGermany, Christine Greiner, Ekkehard Haen, Prof.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize that inhibition of the metabolism from risperidone to 9-OH-risperidone via 2D6 increases risperidone serum concentrations expressed as the sum of risperidone and 9-OH-risperidone rather than just altering the risperidone / 9-OH-risperidone ratio.

**SUMMARY:**

Introduction: Risperidone, one of the newer antipsychotic agents, is known to be metabolized by the liver cytochrome-P450-isoenzymes 2D6 and 3A4 to its active metabolite 9-OH-risperidone. 9-OH-risperidone equally contributes to the pharmacological activity of risperidone [1]. We checked our data base to identify any comedication that might interact with the risperidone metabolism by enzyme inhibition.
Method: Our data base KONBEST® contains all clinical and laboratory data of drug concentration assays performed in our clinical pharmacological laboratory since April 2005. The data base was screened for specimens analysed for risperidone. Serum concentrations that were too high in relation to the dose given were taken as signal for drug-drug-interactions. The ratio risperidone / 9-OH-risperidone was taken as measure for the extent of enzyme inhibition.
Results:566 specimens were identified to be analysed for risperidone. 252 of them were found to be too high in relation to the dose given. Amitriptyline, biperiden, chlorprothixene, citalopram, clozapin, hydrochlorothiazide, levomepromazine, and metoprolol were mentioned as comedication in 22, 25, 32, 55, 34, 6, 15, 12 cases, respectively. In >50 % of these cases the risperidone / 9-OH-risperidone ratio was found to be higher than 0.75 suggesting these substances inducing a poor metabolizer phenotype.
Conclusion:According to the literature, a ratio of risperidone / 9-OH-risperidone of 0,75 and higher can be detected in poor metabolizers. We suggest that the above mentioned substances inhibit the oxidative metabolization of risperidone via CYP 2D6 in the liver and in consequence of this rise risperidone blood

concentrations [2].

**REFERENCES:**


1. Scordo MG. et al. Cytochrome P450 2D6 genotype and steady state plasma levels of risperidone and 9-hydroxyris peridone. Psychopharmacology 1999; 147(3):300-5.
2. Bader W., Greiner C., Haen E. Increase of risperidone con centration under chlorprothixene comedication – A case report. submitted to and accepted: Pharmacopsychiatry 2007.


## NEW RESEARCH POSTER SESSION 6

## WEDNESDAY, MAY 7, 2008 12:00 P.M. – 2:00 P.M. WEST LOBBY, LEVEL ONE, WASHINGTON CONVENTION CENTER

### NR6-001

### EFFICACY AND SAFETY OF LISDEXAMFETAMINE DIMESYLATE IN THE TREATMENT OF FEMALE CHILDREN AND ADULTS WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER


*Ann C Childress, M.D. Center for Psychiatry and Behavioral Medicine7351 Prairie Falcon Road, Suite 160, Las Vegas, NV 89128, Sharon B. Wigal, Ph.D., Michael Greenbaum, M.D., Joseph Biederman, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to compare and discuss the age- and gender-related effects on the Attention-Deficit/Hyperactivity Disorder (ADHD) Rating Scale following 4 weeks of treatment with lisdexamfetamine dimesylate in females aged 6 to 12 years and 18 to 55 years with ADHD.

**SUMMARY:**


Introduction: Clinical trials have evaluated the efficacy and safety of short-term treatment with lisdexamfetamine dimesylate (LDX) in children and adults with attention-deficit/hyperactivity disorder (ADHD). The age-related effects for females were compared.Methods: Changes in mean total ADHD Rating Scale (ADHD-RS) score from baseline to endpoint in females participating in Phase 3, 4-week randomized, placebo-controlled trials in children aged 6 to 12 years and adults aged 18 to 55 years with ADHD were assessed. The clinical trials were not prospectively powered to detect statistical differences in male and female subpopulations. Safety assessments included adverse events (AEs), physical exams, vital signs, laboratory evaluations, and electrocardiogram results. Results: The 4-week trial in children studied 285 subjects and 88 (30.9%) were girls. The 4-week trial in adults studied 414 subjects and 190 (45.9%) were women. At endpoint, least squares (LS) mean ± SE changes from baseline to endpoint in mean total ADHD-RS scores for girls aged 6 to 12 years were -8.13 (± 3.14), -19.0 (± 3.33), -18.8 (± 2.88), and -24.8 (± 3.27) in the placebo, 30-, 50-, and 70-mg/d LDX groups, respectively (P<.05 for LDX 50 mg/d and 70 mg/d vs placebo). Among adult women aged 18 to 55 years, LS mean ± SE changes in mean total ADHD-RS scores were -7.96 (± 2.02), -15.5 (± 1.56), -18.7 (± 1.58), and -19.3 (± 1.46), for the placebo, 30-, 50-, and 70-mg/d LDX groups, respectively (P<.01 for all LDX groups vs placebo). Most treatment-emergent AEs were mild to moderate and occurred during the first week of treatment. The most commonly reported AEs in both age groups were decreased appetite, insomnia, and headache. Eleven girls (10 LDX, 1 placebo) and 15 women (14 LDX, 1 placebo) discontinued due to AEs. Conclusion: Observed short-term safety and efficacy appeared to be similar in LDX-treated girls aged 6 to 12 years and women aged 18 to 55 years.


**REFERENCES:**


1. Biederman J, Krishnan S, Zhang Y, McGough JJ, Findling RL. Efficacy and tolerability of lisdexamfetamine dimesyl ate (NRP-104) in children with attention-deficit/hyperactiv ity disorder: a phase III, multicenter, randomized, double-blind, forced-dose, parallel-group study. Clin Ther 2007; 29:450-463.
2. Biederman J, Boellner SW, Childress A, Lopez FA, Krishnan S, Zhang Y. Lisdexamfetamine dimesylate and mixed amphet amine salts extended-release in children with ADHD: a double-blind, placebo-controlled, crossover analog classroom study. Biol Psychiatry 2007; 62:970-976.


### NR6-002

### EFFICACY AND SAFETY OF LISDEXAMFETAMINE DIMESYLATE IN ADULTS WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER AND A HISTORY OF MAJOR DEPRESSIVE DISORDER


*Antonella Favit, M.D. Shire Development Inc725 Chesterbrook Blvd, Wayne, PA 19087, Jack Schreckengost, Ph.D., Cynthia Richards, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the end of this presentation, the participant should be able to describe the results of a post-hoc analysis on the use of lisdexamfetamine dimesylate (LDX) in the treatment of adults diagnosed with attention-deficit/hyperactivity disorder (ADHD) and a history of major depressive disorder.

**SUMMARY:**


Introduction: Major depressive disorder (MDD) is a common comorbidity in adults with attention-deficit/hyperactivity disorder (ADHD). This post-hoc analysis evaluated the efficacy and safety of lisdexamfetamine dimesylate (LDX) in adults with ADHD and a history of MDD, not currently treated with antidepressants. Methods: Adults aged 18 to 55 years, with an ADHD-Rating Scale (ADHD-RS) score at baseline >=28, were randomly assigned to receive 30, 50, or 70 mg/d LDX or placebo. LDX treatment groups were combined in this analysis due to the small number of subjects in the MDD subgroup. The primary efficacy measure was change in ADHD-RS score from baseline to endpoint. CGI-Improvement (CGI-I) at endpoint was also reported, with improved defined as “much improved” or “very much improved.” The trial was not prospectively powered to detect differences between the MDD and non-MDD subgroups. Tolerability was assessed throughout the study. Results: Of 420 adults randomized, 40 had a history of MDD (5 placebo, 35 LDX). Least squares mean changes (SE) in ADHD-RS were -16.3 (2.0) (MDD LDX), -17.5 (0.7) (non-MDD LDX), -10.3 (5.2) (MDD placebo), and -8.0 (1.5) (non-MDD placebo); non-MDD vs MDD LDX, P=.57. The percentage of subjects with improved CGI-I at endpoint was 53% for MDD subjects and 60% for non-MDD subjects. Adverse events were consistent with amphetamine use and similar in the MDD and non-MDD

subgroups. No LDX-treated subjects reported dysphoric mood or depression. Overall discontinuation rates were 17.1% and 17.0% for the MDD and non-MDD groups, respectively. Conclusions: In subjects with ADHD and a history of MDD, LDX produced similar improvement in ADHD-RS and CGI-I and tolerability compared with non-MDD subjects. Future studies of stimulant treatment of ADHD in individuals with a history of MDD are indicated.

**REFERENCES:**


1. Biederman J, Krishnan S, Zhang Y, McGough JJ, Findling RL: Efficacy and tolerability of lisdexamfetamine dimesyl ate (NRP-104) in children with attention-deficit/hyperactiv ity disorder: a phase III, multicenter, randomized, double-blind, forced-dose, parallel-group study. Clin Ther 2007; 29:450-463.
2. Kessler RC, Adler L, Barkley R, Biederman J, Conners CK, Demler O, Faraone SV, Greenhill LL, Howes M, Secnik K, Spencer T, Ustun TB, Walters EE, Zaslavsky AM: The prevalence and correlates of adult ADHD in the United States: results from the National Comorbidity Survey Repli cation. Am J Psychiatry 2006; 163:716-723.


**NR6-003**

**PHYSICIAN PERCEPTION OF CLINICAL IMPROVEMENT WITH LISDEXAMFETAMINE DIMESYLATE IN CHILDREN AGED 6 TO 12 YEARS WITH ADHD**


*Brian Scheckner, Pharm.D. Shire Development Inc 725 Chesterbrook Blvd, Wayne PA 19087, Jack Schreckengost, Ph.D., Antonella Favit, M.D., Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to compare the "very much improved" scores on the Clinical Global Impression-Improvement scale after treatment with lisdexamfetamine dimesylate and mixed amphetamine salts extended-release in children aged 6 to 12 years with attention-deficit/hyperactivity disorder.

**SUMMARY:**


Introduction: A randomized, double-blind, placebo-controlled, crossover analog classroom study assessed the response to lisdexamfetamine dimesylate (LDX) and mixed amphetamine salts extended release (MAS XR) in children aged 6 to 12 years with attention-deficit/hyperactivity disorder (ADHD). The primary outcome was the deportment subscale of the Swanson, Kotkin, Agler, M-Flynn, and Pelham (SKAMP) Rating Scale; secondary efficacy measures included the Clinical Global Impression (CGI) Scale, an investigator-rated evaluation of a subject's improvement over time. We used the McNemar's test to compare subjects' responses on the CGI. Methods: After each treatment, the investigator determined each subject's improvement relative to the symptoms at baseline on CGI-Improvement (CGI-I), a 7-point scale ranging from 1 (very much improved) to 7 (very much worse). In this post-hoc analysis, CGI-I was dichotomized into 2 categories, "very much improved," and all other responses (score of 1 vs scores of 2 to 7). Responses to LDX and MAS XR were compared in 2x2 tables and assessed according to McNemar's test. Results: Thirty-two percent of the 50 children who completed the trial were "very much improved" after treatment with LDX, while 16% of these same 50 subjects were "very much improved" after treatment with MAS XR. Specifically, 10 subjects were "very much improved" with LDX but not MAS XR. Conversely, 2 subjects were "very much improved" with MAS XR but not LDX. Six subjects were "very much improved" with both LDX and MAS XR. Thirty-two subjects were not "very much improved" with either LDX or MAS XR. McNemar's test on the 2x2 table showed that LDX resulted in a significantly higher number of subjects with a "very much improved" score on the CGI-I than MAS-XR (P=.0386). Conclusion: Treatment with LDX resulted in a significantly higher number of subjects with a "very much improved" score on the CGI-I than treatment with MAS-XR.


**REFERENCES:**


1. Biederman J, Krishnan S, Zhang Y, McGough JJ, Findling RL: Efficacy and tolerability of lisdexamfetamine dimesyl ate (NRP-104) in children with attention-deficit/hyperactiv ity disorder: a phase III, multicenter, randomized, double-blind, forced-dose, parallel-group study. Clin Ther 2007; 29:450-463.
2. Biederman J, Boellner SW, Childress A, Lopez FA, Krishnan S, Zhang Y: Lisdexamfetamine dimesylate and mixed amphet amine salts extended-release in children with ADHD: a double-blind, placebo-controlled, crossover analog classroom study. Biol Psychiatry 2007; 62:970-976.


**NR6-004**

**METHYLPHENIDATE EFFECTS ON OBJECTIVE MEASURES OF ACTIVITY AND ATTENTION ACCURATELY IDENTIFY DOSES ASSOCIATED WITH OPTIMAL CLINICAL RESPONSE IN ADHD**


*Calvin R Sumner, M.D. 245 First Street 14th Floor, Cambridge-MA 02142, Martin H. Teicher, M.D., Ph.D., Ann Polcari, R.N., Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to appreciate the high level of concordance of objective measures of motor activity and attention with traditional symptom-based evaluations in assessing change in response to treatment. Participants should be able to recognize the value of this office based assessment technology in optimizing medication management.

**SUMMARY:**


Background: Research suggests that measures of attention such as continuous performance tests (CPT) are of limited value for medication titration as CPT performance improves on doses too low to produce clinical benefits. In this study we sought to ascertain whether objective assessment of attention using a computerized visual-motor task and motor activity (using infrared motion analysis)could identify MPH doses associated with optimal clinical response. Methods: Eleven boys 6-12 years old with ADHD by DSM-IV criteria, who were currently receiving treatment with MPH, participated in this four-week, triple blind (parent, child, rater) study. Subjects received one week of each treatment: placebo, low (0.4 mg/kg), medium (0.8 mg/kg) and high (1.5 mg/kg) daily doses of MPH. Parent ratings of clinical response and objective assessment of attention and activity were assessed at baseline and at the end of each treatment week. Objective measures

of activity and attention were compared with parental ratings to determine degree of concordance with respect to treatment effect. Results: In 9/11 cases, the dose producing best overall improvement on objective measures of activity and attention was also the dose parents indicated produced the best clinical outcome (p<.001). Similarly, 7/11 parents indicated that their child's worst week occurred when receiving the treatment that produced the worst objective outcome (p< 0.002). Performance on the objective measures was much better during the week that parents rated best versus the week parents rated as worst(p<.01). Conclusions: Objective measures of activity and attention were highly concordant with parent ratings of clinical response, and in 91% of cases identified the dosage parents rated as most beneficial. This suggests that office-based assessment of clinical response, using objective measures of activity and attention, has ecological validity, and the potential to facilitate rapid and accurate dose titration.

**REFERENCES:**

1. MTA Cooperative Group, 1999.
2. Teicher, 1996.

**NR6-005**

## EFFICACY OF OROS® MPH IN A DOUBLE-BLIND, PLACEBO-CONTROLLED, DOSE-TITRATION STUDY OF ADULTS WITH ADHD: SECONDARY ENDPOINTS

*Camille Orman, Ph.D. 1125 Trenton-Harbourton Road, Titusville, NJ 08560, Sally A. Berry, M.D., Ph.D., Joseph M. Palumbo, M.D.*

**EDUCATIONAL OBJECTIVE:**

It is recognized that attention-deficit/hyperactivity disorder (ADHD) may continue into adulthood. At the conclusion of the presentation, the participant will recognize that a double-blind, placebo-controlled, dose-titration study of adults with ADHD receiving OROS methylphenidate (MPH) in doses ranging from 36 mg/d to 108 mg/d demonstrated efficacy in the treatment of adult patients with ADHD, as measured by the CGI-I and CAARS-S:S scores and the Responder analysis. OROS MPH was well tolerated.

**SUMMARY:**

INTRODUCTION: The potential efficacy of OROS methylphenidate (MPH) for ADHD in adults is supported by demonstrated utility in children. This study evaluates the efficacy and safety of OROS MPH in adults with ADHD by both clinician- and patient-rated measures.
METHODS: A double-blind, placebo-controlled, dose-titration study of OROS MPH in adults with ADHD was conducted. Patients 18–65 with ADHD starting prior to age 7 and an Adult ADHD Investigator Symptom Rating Score (AISRS) =24 were randomized to placebo or OROS MPH during a 5-week titration period. Doses were initiated at 36 mg/d with 18-mg increases until AISRS decreased by 30% from baseline and a Clinical Global Impression Global Improvement subscale [CGI-I] score of 1 or 2 was attained (defined as "Responder"), or maximum dose (108 mg/d) was achieved. Dose reduction was required for resting HR >100 bpm, systolic BP >140 mm Hg, or diastolic BP >90 mm Hg. A 14-day efficacy period followed the titration period. Secondary endpoints were analyzed sequentially and considered statistically significant (0.05 level) if previous endpoints were significant (order: CGI-I; Conners' Adult ADHD Rating Scale–Self Report: Short Version [CAARS-S:S]; Responder; Sheehan Disability Scale [SDS] "work" question; CGI-Severity [CGI-S]; and ADHD Impact Model for Adults [AIM-A™]).
RESULTS: 226 patients were in the intention-to-treat and safety populations (110 OROS MPH; 116 placebo). OROS MPH was significantly superior to placebo on CGI-I, P=0.008; improvement in CAARS-S:S, P=0.029; and Responder, P=0.009. OROS MPH showed greater improvement but was not significantly better for the SDS "work" question, CGI-S, and AIM-A. Study medication was well tolerated. There were no serious treatment-emergent adverse events.
CONCLUSIONS: OROS MPH at 36 mg/d to 108 mg/d demonstrated efficacy for adults with ADHD as measured by both clinician and patient ratings, with no unexpected tolerability findings.

Supported by JJPRD, Titusville, NJ.

**REFERENCES:**

1. Berry SA, et al. Safety and Efficacy of OROS Methylphe nidate in Adults With ADHD. Poster presented at 54th Annual Meeting of the American Academy of Child and Adolescent Psychiatry. Boston, MA, October 26, 2007.
2. Weiss G, Hechtman L, Milroy T, et al. Psychiatric status of hyperactives as adults: a controlled prospective 15 year fol lowup of 63 hyperactive children. J Am Acad Child Adolesc Psychiatry. 1985;24:211-220.

**NR6-006**

## A DYNAMIC PATIENT FLOW MODEL TO IDENTIFY AREAS TO IMPROVE AWARENESS AND DIAGNOSIS IN ADULTS WITH ATTENTION DEFICIT HYPERACTIVITY DISORDER

*Cynthia Willey, Ph.D. University of Rhode Island Fogarty Hall 14 Lower College Road, Kingston, RI 02881, Stephen V. Faraone, Ph.D., Steve Peterson, Juliene L. Stafford, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to understand a dynamic simulation model for adult ADHD populations and its utility in identifying and characterizing the pathways for adult populations and flows through these pathways, leading to the diagnosis of adult ADHD.

**SUMMARY:**

Introduction/Hypothesis: The estimated prevalence of attention deficit hyperactivity disorder (ADHD) in U.S. adults is 4.4% (1, 2) yet the diagnosed prevalence is only 1.4% (1), suggesting a lack of patient awareness and physician under/misdiagnosis. We constructed a dynamic simulation model of pathways that can lead to diagnosis of adult ADHD in the U.S. This Adult ADHD Patient Flow Model identifies populations of adults with ADHD before diagnosis and diagrams their flows through different stages within and outside the health-care system.
Methods: The model was constructed through four steps: 1) Reviewed literature to identify pathways to diagnosis and clinical management gaps in adults with ADHD; 2) Created an adult ADHD flow-to-diagnosis map and defined requirements for data and assumptions that identified populations and flows through the map; 3) Developed model and populated it with

published epidemiologic and clinical care data, and evidence-based assumptions to fill gaps where data were unavailable; 4) Generated a baseline case to evaluate consistency of data and assumptions with known adult ADHD population characteristics.
Results: Patients were mapped to four locations along the pathways to care: outside the medical system (comprising patients either unaware or aware of an issue/suspect ADHD), seeking diagnosis, misdiagnosed, and correctly diagnosed. The baseline case projected a 2007 end-of-year population of 10,081,958 adults with ADHD in the U.S., with 57% outside the medical system. Differences in flow through the pathways allowed us to identify points of patient accumulations and reductions.
Conclusions/Discussion: The Adult ADHD Patient Flow Model suggests that nearly 6 million adults with ADHD are undiagnosed compared with prevalence estimates. This model identifies specific pathways to care and points within those pathways that may be appropriate targets for interventions such as patient awareness and improved diagnosis.
Supported by Shire

**REFERENCES:**

1. Faraone SV, Biederman J: What is the prevalence of adult ADHD? Results of a population screen of 966 adults. J Atten Disord 2005; 9:384-391
2. Kessler RC, Adler L, Barkley R, Biederman J, Conners CK, Demler O, Faraone SV, Greenhill LL, Howes MJ, Secnik K, Spencer T, Ustun TB, Walters EE, Zaslavsky AM: The prevalence and correlates of adult ADHD in the United States: results from the National Comorbidity Survey Repli cation. Am J Psychiatry 2006; 163:716-723

**NR6-007**

## EFFECT OF LISDEXAMFETAMINE DIMESYLATE ON SLEEP QUALITY IN ADULTS WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER

*David W Goodman, M.D. Johns Hopkins at Green Spring Station10751 Falls Road, Suite 306, Lutherville MD 21093, Richard Weisler, M.D., Gregory Mattingly, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to describe the effect of short-term treatment with lisdexamfetamine dimesylate on sleep quality in adults with attention-deficit/hyperactivity disorder.

**SUMMARY:**

Introduction: Sleep problems (eg, insomnia, sleep apnea, and nocturnal motor activity) are common in adults with attention-deficit/hyperactivity disorder (ADHD). This analysis evaluated the effect of lisdexamfetamine dimesylate (LDX) on sleep quality in adults with ADHD. Methods: This double-blind, parallel-group, 4-week forced-dose escalation trial enrolled adults with a *DSM-IV-TR* diagnosis of ADHD. Subjects were randomized to placebo, 30, 50, or 70 mg/d LDX. The Pittsburgh Sleep Quality Index (PSQI), a self-rated questionnaire, assessed sleep quality over 1 month. Seven components (sleep quality, sleep latency, sleep duration, sleep efficiency, sleep disturbances, use of sleep medication, and daytime functioning) were rated from 0 (no difficulty) to 3 (severe difficulty). A global score >5 out of 21 defined poor sleep quality. A decrease in PSQI score indicates improvement in sleep quality. Results: A total of 420 subjects were randomized (62 placebo, 119 LDX 30 mg/d, 117 LDX 50 mg/d, 122 LDX 70 mg/d). The mean baseline global PSQI score was 5.77 for LDX and 6.27 for placebo (P=.189). At endpoint, least squares (LS) mean change from baseline global PSQI scores was not significantly different between LDX and placebo (LDX -0.81 vs placebo -0.54, P=.327). Baseline scores for the 7 PSQI components ranged from 0.06 to 1.33, and none was significantly different from placebo. At endpoint, the daytime functioning component (trouble staying awake/loss of enthusiasm) showed a significant improvement in LS mean change from baseline to endpoint for LDX compared with placebo (LDX -0.38 vs placebo -0.03, P=.0001). LS mean changes from baseline to endpoint for the other 6 PSQI components ranged from -0.19 to 0.04, and none was significantly different from placebo.Conclusions: LDX was not associated with detrimental effects on overall sleep quality and it significantly improved daytime functioning in adults with ADHD.

**REFERENCES:**

1. Philipsen A, Hornyak M, Riemann D: Sleep and sleep disor ders in adults with attention deficit/hyperactivity disorder. Sleep Med Rev 2006; 10:399-405.
2. Kooij JJS, Middelkoop HAM, van Gils K, Buitelaar JK: The effect of stimulants on nocturnal motor activity and sleep quality in adults with ADHD: an open-label case-control study. J Clin Psychiatry 2001; 62:952-956.

**NR6-008**

## GUANFACINE EXTENDED RELEASE: DURATION OF EFFECT IN CHILDREN AND ADOLESCENTS AGED 6 TO 17 YEARS WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER

*Floyd Sallee, M.D. University of Cinncinnati231 Albert Sabin Way ML 0559, Cincinatti OH 45269, Andrew Lyne, M.Sc., C.Stat., Gerald Tremblay, M.D., J.D., Joseph Biederman, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to describe the effects of treatment with guanfacine extended release on parent ratings of attention-deficit/hyperactivity disorder symptoms at various time points throughout the day and up to 24 hours postdose.

**SUMMARY:**

Introduction: Guanfacine extended release (GXR), a selective alpha 2A-adrenoceptor agonist, has demonstrated efficacy as monotherapy in attention-deficit/hyperactivity disorder (ADHD). This analysis pooled data from 2 pivotal trials in subjects aged 6 to 17 years.
Methods: In one trial, subjects were randomized to 2, 3, or 4 mg/d GXR or placebo starting at 1 mg/d. Dose was escalated weekly by 1 mg/d with at least 2 weeks at maximum dose. In a second trial, subjects were randomized to 1, 2, 3, or 4 mg/d GXR or placebo (similar dose-escalation schedule; 3 weeks at maximum dose). The primary efficacy measure in both trials was change in ADHD Rating Scale-IV (ADHD-RS-IV) score from baseline. Duration of effect, a secondary measure, was evaluated with the Conners' Parent Rating Scale (CPRS) at 12, 14, and 24 hours postdose.

Results: From baseline to endpoint, all GXR treatment groups showed significant improvement in ADHD-RS-IV vs placebo (P<.001). Changes from baseline to endpoint in CPRS (±SD) were significantly greater in each weight-adjusted actual dose vs placebo throughout the day. Change from baseline to endpoint at 12 hours for placebo (n=140) was -9.9 (18.4); for 0.01-0.04 mg/kg (n=146), -16.6 (20.8); 0.05-0.08 mg/kg (n=200), -16.7 (19.7); 0.09-0.12 mg/kg (n=102), -22.1 (17.2); and 0.13-0.17 mg/kg (n=41), -25.9 (24.1); P<.001 for all active groups vs placebo. At 14 hours, changes from baseline to endpoint were -9.9 (20.6), -15.8 (21.1), -15.3 (21.5), -17.8 (20.1), and -23.7 (24.4), respectively, P<.001 for all active groups vs placebo. At 24 hours, these values were -5.7 (22.0), -11.4 (21.6), -11.4 (20.2), -16.7 (18.0), and -17.2 (20.3), respectively, P=.003 for all active groups vs placebo.
Conclusion: Results of GXR treatment when analyzed by weight-adjusted actual dose show efficacy in reducing ADHD symptoms at all time points measured throughout 24 hours in subjects aged 6 to 17 years as rated by parents using the CPRS.

**REFERENCES:**


1. Biederman J, Melmed RD, Patel A, McBurnett R, Konow J, Lyne A, Scherer N, for the SPD503 Study Group: A random ized, double-blind, placebo-controlled study of guanfacine extended release in children and adolescents with attention-deficit/hyperactivity disorder [In press].
2. PediatricsScahill L, Chappell PB, Kim YS, Schultz RT, Katsovich L, Shepherd E, Arnsten AFT, Cohen DJ, Leckman JF: A placebo-controlled study of guanfacine in the treatment of children with tic disorders and attention deficit hyperactiv ity disorder. Am J Psychiatry 2001; 158:1067-1074


**NR6-009**

## CARDIOVASCULAR EFFECTS OF LONG-TERM LISDEXAMFETAMINE DIMESYLATE TREATMENT OF SCHOOL-AGED CHILDREN WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER


*Frank A Lopez, M.D. Children's Developmental Center 1992 Mizell Avenue, Winter Park, FL 32792, Valerie Arnold, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to evaluate the effects of 1 year of treatment with lisdexamfetamine dimesylate on systolic blood pressure, diastolic blood pressure, and pulse in children aged 6 to 12 years with attention-deficit/hyperactivity disorder.

**SUMMARY:**


Introduction: Stimulants used to treat attention-deficit/hyperactivity disorder (ADHD) may elevate cardiovascular vital and electrocardiogram (ECG) parameters. We have assessed the effects on systolic blood pressure (SBP), diastolic blood pressure (DBP), and pulse in children aged 6 to 12 years diagnosed with ADHD who were treated for 1 year with 30, 50, and 70 mg/d lisdexamfetamine dimesylate (LDX). Methods: Children aged 6 to 12 years who met the DSM-IV-TR® criteria for ADHD (combined or hyperactive subtypes; n=270) were titrated to 30, 50, or 70 mg/d LDX over 4 weeks and maintained at this dose for up to 11 months. SBP, DBP, and pulse were measured at screening, baseline, at the end of each of the first 4 weeks, and every month thereafter, as well as at the final study visit. Results: Of the 272 treated subjects, 125 (46%) discontinued before completion; for each participant, study endpoint was defined as the time of discontinuation. There were significant improvements in the primary outcome measure, change in mean ± SD total ADHD-Rating Scale (ADHD-RS) score from baseline to endpoint for the intent-to-treat population (-27.2 ± 13.0 points, P<.0001). Mean ± SD changes from baseline at endpoint for vital signs were small (1.4 ± 13.7 bpm for pulse, 0.7 ± 10.0 mm Hg for SBP, and 0.6 ± 8.3 mm Hg for DBP). By endpoint, there were 19 (7.0%) SBP outliers (defined as >=120 mm Hg from <120 mm Hg at baseline), 13 (4.8%) DBP outliers (defined as >=80 mm Hg from <80 mm Hg at baseline), and 18 (6.6%) pulse outliers (defined as >=[mean+2SD] from <[mean+2SD] at baseline). There were no apparent trends in vital sign outliers, and the medical monitor determined that there were no clinically meaningful cases among outliers.
Conclusion: While long-term LDX treatment of children aged 6 to 12 years with ADHD improved ADHD-RS total scores significantly, LDX did not have clinically meaningful effects on SBP, DPB, or pulse.


**REFERENCES:**


1. Biederman J, Krishnan S, Zhang Y, McGough JJ, Findling RL: Efficacy and tolerability of lisdexamfetamine dimesyl ate (NRP-104) in children with attention-deficit/hyperactiv ity disorder: a phase III, multicenter, randomized, double-blind, forced-dose, parallel-group study. Clin Ther 2007; 29:450-463
2. Biederman J, Boellner SW, Childress A, Lopez FA, Krishnan S, Zhang Y: Lisdexamfetamine dimesylate and mixed amphetamine salts extended-release in children with ADHD: a double-blind, placebo-controlled, crossover analog class room study. Biol Psychiatry 2007; 62:970-976


**NR6-010**

## CLINICIAN-RATED AND PATIENT-REPORTED SYMPTOM IMPROVEMENT IN A DOUBLE-BLIND, PLACEBO-CONTROLLED, DOSE-TITRATION STUDY OF OROS® MPH IN ADULTS WITH ADHD


*Gahan Pandina, Ph.D. 1125 Trenton-Harbourton Road, Titusville, NJ 08560, Camille Orman, Ph.D., Sally A. Berry, M.D., Ph.D., Joseph M. Palumbo, M.D.*


**EDUCATIONAL OBJECTIVE:**

Participants will note consistency of improvement in ADHD symptoms between clinician-rated symptoms (Adult ADHD Investigator Symptom Rating Scale; AISRS) and patient-rated symptoms (Conners' Adult ADHD Rating Scale–Self Report: Short Version; CAARS-S:S) in a double-blind, placebo-controlled, dose-titration study of OROS methylphenidate (MPH) in adult patients.

**SUMMARY:**


INTRODUCTION: There is little information on the consistency between patients' subjective assessment of clinical response and clinician ratings of symptoms in adult ADHD. Concordance of symptoms may be relevant in evaluating response. This study evaluates symptom improvement as measured by patient-reported and clinician-rated ADHD rating scales in a study of OROS methylphenidate (MPH) in adults with ADHD.

METHODS: In a randomized, double-blind, placebo-controlled, dose-titration study of OROS MPH in adults with ADHD, patients aged 18–65 with ADHD were randomized to receive placebo or OROS MPH (36–108 mg/d) for 7 weeks. Investigator-rated Adult ADHD Investigator Symptom Rating Scale (AISRS) scores and patient-rated Conners' Adult ADHD Rating Scale–Self Report: Short Version (CAARS-S:S) scores were measured throughout the study. A post-hoc correlation assessment of AISRS and CAARS-S:S was performed. RESULTS: The intent-to-treat population included 226 patients: 110 randomized to OROS MPH and 116 to placebo. OROS MPH was statistically significantly superior to placebo in reducing ADHD symptoms as measured by AISRS and CAARS-S:S. Least squares mean (SEM) change from baseline to final visit (LOCF) AISRS total score was –10.6 (1.09) for OROS MPH vs –6.8 (1.06) for placebo (P=0.012). Similarly, the least squares mean (SEM) change from baseline to final visit (LOCF) CAARS-S:S total score was –12.7 (1.45) for OROS MPH vs –8.3 (1.37) for placebo (P=0.029). Final visit change scores for AISRS and CAARS-S:S were well correlated for the OROS MPH group (Pearson correlation coefficient, r=0.76; P<0.0001) and the placebo group (r=0.73; P<0.0001). CONCLUSIONS: The impact of treatment with OROS MPH on adult ADHD symptoms was consistent across patient-reported and clinician-rated assessments. This consistency may have important implications for evaluating treatment response in adult patients with ADHD.

Supported by funding from JJPRD, Titusville, NJ

**REFERENCES:**

1. Berry SA, et al. Safety and Efficacy of OROS Methylphe nidate in Adults With ADHD. Poster presented at 54th Annual Meeting of the American Academy of Child and Adolescent Psychiatry. Boston, MA, October 26, 2007.
2. Murphy P, Schachar R. Use of self-ratings in the assessment of symptoms of attention deficit hyperactivity disorder in adults. Am J Psychiatry. 2000 Jul;157(7):1156-1159.

**NR6-011**

## PATIENT-REPORTED AND OVERALL CLINICAL IMPROVEMENT ASSOCIATED WITH ABT-089 IN ADULT ADHD

*George Apostol, M.D. Abbott Laboratories100 Abbott Park Road, Abbott Park, IL 60064-3500, Lenard A. Adler, M.D., Walid Abi-Saab, M.D., Timothy E. Wilens, M.D., Christopher J. Kratochvil, M.D., Weining Z. Robieson, Ph.D., Patricia J. Wozniak, Ph.D., Mario Saltarelli, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to recognize the effects of the neuronal nicotinic receptor partial agonist ABT-089 on secondary measures of efficacy in the treatment of adults with ADHD.

**SUMMARY:**

Objective: To examine the effects of the neuronal nicotinic receptor (NNR) partial agonist, ABT-089, on various clinician- and self-rated efficacy rating scales in adults with ADHD. The primary safety and efficacy results are presented in an accompanying poster. Methods: This multicenter, randomized, double-blind, placebo-controlled study used a 2 x 2 crossover design in which each subject received, in random sequence, both placebo and active treatment. Five doses of ABT-089 were evaluated: 2 mg, 5 mg, 15 mg, or 40 mg once daily (QD), or 40 mg twice daily (BID). Each treatment period was 4 weeks, separated by a 2-week washout period. Protocol-specified secondary efficacy measures included the Adult ADHD Investigator Symptom Report Scale (AISRS), the subject self-rated Conners' Adult ADHD Rating Scale (CAARS), as well as, the investigator-rated Clinical Global Impression-ADHD Severity Scale (CGI-ADHD-S). Efficacy assessments were performed at the end of each treatment period, and evaluated by an analysis of covariance with baseline score within each period as a covariate. Results: ABT-089 40 mg BID (P=0.022) and 40 mg QD (P=0.029) were superior to placebo in reducing symptom severity on the AISRS. Subjects' self-reported CAARS scores were also significantly superior for ABT-089 40 mg BID (P=0.029) and 40 mg QD (P=0.004) compared to placebo. Subjects receiving ABT-089 40 mg BID demonstrated significant improvement compared to placebo on the CGI-ADHD-S (ABT-089 40 mg BID 3.7±0.20 vs. placebo, 4.0±0.20; P=0.033). ABT-089 40 mg QD showed a trend toward efficacy on this measure (P=0.108). Conclusion: The NNR partial agonist ABT-089 demonstrated efficacy by both improved scores in investigator-rated scales of symptom severity and self-reported ratings of treatment benefits in adults with ADHD.

Supported by Abbott.

**REFERENCES:**

1. Wilens TE, Decker MW. Neuronal nicotinic receptor agonists for the treatment of attention-deficit/hyperactivity disorder: focus on cognition. Biochemical Pharmacology 2007;74:1212-1223.
2. Wilens TE, Verlinden MH, Adler LA et al. ABT-089, a neu ronal nicotinic receptor partial agonist, for the treatment of at tention-deficit/hyperactivity disorder in adults: results of a pilot study. Biol Psychiatry 2006;59:1065-1070.

**NR6-012**

## COMORBID DEPRESSION AND ADHD IN CHILDREN AND ADOLESCENTS - CONSENSUS AND CONTROVERSY

*Godehard Oepen, M.D. Alabama Psychiatric Services2868 Acton RoadBirmingham, AL 35243, BirminghamAL 35243, Gavin L. Brunsvold, M.D., Godehard Oepen, M.D., Ph.D., Edward J. Federman, Ph.D., Richard N. Akins, M.D., M.B.A.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to; 1) name at least three frequent comorbid conditions of ADHD; 2) understand the limitation of the concept of "externalizing" and "internalizing" conditions; 3) understand the important impact of age, gender and ADHD subtype on depression in ADHD; and 4) understand the important role of comorbid ODD in ADHD outcome

**SUMMARY:**

Comorbid Depression in Attention Deficit Disorder patients suffers from an "attention deficit" by both clinicians and researchers, compared to other comorbidities (ODD, anxiety). Consensus and controversies of diagnosis and treatment of these conditions is reviewed. Based on academic studies as well as on own data from integrated routine measures of outcome in a large private practice group (Alabama

Psychiatric Services), depression in ADHD appears to be a distinct comorbidity. Age and gender are important and often overlooked variables: Depression in children and adolescents with ADHD is increasingly prevalent in girls as they get older, but not in boys. Externalizing and internalizing disorders, as traditionally conceptualized, appear to be overlapping rather than exclusive categories, with anger and acting-out (ODD features) cutting across both categories. Depression alone does not seem to worsen outcome in our sample of 920 patients with ADHD (out of a total of 3419 outpatients in the study). ODD features may compromise outcome of ADHD even when full ODD crteria are not met. Our findings are somewhat counter-intuitive and highlight the importance of a careful assessment of children with ADHD and comorbid depression, with attention to gender, age and especially ODD features; contradictory findings in treatment outcome may result from a failure to do so. Furthermore, they stress the feasability and value of naturalistic data from private practice to supplement and correct data obtained form highly selective overcompliant patient populations in academic studies.

**REFERENCES:**


1. Ostrander R, Crystal DS, August G Attention-Deficit-Hyper activity Disorder, Depression, and self- and other-assessments of social competence: a developmental study. J Abnorm Child Psychol Dec 2006;34(6):773-787
2. Swanson JM, Kramer HC, Hinshaw SP, et al. Clinical rel evance of the primary findings of the MTA: success rates based on severity of ADHD and ODD symptoms at the end of treatment. J Am Acad Child Adolesc Psychiatry Feb 2001;40(2):168-179


**NR6-013**

## EVALUATION OF CARDIOVASCULAR EFFECTS OF LISDEXAMFETAMINE DIMESYLATE TREATMENT IN ADULTS WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER


*Gwendolyn Niebler, D.O. Shire Development Inc 725 Chesterbrook Blvd., Wayne, PA 19087, Timothy E. Wilens, M.D., Richard Weisler, M.D., David Goodman, M.D., Lenard Adler, M.D., Joseph Biederman, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to; 1)Evaluate the effects on systolic blood pressure, diastolic blood pressure, and pulse after 4 weeks of treatment with lisdexamfetamine dimesylate (LDX) in adults with attention-deficit/hyperactivity disorder (ADHD); and 2)Evaluate the effects on electrocardiogram parameters from 4 weeks of treatment with LDX in adults with ADHD.

**SUMMARY:**


Introduction: We assessed the cardiovascular effects of the prodrug stimulant lisdexamfetamine dimesylate (LDX) in adults with attention-deficit/hyperactivity disorder (ADHD). Methods: Adults aged 18 to 55 years with ADHD were randomized to placebo (n=62), or 30 (n=119), 50 (n=117), or 70 (n=122) mg/d LDX, respectively, for 4 weeks, with the latter 2 groups undergoing forced-dose titration. ECGs and measurements of systolic (SBP) and diastolic (DBP) blood pressure and pulse were performed pretreatment and weekly thereafter. Results: In the placebo, 30, 50, and 70 mg/d LDX groups, LS mean (95% confidence interval [CI]) SBP changes from baseline to endpoint were -0.6 (-2.6, 1.5), 0.8 (-0.7, 2.3), 0.3 (-1.2, 1.8), and 1.3 (-0.2, 2.7) mm Hg, respectively, and LS mean (95% CI) DBP changes were 1.1 (-0.5, 2.7), 0.8 (-0.4, 2.0), 1.1 (-0.1, 2.2), and 1.6 (0.4, 2.7) mm Hg, respectively. There were 3 SBP (>=150 mm Hg from <150 mm Hg) outliers (1 in the 50 and 2 in the 70 mg/d groups) and 19 DBP (>=95 mm Hg from <95 mm Hg) outliers (1, 6, and 12 in the 30, 50, and 70 mg/d groups, respectively). LS mean (95% CI)changes in pulse from baseline to endpoint for the 4 groups were -0.01 (-2.3, 2.2), 2.8 (1.2, 4.4), 4.2 (2.6, 5.9), and 5.2 (3.6, 6.8) bpm, respectively, and there were 4, 36, 56, and 35 pulse outliers, respectively, defined as >=(mean+2•SD) from <(mean+2•SD). LS mean (95% CI) changes in ECG QTc-F interval were -0.3 (-4.1, 3.4), 4.0 (1.3, 6.8), -1.8 (-4.5, 0.9), and 2.7 (0, 5.4) msec, respectively. No QTc-F interval exceeded 480 msec or changed >=60 msec on treatment. There were no clinically meaningful ECG abnormalities. LS mean differences were significant for pulse (50 mg [P<.01] and 70 mg [P<.001] vs placebo), but not for any SBP, DBP, or QTcF comparisons. Conclusion: Small increases in LS mean pulse were observed with LDX in a dose-dependent fashion. LDX had no clinically meaningful effects on SBP, DPB, or ECG parameters.


**REFERENCES:**


1. Biederman J, Krishnan S, Zhang Y, McGough JJ, Findling RL: Efficacy and tolerability of lisdexamfetamine dimesyl ate (NRP-104) in children with attention-deficit/hyperactiv ity disorder: a phase III, multicenter, randomized, double-blind, forced-dose, parallel-group study. Clin Ther 2007; 29:450-463
2. Biederman J, Boellner SW, Childress A, Lopez FA, Krishnan S, Zhang Y: Lisdexamfetamine dimesylate and mixed amphetamine salts extended-release in children with ADHD: a double-blind, placebo-controlled, crossover analog class room study. Biol Psychiatry 2007; 62:970-976


**NR6-014**

## TREATMENT RESPONSE WITH OROS® MPH IN A DOSE-TITRATION STUDY OF ADULTS WITH ADHD


*H. Lynn Starr, M.D. 420 Delaware Drive, Fort Washington, PA 19034, Sally A. Berry, M.D., Ph.D., Camille Orman, Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the end of the presentation, the participant should recognize that a double-blind, placebo-controlled, dose-titration study showed that adults with attention-deficit/hyperactivity disorder (ADHD) responded to OROS methylphenidate (MPH) at doses ranging from 36 to 108 mg/d. The proportion of patients achieving response was higher with OROS MPH vs placebo across the dose range. Findings indicate a need for individualized dosing and use of higher doses of OROS MPH in some adult patients.

**SUMMARY:**


INTRODUCTION: OROS methylphenidate (MPH) has been shown to be safe and effective for the treatment of ADHD in children and adolescents, and there have been positive clinical trials in adults. This was a responder analysis with OROS MPH in a dose range of 36 to 108 mg/d in adults with ADHD. METHODS: We conducted a responder analysis of patients aged 18–65 years (N=226) enrolled in a placebo-controlled,

double-blind, dose-titration study of OROS MPH in adults with ADHD. During a 5-week titration period, treatment (OROS MPH or placebo) was initiated at 36 mg/d and was increased by 18 mg every week until a protocol-defined response was achieved or the highest dose was reached (108 mg/d). Response was defined as a decrease in the Adult ADHD Investigator Symptom Rating Scale (AISRS) score of =30% from baseline with a Clinical Global Impression–Improvement (CGI-I) rating of 1 (very much improved) or 2 (much improved). Once criterion response was achieved, no higher dose was attempted.
RESULTS: Mean final dose of OROS MPH was 67.7 mg/d (±27.9). A significantly greater proportion of patients met responder criteria with OROS MPH (36.9%) compared with placebo (20.9%) at final study visit (LOCF; P=0.009). The percentage of patients who met responder criteria at each dose level with OROS MPH vs placebo was 20.4% vs 7.8%, respectively, at 36 mg; 14%.1 vs 10.7, at 54 mg; 20.3% vs 7.1%, at 72 mg; 18.2 vs 1.4, at 90 mg; and 17.2% vs 4.5%, at 108 mg. 17 OROS MPH-treated patients (15.5%) and 5 placebo-treated patients (4.3%) had dose reductions because of adverse events (AEs). No serious AEs or deaths occurred.
CONCLUSIONS: OROS MPH reduces symptoms of ADHD across the dose range of 36 to 108 mg/d. Because responders were observed at each dose level, results suggest a need for individualized dosing and the use of higher doses (ie, 90 mg/d or 108 mg/d) of OROS MPH in some adult patients. OROS MPH was safe and well tolerated at all doses.
Supported by JJPRD, Titusville, NJ

**REFERENCES:**

1. Berry SA, Orman C, Cooper K, et al. Safety and efficacy of OROS methylphenidate in adults with ADHD. Poster presented at 54th Annual Meeting of the American Academy of Child and Adolescent Psychiatry. Boston, MA, October 26, 2007.
2. Biederman J, Mick E, Surman C, et al. A randomized, placebo-controlled trial of OROS methylphenidate in adults with attention-deficit/hyperactivity disorder. Biol Psychiatry. 2006;59:829-835.

**NR6-015**

## EFFICACY AND SAFETY OF LISDEXAMFETAMINE DIMESYLATE IN ADULTS WITH ADHD AND A HISTORY OF SUBSTANCE USE DISORDER

*Himanshu P Upadhyaya, M.B.B.S Medical University of South Carolina 9225 University Blvd., E-2A, Charleston, SC 29425, Jack Schreckengost, Ph.D., Sharon Youcha, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to describe the results of a post-hoc analysis on the use of lisdexamfetamine dimesylate in the treatment of adults diagnosed with attention-deficit/hyperactivity disorder and a history of substance use disorder.

**SUMMARY:**

Introduction: Substance use disorder (SUD) is a common comorbidity in adults with attention-deficit/hyperactivity disorder (ADHD). A post-hoc analysis of a randomized, double-blind, placebo-controlled trial in adults with ADHD was performed to explore the efficacy and safety of lisdexamfetamine dimesylate (LDX) in adults with ADHD and a lifetime, but not current (past 6 months), history of SUD.
Methods: Adults aged 18 to 55 years, with an ADHD-Rating Scale (ADHD-RS) score at baseline >=28, were randomly assigned to receive 30, 50, or 70 mg/d LDX or placebo. LDX treatment groups were combined in this analysis due to the small number of subjects in the SUD subgroup. The primary efficacy measure was change in ADHD-RS score from baseline to endpoint. CGI-Improvement (CGI-I) at endpoint was also reported with improved defined as “much improved” or “very much improved.” The trial was not prospectively powered to detect differences between the SUD and non-SUD subgroups. Tolerability was assessed throughout the study.
Results: Eighteen of the 420 subjects studied had a history of SUD and, by chance, were all randomized to receive LDX. At endpoint, least squares mean ± SE changes in ADHD-RS scores were -16.4 ± 3.0, -17.5 ± 0.6, and -8.2 ± 1.4 in the SUD LDX, non-SUD LDX, and non-SUD placebo subgroups, respectively (P=.72 for non-SUD vs SUD LDX). The percentages of subjects with improved CGI-I at endpoint were 65%, 59%, and 29% for the SUD, non-SUD, and non-SUD placebo subgroups, respectively. Adverse events were consistent with amphetamine use and similar in the SUD and non-SUD subgroups; overall discontinuation rates were 16.7% and 17.1%, respectively.
Conclusions: In this exploratory analysis of adults with ADHD, LDX appeared similar in efficacy and tolerability in subjects with or without a history of SUD. Future studies of stimulant treatment of ADHD in individuals with a history of SUD are warranted.

**REFERENCES:**

1. Biederman J, Krishnan S, Zhang Y, McGough JJ, Findling RL: Efficacy and tolerability of lisdexamfetamine dimesyl ate (NRP-104) in children with attention-deficit/hyperactiv ity disorder: a phase III, multicenter, randomized, double-blind, forced-dose, parallel-group study. Clin Ther 2007; 29:450-463
2. Kessler RC, Adler L, Barkley R, Biederman J, Conners CK, Demler O, Faraone SV, Greenhill LL, Howes M, Secnik K, Spencer T, Ustun TB, Walters EE, Zaslavsky AM: The prevalence and correlates of adult ADHD in the United States: results from the National Comorbidity Survey Repli cation. Am J Psychiatry 2006; 163:716-723

**NR6-016**

## WHAT LEVEL OF ADHD SYMPTOM REDUCTION IS NECESSARY FOR FUNCTIONAL IMPROVEMENT?

*Jan Buitelaar, M.D. University Medical Center St Radboud P.O. Box 9101, Nijmegen, Netherlands 6500 HB, Timothy E. Wilens, M.D., Shuyu Zhang, M.S., Yu Ning, M.S., Peter D. Feldman, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand (A) that improvements in ADHD symptoms during treatment with atomoxetine or methylphenidate may be reflected in improvements in social and behavioral function and (B) that there may be a threshold of 40% improvement in symptom severity that must be achieved for functional improvements to become apparent.

**SUMMARY:**

Objective: To determine the relationship between treatment-

related reduction of attention-deficit/hyperactivity disorder (ADHD) symptoms and functional improvement.Methods: Four studies were identified in the atomoxetine developmental database as involving a symptomatic measure, the ADHD Rating Scale-IV:Parent-Inv (ADHD RS), and a functional measure, the Life Participation Scale (LPS). Children and adolescents with DSM-IV ADHD were treated with atomoxetine (max. dose 1.2–1.8 mg/kg/d), OROS® methylphenidate (max. dose 54 mg/d), or placebo for a period of up to 12 weeks. Data were combined for all randomized patients in the parent studies, regardless of treatment-group assignment. Standardized changes of LPS score were calculated as the difference between each subject's change score and the mean of all change scores from all subjects, divided by the standard deviation of the changes from all subjects. This formed the basis for dividing patients into subgroups. Standardized changes of less than 0.25 SD were defined as indicating no change in functional outcome, changes of greater than 1.0 SD as indicating pronounced improvement or worsening, and changes of 0.25–1.0 SD as indicating a threshold change. Results: Analysis of mean changes in ADHD RS scores corresponding to standardized changes in functional scores indicated that a reduction of 16–18 points on the ADHD RS total score was associated with threshold functional improvement, corresponding to an approximately 40% to 45% improvement in symptom severity. For pronounced improvement, a reduction of 20–27 points was needed, corresponding to an approximately 50% to 65% improvement. Conclusions: The results suggest that a treatment-induced reduction of approximately 20 points in ADHD RS total score is associated with demonstrable improvement in patients' functional status. These initial findings will require verification by replication with other outcome measures.Research funded by Lilly Research Laboratories.

**REFERENCES:**

1. Saylor K, Buermeyer C, Sutton V, Faries D, Khan S, Schuh K: The Life Participation Scale for ADHD-Child Version: psychometric properties of an adaptive change instrument. J Child Adolesc Psychopharmacol (in press)
2. Steele M, Jensen PS, Quinn DMP: Remission versus response as the goal of therapy in ADHD: a new standard for the field? Clin Ther 2006; 28:1892–1908

**NR6-017**

## A LONG-TERM SAFETY STUDY OF OROS METHYLPHENIDATE IN ADULTS WITH ADHD

*Jaskaran Singh, M.D. Johnson & Johnson Pharmaceutical Research and Development, 1125 Trenton-Harbourton Road, TitusvilleNJ 08560, Lenard A. Adler, M.D., Sally A. Berry, M.D., Ph.D., Camille Orman, Ph.D., Gahan Pandina, Ph.D., Joseph M. Palumbo, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of the presentation, the participant will understand that OROS methylphenidate (MPH) was shown to be safe and well tolerated in adults with attention-deficit/hyperactivity disorder (ADHD) for up to 12 months over a range of doses (36 to 108 mg/d) in a long-term, open-label safety study. In addition, ADHD symptom improvement was observed with OROS MPH.

**SUMMARY:**

Introduction: Few studies address long-term safety of methylphenidate-based stimulants in adults with ADHD. A long-term, open-label study evaluated the safety of OROS MPH in adults with ADHD. The effect of OROS MPH on ADHD symptoms was examined.
Methods: 560 adults (18–65 years) were enrolled in an open-label study of OROS MPH for either 6 or 12 months. OROS MPH was initiated at 36 mg/d followed by weekly dose titration of 18 mg/d until clinical response or maximum dose (108 mg/d) was reached. Safety data were collected. Efficacy evaluations, including the Adult ADHD Investigator Symptom Rating Scale (AISRS), were performed for descriptive purposes.
Results: Of the 550 subjects who took at least 1 dose of study medication, mean (SD) final dose was 67.4 mg/d (24.09) with a mean (SD) duration of exposure of 173.4 days (125.77). AEs reported in =10% of subjects were irritability (10.0%), increased heart rate (10.5%), nausea (11.1%), upper respiratory tract infection (13.5%), anxiety (13.8%), dry mouth (14.7%), insomnia (20.7%), headache (24.0%), and decreased appetite (26.7%). Eight subjects reported serious AEs, none of which was considered drug related. No deaths occurred. Results indicated a mean (SD) heart rate increase of 4.1 bpm (10.77). Small changes in mean (SD) systolic (+2.6 mmHg [9.32]) and diastolic (+1.9 mmHg [7.16]) blood pressure were observed. There was no evidence of clinically relevant change in ECG interval assessments, including corrected QT. Mean (SD) weight loss was –2.3 kg (4.34). Mean (SD) baseline AISRS total score was 38.3 (7.50); change from baseline to final visit was –18.7 (11.96).
Conclusion: For adults with ADHD, OROS MPH (36–108 mg/d) is safe and well tolerated for up to 12 months. Cardiovascular effects and AE profile were consistent with known effects of MPH. Open-label use of OROS MPH was associated with improvement in ADHD symptoms, suggesting a clinical benefit in adults with ADHD.

Supported by funding from JJPRD, Titusville, NJ

**REFERENCES:**

1. Berry SA, Orman C, Cooper K, et al. Safety and efficacy of OROS methylphenidate in adults with ADHD. Poster presented at 54th Annual Meeting of the American Academy of Child and Adolescent Psychiatry. Boston, MA, October 26, 2007.
2. Biederman J, Mick E, Surman C, et al. A randomized, placebo-controlled trial of OROS methylphenidate in adults with attention-deficit/hyperactivity disorder. Biol Psychiatry. 2006;59:829-835.

**NR6-018**

## LONG-TERM TREATMENT EFFECTS OF THE METHYLPHENIDATE TRANSDERMAL SYSTEM IN BOYS AND GIRLS WITH ADHD

*John C Burnside, M.D. 13535 Jones Maltsberger Road, San AntonioTX 78247, Robert L. Findling, M.D., Oscar Bukstein, M.D., M.P.H, Frank A. López, M.D., Raun Melmed, M.D., Richard Civil, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) Demonstrate an understanding of MTS in the treatment of pediatric ADHD; 2) Discuss the long-term use of MTS in boys and girls with ADHD.

**SUMMARY:**
Introduction: This study evaluated the long-term safety and efficacy of the methylphenidate transdermal system (MTS) in children with attention-deficit/hyperactivity disorder (ADHD). Our sub-analysis examines treatment differences between boys and girls receiving MTS for up to 12 months. Methods: Children (6-12 years) exposed to MTS, placebo, or OROS MPH in previous MTS trials, entered this open-label, extension study. Subjects already receiving optimized MTS doses continued that dose for 12 months; those who were not underwent a 4-week stepwise dose-titration to an optimal MTS dose and continued this dose for 11 months. Efficacy measures (ADHD-Rating Scale-IV [ADHD-RS-IV], Clinical Global Impression-Improvement [CGI-I] and Parent Global Assessment [PGA] scales) were assessed at each study visit. Safety was assessed throughout the study. Results: In total, 212 boys and 114 girls received study medication. Common (>=10%) adverse events (AEs) included decreased appetite, headache, upper respiratory tract infection, cough, pyrexia and decreased weight; most (98%) were mild or moderate in severity. No clinically important differences were noted between sexes. Compared with Baseline, overall ADHD-RS-IV mean total scores were significantly lower at Endpoint (P<.0001). Between sexes, Baseline mean total scores were similar in boys (25.1) and girls (24.9), as were Endpoint improvements in ADHD symptoms; however, with slightly greater mean ADHD-RS improvements in boys (15.9) than in girls (18.5). CGI and PGA Endpoint mean scores were also comparable between boys and girls respectively (CGI: 1.9 and 2.0; PGA: 2.2 and 2.2); mean change from Baseline in boys and girls respectively (CGI: -0.6 and -0.3; PGA: -0.6 and -0.5). Conclusions: Reported AEs were consistent with stimulant treatment and generally comparable between sexes. MTS (for up to 12 months) demonstrated similar efficacy in treating symptoms of ADHD in boys and girls. This
work was supported by Shire Development Inc.
**REFERENCES:**
1. McGough JJ, Wigal SB, Abikoff H, et al. A randomized, double-blind, placebo-controlled, laboratory classroom as sessment of methylphenidate transdermal system in children with ADHD. J Atten Disord. 2006;9(3):476-485.
2. Anderson VR, Scott LJ. Methylphenidate transdermal system in attention-deficit hyperactivity disorder in children. Drugs. 2006:66(8):1117-1126.

**NR6-019**

## CARDIOVASCULAR SAFETY DATA FROM A LONG-TERM, OPEN-LABEL STUDY OF OROS® MPH IN ADULTS WITH ADHD

*Joris Berwaerts, M.D. 1125 Trenton-Harbourton Road, TitusvilleNJ 08560, Camille Orman, Ph.D., Sally A. Berry, M.D., Ph.D., Gahan Pandina, Ph.D., Joseph M. Palumbo, M.D.*
**EDUCATIONAL OBJECTIVE:**
Data regarding cardiovascular effects of stimulant medication in adults with attention-deficit/hyperactivity disorder (ADHD) are limited to short-term clinical trials. Participants will learn that in a long-term open-label safety study of adults with ADHD, OROS methylphenidate did not appear to lead to clinically important mean changes from baseline in blood pressure, heart rate, or electrocardiogram parameters when administered in doses from 36 mg/d to 108 mg/d for up to 12 months.
**SUMMARY:**
INTRODUCTION: Stimulant medications have sympathomimetic effects that increase blood pressure (BP) and heart rate (HR). With methylphenidate (MPH) at therapeutic doses, these changes have been reversible and of debatable clinical relevance.1 Data on the cardiovascular (CV) effects of stimulant medications in adults with ADHD are limited to short-term clinical trials.2
METHODS: In a long-term, open-label safety study of OROS MPH in adults with ADHD, patients aged 18–65 were initially dosed with OROS MPH 36 mg/d. Dose increments of 18-mg were allowed until a protocol-defined response or a maximum dose of 108 mg/d. Patients enrolled for 6 or 12 months. Dose reduction was required for resting HR >100 bpm, systolic BP >140 mmHg, or diastolic BP >90 mmHg. CV evaluation included BP and HR (monthly), and ECG (every 3 months).
RESULTS: 550 patients received at least one dose of study medication: 258 in the 6-month and 292 in the 12-month study period. Dose reductions were increase in HR, 4.0% (22/550); increase in systolic BP, 1.6% (9/550); and increase in diastolic BP, 2.4% (13/550). Mean (SD) changes from baseline to final visit were HR, 4.1 bpm (10.77), systolic BP, 2.6 mmHg (9.32), and diastolic BP, 1.9 mmHg (7.16). The proportion of subjects with vital signs exceeding predefined cut-off values was HR >100 bpm, 3.0% (16/550); increase in HR >25% of baseline, 40.3% (217/550); systolic BP >140 mmHg, 9.6% (52/550); and diastolic BP >90 mmHg, 12.0% (65/550). There were no clinically relevant mean changes from baseline in any ECG parameters, including corrected QT interval. CV-related adverse events (AEs) occurred in 23.3% (128/550) of patients. There were no serious CV-related AEs.
CONCLUSIONS: OROS MPH was well tolerated by adult patients with ADHD followed up to 12 months. The modest mean increases in HR and BP are consistent with known increases in shorter term clinical trials of OROS MPH in adults with ADHD.
Supported by funding from JJPRD, Titusville, NJ
**REFERENCES:**
1. Wilens TE, Hammerness PG, Biederman J, et al. Blood pres sure changes associated with medication treatment of adults with attention-deficit/hyperactivity disorder. J Clin Psychiatry. 2005;66:253-259.
2. Berry SA, et al. Safety and Efficacy of OROS Methylphe nidate in Adults With ADHD. Poster presented at 54th Annual Meeting of the American Academy of Child and Adolescent Psychiatry. Boston, MA, October 26, 2007.

**NR6-020**

## EFFECTS OF DOSE, TREATMENT DURATION, AND SUBJECT AGE ON THE EFFICACY OF GUANFACINE EXTENDED RELEASE FOR ATTENTION-DEFICIT/HYPERACTIVITY DISORDER

*Keith McBurnett, Ph.D. 401 Parnassus Ave., Box CAS-0984, Room 140, San Francisco, CA 94143, Jonathan Rubin, M.D., Stephen J. Glatt, Ph.D., Stephen V. Faraone, Ph.D.*
**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able

to describe the effects of dose, treatment duration, subject age, and other factors on the efficacy of guanfacine extended release in the treatment of attention-deficit/hyperactivity disorders in children and adolescents.

**SUMMARY:**

Introduction: Guanfacine extended release (GXR), a selective alpha 2A-adrenoceptor agonist, has demonstrated efficacy as monotherapy in attention-deficit/hyperactivity disorder (ADHD). This analysis was performed in order to evaluate the relationship between the efficacy of GXR and dose, treatment duration, and subject age.
Methods: Data from 2 pivotal trials and 1 phase II study were included. The zero-inflated negative binomial model was used to evaluate the impact of specific factors (ie, dose and treatment duration) on the presence or absence, as well as the magnitude of symptoms as measured by weekly total ADHD symptom counts. The effect of drug dose was evaluated as: 1) actual administered dose considering weight as a covariate; 2) mg/kg dose; and 3) titration rate.
Results: Symptom data were available from 813 subjects at 4631 visits. The presence or absence of ADHD symptoms was significantly related to actual dose of medication received (P=.006), dosage as expressed in mg/kg (P=.001), and titration rate (P=.005), with increasing doses associated with fewer symptoms. The magnitude of ADHD symptoms was significantly related to dose received, duration of treatment, and baseline total ADHD symptom score for the actual administered dose (P<.001 for all), mg/kg dose (P<.001 for all), and titration rate models (P<.001 for all). Neither the subjects' weight nor age significantly influenced either the presence or magnitude of ADHD symptoms.
Conclusion: The presence or absence of ADHD symptoms at each weekly visit was more consistently linked to the dose and duration of treatment than any other factors evaluated. Dose, treatment duration, and baseline total ADHD symptom scores were the most reliable predictors of magnitude of ADHD symptoms, with higher doses and longer treatment duration associated with fewer symptoms.

**REFERENCES:**

1. Biederman J, Melmed RD, Patel A, McBurnett R, Konow J, Lyne A, Scherer N, for the SPD503 Study Group: A random ized, double-blind, placebo-controlled study of guanfacine extended release in children and adolescents with attention-deficit/hyperactivity disorder [In press].
2. Pediatrics Scahill L, Chappell PB, Kim YS, Schultz RT, Katsovich L, Shepherd E, Arnsten AFT, Cohen DJ, Leckman JF: A placebo-controlled study of guanfacine in the treatment of children with tic disorders and attention deficit hyperactiv ity disorder. Am J Psychiatry 2001; 158:1067-1074

**NR6-021**

## LONG-TERM TRIAL OF ATOMOXETINE TREATMENT FOR ADHD: YOUNGER ADULTS COMPARED WITH OLDER ADULTS

*Kory J Schuh, Ph.D. Lilly Corporate Center, Indianapolis, IN 46285, Todd Durell, M.D., Lenard Adler, M.D., Timothy Wilens, M.D., Martin Paczkowski, M.P.H.*

**EDUCATIONAL OBJECTIVE:**

*At the conclusion of this session, the participant should be able to describe the effects of atomoxetine in younger adults compared with effects in older adults.*

**SUMMARY:**

Introduction: Atomoxetine was efficacious for adult ADHD in two 10-week studies (Michelson et al., 2003). A post-hoc analysis compared effects in younger adults (18-25 years) and older adults (>25) (Durell et al., 2006). Although less impaired at baseline, younger adults showed similar improvements at endpoint, smaller variability on outcome measures, larger effect sizes, and a trend toward greater response rates. The analysis presented here compared the efficacy of younger and older adults from a recently-completed, 6-month, randomized, placebo-controlled trial of atomoxetine.
Methods: Patients received once-daily atomoxetine (ATX) or placebo (PBO) for about 6 months. Data from patients aged 18-25 years (ATX, n=32; PBO, n=24) were compared with data from patients older than 25 years (ATX, n=182; PBO, n=191). Efficacy measures included the Conners' Adult ADHD Rating Scale Total ADHD Symptom score (CAARS) and the Clinical Global Impressions-Severity (CGI-S).
Results: In younger adults (mean age=22.0 years), ATX produced significantly greater benefit than PBO (CAARS changes of -15.2 versus -8.3 for ATX and PBO, respectively; p=.016; effect size=.76). Statistically significant differences were not found on the CGI-S (-1.16 versus -0.83; p=.102; effect size=.46). In older adults (mean age=40.1 years), ATX produced significant benefit (CAARS changes of -12.4 and -9.8; p=.013; effect size=.26; CGI-S changes of -1.1 versus -0.9; p=.004; effect size=.28). Response rate (25% decrease from baseline on the CAARS) was 57.1% for the younger adults and 51.3% for the older adults (p=.508). A very strong response rate (40% decrease from baseline on the CAARS) was 44.6% for the younger adults and 35.0% for the older adults (p=.200). The older adults reported more adverse events.
Conclusion: These data support previous findings that ATX is efficacious for treating ADHD in younger adults. Effect sizes were substantially larger than for older adults. Funded by Eli Lilly and Co

**REFERENCES:**

1. Michelson D, Adler L, Spencer T, Reimherr FW, West SA, Allen AJ, Kelsey D, Wernicke J, Dietrich A, Milton D: Ato moxetine in adults with ADHD: Two randomized, placebo-controlled studies. Biological Psychiatry 2003; 53:112-120
2. Durell T, Adler L, Wilens T, Paczkowski M, Schuh K: Ato moxetine Treatment for ADHD: Young Adults Compared With Older Adults. Presented at the 53rd Annual AACAP Meeting, 2006, San Diego, CA

**NR6-022**

## EFFECTS OF ABT-089 ON HEART RAE AND BLOOD PRESSURE IN ADULTS

*Laura Gault, M.D. Abbott Laboratories, 100 Abbott Park Road, Abbott Park, IL 60064-3500, Weining Robieson, Ph.D., George Apostol, M.D., Amy Kendall, Pharm.D., Gary Gintant, Ph.D., Walid Abi-Saab, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant will recognize that single and multiple doses of ABT-089, a novel

alpha4ß2 neuronal nicotinic receptor partial agonist that has demonstrated efficacy in adults with attention-deficit/hyperactivity disorder (ADHD), do not result in statistically significant changes in blood pressure or heart rate in adults.

**SUMMARY:**
Introduction: Current attention deficit/hyperactivity disorder (ADHD) medications are associated with undesirable cardiovascular effects. ABT-089, a novel alpha4ß2 neuronal nicotinic receptor (NNR) partial agonist, has demonstrated efficacy in adults with ADHD and has not shown significant cardiovascular effects in preclinical studies. This post-hoc analysis was conducted to assess the effects of ABT-089 on blood pressure (BP) and heart rate (HR) in healthy adults and those with ADHD.
Methods: Systolic BP (SBP), diastolic BP (DBP) and HR were obtained in healthy adults at baseline and following single (up to 60 mg daily) or multiple doses of ABT-089 (up to 40 mg twice daily) or placebo (PBO). Mean change from baseline after single doses and after 7 days for all subjects receiving ABT-089 were compared to PBO using t-tests. In addition, mean vital sign changes (baseline-to-endpoint) in adult subjects with ADHD receiving ABT-089 (up to 40 mg twice daily) or PBO were compared with ANOVA.
Results: In two separate studies in healthy adults, administration of ABT-089 for a single dose (n=72) or for 7 days (n=43) did not result in dose-dependent elevations in SBP, DBP or HR. Adult subjects with ADHD who received ABT-089 (n=43) or PBO (n=16) for at least two weeks did not show differences in mean vital sign changes (SBP of 0.7 v. 2.8 mmHg (p=0.4), DBP of –1.7 v. 0.4 mmHg (p=0.34) and HR of 1.7 v. 4.8 beats per minute (bpm, p=0.22), respectively). Similarly, no significant differences in mean vital sign changes were noted in adults with ADHD after 28 days of ABT-089 (n=198) or PBO (n=201) (SBP of –0.5 v. –1.5 mmHg (p=0.24), DBP of –0.2 v. –1.2 mmHg (p=0.19) and HR of 0.1 v. 0.9 bpm (p=0.39), respectively).
Conclusion: In healthy adults and adults with ADHD, mean vital sign changes following single and multiple doses of ABT-089 were not different from PBO. This study was funded by Abbott.

**REFERENCES:**

1. Wilens TE, et al: Blood Pressure Changes Associated with Medication Treatment of Adults with Attention-Deficit/Hyperactivity Disorder. J Clin Psychiatry 2005;66:253-259.
2. Rueter LE, et al: ABT-089: pharmacological properties of a neuronal nicotinic acetylcholine receptor agonist for the potential treatment of cognitive disorders. CNS Drug Rev 2004;10:167-82.

**NR6-023**

## SAFETY OF ATOMOXETINE IN ADHD PATIENTS WITH OR WITHOUT COMORBID ALCOHOL ABUSE AND DEPENDENCE

*Lenard A Adler, M.D. New York University School of MedicineDepartment of Psychiatry, 530 First Avenue #7D, New YorkNY 10016, Timothy Wilens, MD, Shuyu Zhang, MS, Todd Durell, MD, Daniel Walker, PhD, Leslie Schuh,PhD, Paula Trzepacz, MD*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to recognize that atomoxetine appears to be a safe treatment option for adult ADHD patients that consume alcohol including alcohol abusers and alcohol dependent patients.

**SUMMARY:**
Background: A significant proportion of ADHD patients have comorbid alcohol abuse or dependence. Objective: To evaluate the safety of atomoxetine (ATX) in adults with ADHD with or without comorbid alcohol abuse/dependence. Methods: This post-hoc analysis compared placebo-controlled acute phase (up to 12 weeks) data from 1 trial of adults with ADHD and comorbid alcohol abuse/dependence with 3 trials of adults with ADHD but no alcohol abuse/dependence. ATX-treated patients were stratified by alcohol consumption (heavy, n=25; non-heavy, n=47; and non-drinker, n=541) as were placebo-treated patients (heavy, n=43; non-heavy, n=32; non-drinker, n=405). Heavy drinker is defined as having >=4 (female) and >=5 (male) alcoholic drinks per day for >14 days. Safety was assessed via reasons for discontinuation, treatment-emergent adverse events (TEAEs), and changes in vital signs and laboratory analytes. Results: Within treatments (ATX and placebo), overall discontinuation and lost-to-follow-up rates significantly differed among alcohol use groups (p <=.001). There were no significant treatment differences in discontinuation rates within the heavy or non-heavy drinking groups. In general, alcohol abusers experienced a greater frequency of TEAEs across body systems in both the ATX and placebo groups. TEAEs (>=5%) occurring significantly more often in the ATX versus placebo group included dry mouth, nausea and fatigue (in both heavy drinkers and non-drinkers). No statistically significant differences were observed in diastolic and systolic blood pressure, and pulse among alcohol use groups in patients receiving ATX, and there was no treatment by alcohol use group interaction. No significant differences occurred in lab analytes by alcohol use group or treatment. Conclusions: Prospective data from a study of alcohol abusers demonstrated that ATX may be a safe treatment alternative for this population of adult patients with ADHD. Research funded by Lilly Research Laboratories.

**REFERENCES:**

1. Michelson D, Adler L, Spencer T, Reimherr FW, West SA, Allen AJ, Kelsey D Wernicke J, Dietrich A, Milton D: 2003. Atomoxetine in adults with ADHD: two randomized, placebo-controlled studies. Biol Psychiatry 2003; 53:112-120
2. Wilens TE, Monuteaux MC, Snyder LE, Moore BH, Whitley J, Gignac M: The Clinical Dilemma of Using Medications in Substance-Abusing Adolescents and Adults with Attention-Deficit/Hyperactivity Disorder: What Does the Literature Tell Us? J Child Adolesc Psychopharmacol 2005; 15:787-798

**NR6-024**

## EFFECTS OF THE METHYLPHENIDATE TRANSDERMAL SYSTEM BY ANTECEDENT ADHD TREATMENT

*Melmed D Raun, M.D. 5020 East Shea Blvd, Ste 100, ScottsdaleAZ 85254, Frank A. López, M.D., Oscar G. Bukstein, M.D., Robert L. Findling, M.D., John M. Turnbow, M.D., Richard Civil, M.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able

to; 1)Demonstrate an understanding of the long-term clinical use of the methylphenidate transdermal system (MTS) in pediatric subjects; 2) Discuss the differential long-term efficacy and safety of MTS assessed by previous ADHD treatment.

**SUMMARY:**
Introduction: The methylphenidate transdermal system (MTS) is a multi-polymeric patch that is designed to release MPH continuously upon application to intact skin. Clinical trials have documented the short-term efficacy and safety of this non-oral, MPH formulation in children with ADHD. We report the safety and efficacy of MTS for up to 12 months analyzed by antecedent ADHD treatment. Methods: This analysis is from a 12-month, multicenter, open-label, flexible dose extension safety study of MTS in children previously exposed to MTS, OROS MPH, or placebo in a 7-week parallel group study. Children (6-12 years) diagnosed with ADHD by *DSM-IV-TR* criteria entered a 4-week stepwise dose titration phase of MTS followed by an 11-month dose maintenance phase. Safety and efficacy measures were assessed at multiple time points throughout the study. The primary objective of this study was to evaluate the long-term safety of MTS. Results: Antecedent study treatments were MTS (N=78), OROS MPH (N=81), and placebo (N=62). Overall, the percentage reporting any AE was similar across the groups. For the ADHD-RS-IV, Endpoint scores from the antecedent study were used as Baseline for this study: MTS, 16.6; OROS MPH, 20.5; and placebo, 29.7. During titration and throughout the study, scores were similar in all groups. Endpoint scores were: MTS, 15.9; OROS MPH 14.9; and placebo 15.1. Changes from Baseline to Endpoint were statistically significant in the OROS MPH and placebo groups, P=.0081 and P<.0001, respectively. There was no significant change from Baseline to Endpoint for the group receiving MTS in the antecedent study. Conclusions: In this 12-month study of MTS, reported AEs were consistent with stimulant treatment and generally comparable between groups. MTS demonstrated similar efficacy in treating the symptoms of ADHD in children aged 6 to 12 years regardless of previous treatment. This work was supported by Shire Development Inc.

**REFERENCES:**

1. McGough JJ, Wigal SB, Abikoff H, et al. A randomized, double-blind, placebo-controlled, laboratory classroom as sessment of methylphenidate transdermal system in children with ADHD. J Atten Disord. 2006;9(3):476-485.
2. Findling R, Lopez R. Transdermal Methylphenidate With Reference to OROS Methylphenidate in ADHD. Poster pre sented at: Annual Meeting of the American Academy of Child and Adolescent Psychiatry; October 20, 2005; Toronto, Ontario.

**NR6-025**

## LISDEXAMFETAMINE DIMESYLATE TREATMENT IN CHILDREN DIAGNOSED WITH ADHD: PARENTAL IMPRESSIONS AND EXPERIENCES

*Michael J Manos, Ph.D. Cleveland Clinic 9500 Euclid Ave. Desk A120, Cleveland, OH 44195, Donna Antonucci, M.D., Donna L. Kerney, Ph.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to; 1)Describe parental impressions on the effectiveness of 3 and 6 weeks of treatment with lisdexamfetamine dimesylate in children with attention-deficit/hyperactivity disorder (ADHD); and 2)Describe parental impressions on the tolerability of 3 and 6 weeks of treatment with lisdexamfetamine dimesylate in children with ADHD.

**SUMMARY:**
Introduction: Lisdexamfetamine dimesylate (LDX) is approved for use in children diagnosed with attention-deficit/hyperactivity disorder (ADHD). We assessed parents' perceptions of the impact of LDX treatment on their children with ADHD.
Methods: Parents of children prescribed LDX answered an automated telephone survey before and 3 and 6 weeks after their children started daily LDX treatment (mean follow-up: 24 and 51 days, respectively).
Results: 251 parents completed all 3 surveys. Prior to LDX treatment, 219 children (88%) had taken another prescription medication for ADHD. Parents reported that the most bothersome ADHD symptom in their children was attention or focus difficulty (50%), impulsivity (27%), and hyperactivity (23%). The most bothersome time of day was during school (39%), after-school activities (24%), and homework time (20%). Relative to pretreatment, LDX significantly reduced interference of ADHD symptoms during school activities, family interactions, homework, and social interactions at each follow-up (P<.01). LDX treatment at 3 and 6 weeks resulted in global improvements in ADHD symptoms (6.4 ± 2.0 and 6.8 ± 2.0 on a scale of 1-9 [9=very much improved], respectively). At each follow-up, 87% of parents reported improvements in the most bothersome symptom; 85% and 83% reported improvements at the most bothersome time after their children took LDX for 3 and 6 weeks, respectively. LDX was well tolerated at each follow-up (7.5 ± 1.9 on a scale of 1-9 [9=very well tolerated] for each). Medication satisfaction was significantly higher with LDX (7.2 ± 2.0 and 7.3 ± 2.0 at 3 and 6 weeks, respectively, on a scale of 1-9 [9=very satisfied]) than with their child's prior prescription (5.7 ± 2.0, P<.01). 83% reported they intended for their child to continue taking LDX. Conclusion: Parents of children taking LDX reported high satisfaction with LDX, notable reductions in ADHD symptoms, and good tolerability.

**REFERENCES:**

1. Biederman J, Krishnan S, Zhang Y, McGough JJ, Findling RL: Efficacy and tolerability of lisdexamfetamine dimesyl ate (NRP-104) in children with attention-deficit/hyperactiv ity disorder: a phase III, multicenter, randomized, double-blind, forced-dose, parallel-group study. Clin Ther 2007; 29:450-463
2. Biederman J, Boellner SW, Childress A, Lopez FA, Krishnan S, Zhang Y: Lisdexamfetamine dimesylate and mixed amphetamine salts extended-release in children with ADHD: a double-blind, placebo-controlled, crossover analog class room study. Biol Psychiatry 2007; 62:970-976

**NR6-026**

## COGNITIVE DYSFUNCTION IN CASES WITH COMORBID ATTENTION DEFICIT HYPERACTIVITY AND LEARNING DISABILITY

*Nahla P Nagy, M.S. 21 Ismail Ramzy St. Heliopolis ,Cairo ,Egypt, 00202, Alwaya B,Ph.D., Hanan H,Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to identify cases with comorbid ADHD/LD and recognize the associated cognitive deficits important in treatment consideration .

**SUMMARY:**

Introduction : 30% or more of children with ADHD would also havelearning disability.

Objectives :this study tried to assess cognitive functions and attention in children having ADHD, LD or combined ADHD/LD in comparison to normal matched controls.Methods : cross sectional case-control study included 4 subgroups each 20 children ,(ADHD),(LD), (ADHD with LD) , and matched controls. Male/female ratio 3/1 , and mean age 8.45+2.55. They were examined for I,Q testing , electroencephalography (EEG) ,and event related evoked potentials (ERP) to assess their cognitive functions .Results :The frequency of peri natal problems were 40% for ADHD group, 35% for LD group and 45% for ADHD with LD group .Positive Family history was 45% in ADHD , 25% in the LD and 40% for ADHD with LD group. EEG abnormalities in the form of frontotemporal epileptic focus with 2nd generalization and slow delta activity were significantly higher in ADHD/LD compared to other groups.EVENT RELATED POTENTIALS study showed significant delayed latency of N100,P200 and P300 and decreased amplitude of N100 waves in patients with ADHD/LD compared to patients with LD only.Discussion : Injury of the medial temporal lobe during early development leading to impairment of language development associated with ADHD like behaviors and dopamine regulation disruption in the dorsolateral prefrontal cortex .Molecular genetic studies of ADHD had suggested the involvement of the dopamine (DRD-4) receptor gene , dopamine transporter gene (DRT1) and dopamine receptor 2 gene (DRD2) .EEG abnormalities are common finding in ADHD and LD children particularly in frontal and temporal lobes to be associated with memory, and auditory perceptual language disorders.N100 wave has a great relationship with selective attention to stimulus source . P300 responses occur during the evaluation of stimulus relevance and directing of attention that occur after initial stimulus perception

**REFERENCES:**

1. Accardo P, Blondis T. The neurodevelopment assessment of ADHD children. Arch Pediatric Adolesc Med ,2000; 131: 1142-1159.
2. Castiellou R. Neuropsychological evaluation of deficits in ex ecutive functioning for ADHD children with or without learn ing disabilities. Dev Neuropsychol ,2002; 22 (2): 501.

**NR6-027**

## EFFECTS OF METHYLPHENIDATE TRANSDERMAL SYSTEM (MTS) ON GROWTH IN CHILDREN WITH ADHD

*Oscar G Bukstein, M.D. Western Psychiatric Institute and Clinic 3811 O'Hara St., Pittsburgh, PA 15213, Frank A. López, M.D., Robert L. Findling, M.D., John M. Turnbow, M.D., Richard Civil, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to; 1) Demonstrate an understanding of the potential effects of stimulants, including methylphenidate, on growth parameters in pediatric patients; 2) Describe the growth effects of long-term treatment with the methylphenidate transdermal system in pediatric patients.

**SUMMARY:**

Introduction: This study primarily evaluated the long-term safety of the methylphenidate transdermal system (MTS) in children with attention-deficit/hyperactivity disorder (ADHD). A previous study reported that treatment with MTS led to small, statistically significant delays in height, weight, and BMI that were most apparent during the first year of treatment but were not of significant clinical concern. This report explores the effects of MTS on growth in the present study.

Methods: Children (6-12 years) exposed to MTS, placebo, or OROS MPH in previous MTS trials, entered this open-label, extension study. Subjects already receiving optimized MTS doses continued that dose for 12 months; those who were not underwent a 4-week stepwise dose-titration to an optimal MTS dose that was continued for 11 months. MTS was worn for 9 hours/day. Safety was monitored throughout; height, weight and body mass index (BMI) measurements were taken over time at various study assessments for up to 12 months.

Results: Of the 327 enrolled subjects, 326 received treatment. In general, subjects for which growth data were available showed no clinically significant deficits at Endpoint compared with Baseline. After 1 month of treatment, a decrease in weight was observed with the lower MTS doses (10 mg and 15 mg) which began approaching Baseline values around Month 5. At Baseline weight was below the lower limit of normal in 1 subject. Overall, subjects demonstrated growth in height and weight but not BMI (mean change from Baseline to Endpoint was 1.5 inches, 3.5 pounds and -0.2 kg/m2, respectively).

Conclusions: Overall, there were fluctuations in growth parameters during MTS treatment but there appeared to be minimal deficits at the end of 12 months. Additional studies may further the understanding of MTS on growth. Clinicians should continue to monitor growth parameters when using MTS.

This work was supported by Shire Development Inc.

**REFERENCES:**

1. Poulton A. Growth on stimulant medication; clarifying the confusion: a review. Arch Dis Child. 2005;90(8):801-806.
2. Faraone SV, Giefer EE. Long-term effects of methylphenidate transdermal delivery system treatment of ADHD on growth. J Am Acad Child Adolesc Psychiatry 2007;46(9):1138-1147.

**NR6-028**

## LACK OF EFFECT OF DEXMETHYLPHENIDATE EXTENDED RELEASE (D-MPH-ER) ON QT/QTC DURATION IN HEALTHY SUBJECTS

*Rafael Muniz, M.D. Novartis Pharmaceutics CorporationOne Health Plaza, East Hanover, NJ 07936, Vincenzo Teneggi, MD, Martin Bedigian, MD, Marc Vandemeulebroecke, PhD, Christian Pfister, PhD, Andrew T. Roberts, MS, Rafael Muniz, MD*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to; 1) Recognize the potential cardiac risk associated with stimulant therapy for ADHD as reflected in recent FDA labeling mandates; 2) Consider the potential benefits of the reduced dosing requirements associated with the use of a once-daily, long-acting formulation of d-MPH-ER; and 3) Evaluate

the results of this study demonstrating the absence of QTc prolongation with the use of d-MPH-ER in a healthy adult population.

**SUMMARY:**

Objective: This randomized, double-blind, placebo and active controlled study reports the effects of d-MPH-ER on corrected Q-T interval (QTc) in healthy subjects.

Methods: Adult subjects aged 18 to 45 years are randomized to a three-fold crossover treatment to receive single doses of supra-therapeutic d-MPH-ER 40 mg (2x20 mg), moxifloxacin 400 mg, and placebo. The primary outcome variable is change from mean baseline QTc on 12-lead ECG, corrected using Fridericia's formula (QTcF). Changes from baseline QTcF are evaluated at each post-baseline time point (1.5, 4, 6, 7, 9, 12 hours) using a one-sided significance level of 0.05, testing the null hypothesis of a =10 msec difference between d-MPH-ER vs placebo. Adverse events (AEs) are recorded.

Results: Data from 73 of the 75 enrolled subjects (mean age 29 y; 39 male; mean BMI 24 kg/m2) are evaluated. At all time points, d-MPH-ER does not show any QTcF prolongation, with upper bounds of all confidence intervals (CI) well below the predefined threshold of 10 msec. Moxifloxacin shows significantly prolonged QTcF, as expected. No serious AEs are reported. The most common reported AEs with d-MPH-ER 40 mg are nausea, dizziness, and headache. All AEs are transient and mild or moderate in severity.

Conclusion: In healthy adult subjects, supra-therapeutic d-MPH-ER 40 mg (2x20 mg) did not prolong QTcF interval at any time post-dose. Reported AEs are aligned with the known safety profile of the compound and therapeutic class. Despite the use of a supra-therapeutic dose, there appears to be no effects suggestive of stimulant-related toxicity with d-MPH-ER in this population.

**REFERENCES:**

1. Bednar MM, Harrigan EP, Anziano RJ, et al. The QT interval. Prog Cardiovasc Dis. 2001;43(5 Suppl 1):1-45.
2. Hanton G. Preclinical cardiac safety assessment of drugs. Drugs. 2007;8:213-228.

**NR6-029**

## ADHD TREATMENT WITH ATOMOXETINE: TRANSITION FROM ADOLESCENCE TO YOUNG ADULTHOOD

*Ralf Dittmann, M.D. Saalburgstrasse 153, Bad Homburg Germany D-61350, Lenard Adler, MD, Timothy Wilens, MD, Shuyu Zhang, MS, Todd M. Durell, MD, Leslie M. Schuh, PhD*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize that atomoxetine may be safely continued for treatment of ADHD during the transition from adolescence to young adulthood.

**SUMMARY:**

Background: Most ADHD studies have focused on childhood and adolescence. However, ADHD prevalence is approximately 4% in US adults. Pharmacotherapies effective in children appear helpful in adults, but few studies have compared medications in adolescents and young adults. Objective: Examine atomoxetine's (ATX) treatment effects in the transition from adolescence to adulthood in patients with ADHD. Methods: Six adolescent (12-18 years old; ATX n=154; placebo [PLA] n=88) and 3 young adult (18-30 years old; ATX n=117; PLA n=125) acute (<=10 weeks), double-blind trials were analyzed post hoc. Efficacy measures were ADHD Rating Scale (ADHDRS) for adolescents, Conners' Adult ADHD Rating Scale (CAARS) for adults, and Clinical Global Impressions-Severity (CGI-ADHD-S) for all. Treatment response was defined as >=40% reduction from baseline in ADHDRS or CAARS total ADHD symptom score. Results: Young adults were less symptomatic at baseline (adults, CAARS total ADHD symptom score 35.3 vs adolescents, ADHDRS total score 37.3; p<.016). In adolescents (mean 13.4 years, SD 1.2), ATX significantly improved ADHD (ADHDRS total score change -12.89 vs -7.50; p<.001, effect size=.48; CGI-ADHD-S change -1.21 vs -0.70, p=.012; response rate 42.3% vs 27.9%; p=.035, for ATX and PLA, respectively). In young adults (mean 24.7 years, SD 3.4), ATX also significantly improved ADHD (CAARS total ADHD symptom score change -13.63 vs -7.68; p<.001, effect size=.56; CGI-ADHD-S change -1.13 vs -0.63; p<.001; response rate 52.0% vs 21.6%; p<.001, for ATX and PLA, respectively). Tolerability was similar by age, except treatment-emergent nausea (p=.004), which was significantly more frequent for ATX than PLA in young adults (p=.024) and showed a trend for less nausea for ATX than PLA in adolescents (p=.108). Conclusion: Acute ATX treatment was efficacious and well-tolerated, suggesting it may be continued safely during the adolescent to young adult transition. Research funded by Lilly Research Laboratorie

**REFERENCES:**

1. Michelson D, Faries D, Wernicke J, Kelsey D, Kendrick K, Sallee FR, Spencer T, Atomoxetine ADHD Study Group: Atomoxetine in the treatment of children and adolescents with attention-deficit/hyperactivity disorder: a randomized, pla cebo-controlled, dose-response study. Pediatrics 2001; 108: E83
2. Michelson D, Adler L, Spencer T, Reimherr FW, West SA, Allen AJ, Kelsey D, Wernicke J, Dietrich A, Milton D: Ato moxetine in adults with ADHD: two randomized, placebo-controlled studies. Biol Psychiatry 2003; 53:112-120

**NR6-030**

## APPLYING THE ADHD ADULT SELF REPORT SCALE TO PRACTICE

*Richard L Rubin, M.D. Vermont Clinical Study Center 789 Pine St, Burlington, VT 05401,*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to; 1) Understand use of the ASRS to recognize and quantify *DSM IV* symptoms in ADHD adults; and 2) Learn results of a 60 patient case series applying the ASRS in medication treatment practice.

**SUMMARY:**

Background: While general guides to adult ADHD treatment are available (1),the literature has no reports of case series using specific instruments for medication management. The recently developed Adult Self Report Scale (ASRS) symptom checklist assesses the 18 *DSM IV* items on a freguency basis. The ASRS adapts the *DSM* symptoms to highlight the adult presentation of ADHD, give a context basis to the symptoms, and ask

the questions in a manner that patients can report on their symptoms. The pilot form of the ASRS was initially available for use under World Health Organization copyright, and has now been replaced by a standardized version (2).
Objective: This presentation describes application of the pilot ASRS in an office practice to provide an evidence base for the management of adult ADHD pharmacotherapy.
Method: The ASRS was administered as part of the initial diagnosis procedure to all patients seen by the author for ADHD consultaion/evaluation during the study period. A second administration was done when the patient showed meaningful medication response. A total of 60 patients participated. The purposes of the ASRS were explained as: 1) To facilitate the patient's recognition and reporting of adult ADHD core symptoms according to modern definitions; 2) To establish both quantitative and qualitative measures of symptom load at baseline before treatment; and 3) To assess meaningful response to medication and guide pursuit of maximal benefit.
Results: 47 patients achieved satisfactory clinical response and 13 were either treatment failures or lost to follow up. Analysis will be presented of their initial and end-point ASRS data.
Conclusions: This case series with the pilot ASRS shows value of the instrument for data based management of medication, and supports use of the newer version. Contributions to improving both physicians' clinical procedure and patients' treatment satisfaction are discussed. No funding has been provided for this study.

**REFERENCES:**

1. Young,J. ADHD Grown Up. New York, W.W. Norton Co, New York, 2007.
2. Kessler RC, Adler L, Ames M, et al. The World Health Organization adult ADHD self-report scale (ASRS), Psychol Med.2005;35:245-256.

**NR6-031**

## SYMPTOM IMPROVEMENT IN CHILDREN WITH ADHD USING THE METHYLPHENIDATE TRANSDERMAL SYSTEM

*Robert L Findling, M.D. University Hospitals Case Medical Center11100 Euclid Avenue, Cleveland, Ohio 44106-5080 USA, ClevelandOH 44106-5080, Oscar G Bukstein, M.D., M.P.H., Raun D Melmed, M.D., Frank A López, M.D., Floyd R Sallee, M.D., Ph.D., L Eugene Arnold, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to; 1)Demonstrate an understanding of the use of MTS in the treatment of pediatric ADHD; 2) Recognize the importance of using normative scales in assessing the treatment of pediatric ADHD.

**SUMMARY:**

Introduction: This study evaluated the efficacy and safety of the methylphenidate transdermal system (MTS) compared with placebo, using osmotic release oral system MPH (OROS MPH) as reference therapy, in children with ADHD. This analysis examined the normalization in the severity of symptoms with MTS treatment. Methods: In a double-blind study, children (6-12 years) with ADHD were randomized to: MTS+placebo capsule, or OROS MPH+placebo patch, or placebo capsule+placebo patch. Over 5 weeks, subjects were titrated to an optimal dose of MTS 10-30 mg and OROS MPH 18-54 mg. Subjects remained on an optimal dose for 2 weeks. The primary efficacy measure (ADHD-Rating Scale-IV [ADHD-RS-IV]) was assessed at each study visit beginning with Baseline. Hyperactivity/impulsivity and inattentiveness subscales were used to assess behavior. MTS Baseline and Endpoint mean scores were compared with normative data based on age and sex. Results: In total, 274 subjects received study treatments. Overall, MTS demonstrated significant improvement in the ADHD-RS-IV total and subscale mean scores compared with placebo (P<.0001). Of the 98 subjects receiving MTS, 96 were included in this sub-analysis. ADHD-RS-IV total, hyperactivity/impulsivity, and inattentiveness subscales mean scores for the MTS group were higher at Baseline (43.0, 20.3, and 22.7, respectively) and improved by Endpoint (18.8, 8.5, and 10.3, respectively). At Endpoint mean total and subscale scores were found to approach normative scores in all age groups for boys and girls. Conclusions: MTS treatment resulted in significantly improved ADHD behavior symptoms compared with placebo. Mean scores of all ADHD-RS-IV domains showed that short-term treatment with MTS brings ADHD symptoms towards normal levels of the general population. Although these results support the efficacy of MTS in the treatment of ADHD in children, they suggest that there may be room for further improvements. This work was supported by Shire Development Inc.

**REFERENCES:**

1. McGough JJ, Wigal SB, Abikoff H, et al. A randomized, double-blind, placebo-controlled, laboratory classroom as sessment of methylphenidate transdermal system in children with ADHD. J Atten Disord 2006;9:476-485.
2. DuPaul A, Power T, Anastopolous A, Reid R. ADHD Rating Scale-IV: Checklists, norms, and clinical interpretation. New York: Guilford; 1998.

**NR6-032**

## CLINICAL VALIDITY OF THE ADULT ADHD QUALITY OF LIFE (AAQOL) SCALE EVALUATED IN AN ADULT ADHD CLINICAL TRIAL

*Roger T Anderson, Ph.D. Pennsylvania State UniversityDepartment of Health Evaluation Sciences, A210 Public Health Sciences Hershey Medical Center, Hershey, PA 17033, Rukmini Rajagopalan, Dr.PH., George Apostol, M.D., Walid Abi-Saab, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation the participant should be able to evaluate the clinical validity of the Attention-Deficit/Hyperactivity Disorder Quality of Life scale (AAQoL)

**SUMMARY:**

Objective: To evaluate the psychometric properties and clinical validity of the Attention-Deficit/Hyperactivity Disorder Quality of Life scale (AAQoL) using data from a randomized, double-blind, placebo-controlled, crossover trial in adults with attention-deficit/hyperactivity disorder (ADHD).
Methods: The AAQoL was administered to subjects in a multicenter study designed to evaluate the safety and efficacy of the neuronal nicotinic receptor (NNR) partial agonist ABT-089 in adults with ADHD. There were five dosing groups (2 mg QD, 5 mg QD, 15 mg QD, 40 mg QD and 40 mg BID) and subjects in each group received ABT-089 and placebo in random

order according to a 2x2 crossover design. Treatment duration was 28 days for each period, separated by a 2-week washout. Psychometric assessment of the internal properties of AAQoL domain and total scores, and modeling of the response-to-change in AAQoL scores in work productivity and investigator-rated ADHD scales were performed to determine the clinical validity of the instrument.
Results: Thirty-three to 36 out of 37 to 41 subjects completed the study in each dose group. Psychometric analysis demonstrated a significant correlation ($p<0.0001$) among the subscales and total AAQoL scale, with 'r' ranging from 0.452 to 0.911. Each of the subscales (life productivity, psychological health, life outlook and relationship) and the total AAQoL scale also exhibited high internal consistency (Crohnbach's alpha ranging from 0.781 to 0.938). Furthermore, high clinical validity of the instrument in this cohort was demonstrated by the significant correlation (-0.31 to –0.72, $p<0.0001$) of the change in AAQoL total score to the change in Investigator-rated Conners' Adult ADHD Rating Scale score.
Conclusion: High internal consistency of AAQoL results and significant correlation with clinician-rated ADHD symptom rating scale demonstrates the clinical validity of data on the AAQoL in adult ADHD. Supported by funding from Abbott.

**REFERENCES:**

1. Brod M, Johnston J, et al. Validation of the adult attention-deficit/hyperactivity disorder quality-of-life scale (AAQoL): A disease-specific quality-of-life measure. Quality of Life Research 2006;15:117-129.
2. Brod M, Perwien A, Adler L et al. Conceptualization and assessment of quality of life for adults with attention-deficit/hyperactivity disorder. Primary Psychiatry 2005;12:58-64.

## NR6-033

## QUALITY OF LIFE AND WORK PRODUCTIVITY IMPROVEMENTS ASSOCIATED WITH ABT-089 IN ADULTS WITH ADHD

*Rukmini Rajagopalan, D.P.H. Abbott Laboratories 100 Abbott Park Road, Abbott Park, IL 60064-3500, Roger T. Anderson, Ph.D., George Apostol, M.D., Walid Abi-Saab, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation the participant should be able to evaluate the impact of ABT-089 on quality of life and work productivity in adult patients with ADHD.

**SUMMARY:**

Objective: To evaluate the effects of ABT-089 on self-reported outcomes in adults with ADHD using the Adult ADHD Quality of Life (AAQoL) instrument and the Work Productivity and Activity Impairment (WPAI) scale.
Methods: The AAQoL and WPAI were administered to subjects in a multicenter, randomized, double-blind, placebo-controlled study designed to evaluate the safety and efficacy of the neuronal nicotinic receptor (NNR) partial agonist ABT-089 in adults with ADHD. There were five dosing groups (2 mg QD, 5 mg QD, 15 mg QD, 40 mg QD and 40 mg BID) and subjects in each group received ABT-089 and placebo in random order according to a 2x2 crossover design. Treatment duration was 28 days for each period, separated by a 2-week washout. The mean difference in AAQoL and WPAI scores for each ABT-089 dosing group vs. placebo was calculated using an ANCOVA model, and the effect sizes (small >0.2, medium >0.5 and large >0.8) were determined. All tests were 2-sided at a 0.05 significance level.
Results: Data from a total of 213 subjects were available for quality of life analysis (33-36 subjects in each dose group). The 40-mg dose had a mean AAQoL total score difference from placebo of 8.77 ($p=0.0323$) and 6.24 ($p=0.0232$) for QD and BID groups, respectively. The effect size was 0.56 for and 0.37 for these doses, respectively. WPAI scales showed a 6.7 % reduction in absenteeism ($p=0.032$) and improvements in work effectiveness (14.2%, $p=0.026$) and work productivity (17%, $p=0.011$). In addition, the 40-mg QD group showed a marginally significant decrease in overall activity impairment (8.4%, $p=0.092$). The effect sizes for the WPAI results ranged from 0.35 to 0.71.Conclusion: These results demonstrated that treatment with ABT-089 significantly improved quality of life and work effectiveness, and reduced overall work impairment in adults with ADHD as measured by the AAQoL. Supported with funding by Abbott.

**REFERENCES:**

1. Brod M, Johnston J, et al. Validation of the adult attention-deficit/hyperactivity disorder quality-of-life scale (AAQoL): A disease-specific quality-of-life measure. Quality of Life Research 2006;15:117-129.
2. Brod M, Perwien A, Adler L et al. Conceptualization and assessment of quality of life for adults with attention-deficit/hyperactivity disorder. Primary Psychiatry 2005;12:58-64.

## NR6-034

## CARDIOVASCULAR EFFECTS OF OROS® MPH IN A DOSE-TITRATION STUDY OF ADULTS WITH ADHD

*Sally A Berry, M.D. 1125 Trenton-Harbourton Road, TitusvilleNJ 08560, Joseph M. Palumbo, M.D., Jaskaran Singh, M.D., Joris Berwaerts, M.D., Gahan Pandina, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of the presentation, the participant will appreciate that OROS methylphenidate in doses ranging from 36 to 108 mg/d did not lead to clinically significant mean changes from baseline in blood pressure, heart rate, or electrocardiogram parameters in a double-blind, placebo-controlled, dose-titration study of adults with attention-deficit/hyperactivity disorder.

**SUMMARY:**

INTRODUCTION: Stimulant medications have sympathomimetic effects that increase blood pressure (BP) and heart rate (HR). These changes with methylphenidate (MPH) are well studied in pediatric populations, but there are few reports on the effects in adults.1 In pediatric patients, the changes in BP and HR are reversible and minor.2 This is the first report of a large clinical trial demonstrating the cardiovascular (CV) effects associated with OROS MPH in adults with ADHD.
METHODS: A randomized, double-blind, placebo-controlled study of OROS MPH in adults with ADHD assigned patients aged 18–65 to placebo or OROS MPH (36–108 mg/d) during a 7-week clinical trial. Dose reduction was required for resting HR >100 bpm, systolic BP >140 mmHg, or diastolic BP >90 mmHg. CV evaluation included BP, HR, and ECG measurement.
RESULTS: 226 patients received study medication. BP or HR increase led to down titration in 4.5% (5/110) of OROS MPH

patients (1 at 54 mg; 1 at 90 mg; 3 at 108 mg) and 0.9% (1/116) of placebo patients. Mean (SD) change from baseline to final visit in systolic and diastolic BP was similar for OROS MPH and placebo groups, –1.2 (8.92) vs –0.5 (9.72) mmHg and +1.1 (6.72) vs +0.4 (7.43) mmHg; mean change in pulse was greater for the OROS MPH group, +3.6 (9.78) vs –1.6 (8.33) bpm.
A higher rate of patients in the OROS MPH group had post-baseline HR >100 bpm (n=5, 4.9%) and an increase in HR from baseline >25% (n=32, 31.4%) than those in the placebo group (n=1, 0.9%; n=16, 13.9%). There were no clinically relevant mean changes from baseline in ECG parameters. Increased BP was the only CV adverse event reported in =10% of OROS MPH patients (10%).
CONCLUSIONS: OROS MPH was well tolerated during the 7-week study. Small mean changes in BP, HR, ECG parameters were not likely to be clinically significant. The CV effects noted were consistent with or less apparent than those previously documented in IR MPH in adults.2
Supported by funding from JJPRD, Titusville, NJ.

**REFERENCES:**

1. Berry SA, et al. Safety and efficacy of OROS methylpheni date in adults with ADHD. Poster presented at the 54th An nual Meeting of the American Academy of Child and Adoles cent Psychiatry. Boston, MA, October 26, 2007.
2. Wilens TE, Hammerness PG, Biederman J, et al. Blood pres sure changes associated with medication treatment of adults with attention-deficit/hyperactivity disorder. J Clin Psychiatry. 2005;66:253-259.

**NR6-035**

## GUANFACINE EXTENDED RELEASE FOR ATTENTION-DEFICIT/HYPERACTIVITY DISORDER: IMPACT OF TREATMENT DURATION ON SEDATION-RELATED ADVERSE EVENTS

*Stephen J Glatt, Ph.D. SUNY Upstate Medical University 3239 Weiskotten Hall, Syracuse, NY 13210, Jonathan Rubin, M.D., Stephen V. Faraone, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to describe the relationship between frequency of sedation-related adverse events and guanfacine extended release dose, treatment duration, and subject age in children and adolescents aged 6 to 17 years with attention-deficit/hyperactivity disorder.

**SUMMARY:**

Introduction: Guanfacine extended release (GXR), a selective alpha 2A-adrenoceptor agonist, has demonstrated efficacy as monotherapy for attention-deficit/hyperactivity disorder (ADHD) in previous studies. The objective of this analysis was to determine the relationship between sedation-related adverse events (AEs) and GXR dose, treatment duration, and subject age in children and adolescents aged 6 to 17 years with ADHD.
Methods: Data were pooled from 2 pivotal trials (both forced-fixed-dose escalation studies) and 1 phase 2 dose optimization study. For the pivotal trials, patients were randomized to placebo, 2, 3, or 4 mg/d GXR in 1 trial and placebo, 1, 2, 3, or 4 mg/d in the other. Patients received placebo, 1, 2, or 3 mg/d GXR in the dose-optimization study. Sedation-related AEs (sedation, somnolence, hypersomnia, asthenia, lethargy, and fatigue) attributed to GXR were included in the analysis. To evaluate the effect of GXR dose, 3 dose measurement models were used: actual administered dose (considering weight as a covariate), mg/kg dose, and titration rate. For all 3 dose models, negative binomial regression was used to evaluate impact on frequency of sedation-related AEs.
Results: Data from 4631 visits made by 813 subjects were analyzed. Duration of treatment had a significant influence on and was inversely correlated with frequency of sedation-related AEs in all 3 dose models (P=.034 for all). Frequency of sedation-related AEs was not related to dose, magnitude of dose change, interaction of weekly dose with magnitude of dose change, or subject age when analyzed by actual dose, mg/kg dose, or titration rate.
Conclusion: Duration of GXR treatment had a significant effect on frequency of sedation-related AEs. Longer treatment duration predicted fewer sedation-related AEs in children and adolescents with ADHD.

**REFERENCES:**

1. Biederman J, Melmed RD, Patel A, McBurnett R, Konow J, Lyne A, Scherer N, for the SPD503 Study Group: A random ized, double-blind, placebo-controlled study of guanfacine extended release in children and adolescents with attention-deficit/hyperactivity disorder [In press]. Pediatrics
2. Scahill L, Chappell PB, Kim YS, Schultz RT, Katsovich L, Shepherd E, Arnsten AFT, Cohen DJ, Leckman JF: A pla cebo-controlled study of guanfacine in the treatment of children with tic disorders and attention deficit hyperactivity disorder. Am J Psychiatry 2001; 158:1067-1074

**NR6-036**

## DIAGNOSIS OF ADULT ATTENTION DEFICIT HYPERACTIVITY DISORDER: EXPERIMENTAL RESULTS FROM THE ADULT ADHD PATIENT FLOW MODEL

*Stephen V Faraone, Ph.D. SUNY Upstate Medical University750 East Adams Street, Syracuse NY 13210, Cynthia Willey, Ph.D., Steve Peterson, Juliene L. Stafford, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to understand the experimental application of the Adult ADHD Patient Flow Model in characterizing the impact of altered patient flow rates along diagnostic pathways on the number of patients correctly diagnosed with adult ADHD over time.

**SUMMARY:**

Introduction/Hypothesis: Although attention deficit hyperactivity disorder (ADHD) in adults has an estimated prevalence of 4.4% in the U.S. population (1, 2), the actual prevalence of diagnosed adult ADHD is only 1.4% (1), suggesting a lack of symptom awareness among patients and physician under/misdiagnosis. Using our Adult ADHD Patient Flow Model, we tested the impact of altered flow rates along the pathways to correct diagnosis (simulating results of successful patient/physician educational initiatives) on the number of patients correctly diagnosed over time.
Methods: We established a baseline case for a 24-month experimental period from January 2008 through December 2009. In experiment 1, we examined the impact of decreasing

the rate of patient misdiagnosis by 40% and decreasing the length of time to correct diagnosis by 30% over the experimental period. In experiment 2, we examined the impact of tripling the rate at which patients outside the medical system seek diagnosis over the experimental period. For both experiments 1 and 2, the primary outcome was the number of patients correctly diagnosed 3 years beyond the end of the experimental period. In experiment 3, we combined experiments 1 and 2 in a parallel experiment.
Results: The results of experiments 1, 2, and 3 indicate that an additional 115,000, 202,000, and 427,000 patients above baseline, respectively, would receive a correct diagnosis of ADHD 3 years beyond the end of the experimental period.
Conclusions/Discussion: Experiments within the Adult ADHD Patient Flow Model illustrate the cumulative impact over time of targeted interventions along the pathways to correct diagnosis of adult ADHD. The results of experiment 3 demonstrate that combined interventions can result in greater increases in populations of patients with a correct diagnosis of ADHD compared with either intervention alone.
Supported by Shire US Inc.

**REFERENCES:**

1. Faraone SV, Biederman J: What is the prevalence of adult ADHD? Results of a population screen of 966 adults. J Atten Disord 2005; 9:384-391
2. Kessler RC, Adler L, Barkley R, Biederman J, Conners CK, Demler O, Faraone SV, Greenhill LL, Howes MJ, Secnik K, Spencer T, Ustun TB, Walters EE, Zaslavsky AM: The prevalence and correlates of adult ADHD in the United States: results from the National Comorbidity Survey Replica tion. Am J Psychiatry 2006; 163:716-723

**NR6-037**

## EFFECTS OF ATOMOXETINE ON SEXUAL DEVELOPMENT IN CHILDREN AND ADOLESCENTS WITH ADHD

*Thomas J Spencer, M.D. 55 Fruit Street. YAW 6A, Boston, MA 02114, Paula T. Trzepacz, M.D., Michael M. Witte, Ph.D., Shuyu Zhang, M.S., Mark E. Bangs, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to learn about new serial Tanner staging data in children and adolescents with ADHD and understand how longer term use of atomoxetine compares with placebo for secondary sexual characteristic development.

**SUMMARY:**

Objective: To determine the effects of long-term atomoxetine treatment on sexual development in children and adolescents with Attention-Deficit/Hyperactivity Disorder (ADHD) as compared to placebo from a relapse prevention trial lasting 15 months. Methods: Tanner stage was assessed by the investigator at baseline, at approximately 6 months, at approximately 1 year, and again at approximately 1.5 years, and the rate of sexual development (defined as change in Tanner stage) was compared in the continued treatment group and the placebo group.
Results: No statistically significant differences were observed between atomoxetine and placebo group for: proportion of patients who had at least one Tanner stage change; duration of treatment; distribution of time to first Tanner-stage change; and the proportions of patients in each baseline Tanner-stage group moving to higher stages. The puberty onset age was similar across treatment arms and is consistent with US norms.
Conclusions: Atomoxetine treatment was not associated with any appreciable impact on sexual maturation in children with ADHD and was not delayed compared to normative data.
Research funded by Lilly Research Laboratories.

**REFERENCES:**

1. Grumbach MM, Styne DM. Puberty: ontogeny, neuroendo crinology, physiology, and disorders. In Williams Textbook of Endocrinology, 10th ed., edited by Larsen PR, Kronenberg HM, Melmed S, Polonsky, Philadelphia, Saunders, 2003, pp 1115-1286
2. Coleman L, Coleman J: The measurement of puberty: a review. J Adolescence 2002; 25:535–550

**NR6-038**

## OPEN-LABEL COADMINISTRATION OF GUANFACINE EXTENDED RELEASE AND STIMULANTS IN CHILDREN AND ADOLESCENTS WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER

*Thomas J. Spencer, M.D. 15 Parkman Street, WACC 7251, Boston, MA 02114, Michael Greenbaum, M.D., Lawrence D. Ginsberg, M.D., William R. Murphy, M.D., Kimberly Farrand, M.P.H.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to describe new data on the safety and efficacy of guanfacine extended release coadministered with psychostimulants in children and adolescents with attention-deficit/hyperactivity disorder.

**SUMMARY:**

Introduction: Guanfacine extended release (GXR) has demonstrated efficacy as monotherapy for the treatment of attention-deficit/hyperactivity disorder (ADHD). This study assessed the safety and efficacy of coadministering GXR with stimulants in children and adolescents aged 6 to 17 years with ADHD.
Methods: This open-label, 9-week safety study enrolled patients receiving methylphenidate (MPH, n=42) or amphetamine (AMPH, n=33) for >=1 month whose ADHD symptoms were suboptimally controlled. Stimulant dose was maintained throughout the trial. GXR was titrated in weekly 1-mg increments from 1 mg to 4 mg/d or highest tolerated dose. Safety measures included adverse events (AEs), laboratory tests, electrocardiograms (ECGs), and physical examination. Efficacy measures included the ADHD-Rating Scale, Version IV (ADHD-RS-IV) total score, Clinical Global Impression (CGI) scale, and Conners' Parent Rating Scale-Revised Short Form (CPRS-R). Endpoint for efficacy measures was the last post-baseline treatment week of upward titration or dose maintenance.
Results: There were no deaths, no serious AEs, and no clinically relevant trends in ECGs, laboratory tests, or physical examination. AEs reported in >10% of patients were fatigue, headache, upper abdominal pain, irritability, somnolence, and insomnia. ADHD-RS-IV mean changes from baseline to endpoint were -17.8 for patients coadministered GXR and MPH, and -13.8 for patients coadministered GXR and AMPH

(P<.0001 for both). At endpoint, 77.8% and 66.7% of patients, respectively, showed improvement on the CGI. CPRS-R improvement at endpoint was statistically significant for all time points and for the mean day total score in both groups (P<.01). Conclusion: AEs were generally mild to moderate. Coadministration of GXR (up to 4 mg/d) with stimulants was associated with significant improvement in ADHD symptoms in children and adolescents with suboptimal control on stimulants alone.

**REFERENCES:**


1. Biederman J, Melmed RD, Patel A, McBurnett R, Konow J, Lyne A, Scherer N, for the SPD503 Study Group: A random ized, double-blind, placebo-controlled study of guanfacine extended release in children and adolescents with attention-deficit/hyperactivity disorder [In press]. Pediatrics
2. Scahill L, Chappell PB, Kim YS, Schultz RT, Katsovich L, Shepherd E, Arnsten AFT, Cohen DJ, Leckman JF: A pla cebo-controlled study of guanfacine in the treatment of children with tic disorders and attention deficit hyperactivity disorder. Am J Psychiatry 2001; 158:1067-1074


**NR6-039**

## STIMULANT TREATMENT OF ADHD IN ADOLESCENT GIRLS AND LATER CIGARETTE AND SUBSTANCE ABUSE


*Timothy E Wilens, M.D. 55 Fruit Street, YAW 6A, Boston, MA 02114, Joel Adamson, B.A., Michael Monuteaux, Sc.D., Stephen V. Faraone Ph.D.,Mary Schillinger, B.A., Diana Westerberg, B.A., Joseph Biederman, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to Understand risk of later cigarette smoking with earlier stimulant treatmentUnderstand if early stimulant treatment effects later substance abuse in ADHD girlsLearn if the duration of stimulant treatment is related to later substance abuse in ADHD girls

**SUMMARY:**


Objective: Controversy remains as to the effect of stimulant treatment on the subsequent development of substance use disorders (SUD) and cigarette smoking; particularly on girls with ADHD. To this end, we evaluated the risk imparted by stimulant treatment for ADHD on SUD and nicotine dependence in a prospective study of girls with ADHD. Methods: We conducted a case-controlled, prospective, five-year follow up study of adolescent girls with and without ADHD ascertained from psychiatric and pediatric sources. All psychiatric diagnoses were made by blinded structured interviews. We modeled time to onset of SUD and smoking as a function of lifetime stimulant treatment history. Results: We ascertained 114 subjects with ADHD (mean age at follow-up of 16.2 yrs) who had complete medication and substance abuse data of which ninety-four (82%) subjects had lifetime history of stimulant treatment. There were no differences in risk factors for SUD between the naturalistically treated and untreated groups other than a family history of ADHD. Controlling for family history of ADHD, we did not find any increased risks for cigarette smoking or SUD associated with stimulant exposure. In contrast, we found significant protective effects of stimulant treatment on the development of any subsequent SUD (N = 113; HR = 0.27 [0.125 0.60], c2=10.57, p=0.001) and cigarette smoking (N = 111; HR = 0.28 [0.14 0.60], c2=10.05, p=0.001). We found no effects of the time of onset or duration of stimulant therapy on development of subsequent SUD or cigarette smoking (dependence) in ADHD subjects. Likewise, we found no effect of stimulant therapy on duration of SUD in subjects that developed SUD. These results maintained significance when controlling for comorbid conduct disorder. Conclusions: Exposure to stimulants does not increase and appears to reduce risk for cigarette smoking and SUD in adolescent years in girls with ADHD. Follow up studies should confirm if this effect persists into adulthoo


**REFERENCES:**


1. Wilens T, Faraone S, Biederman J, Gunawardene S. Does the stimulant pharmacotherapy of ADHD beget later sub stance abuse: A metaanalysis of the literature. Pediatrics 2003;111:179-185.
2. Biederman J, Wilens TE, Mick E, Faraone S, Spencer T (1999). Protective effects of ADHD pharmacotherapy on subsequent substance abuse: A longitudinal study. Pediatrics 1999; 104(2); e20


**NR6-040**

## RESPONSE TO GUANFACINE EXTENDED RELEASE IN CHILDREN AND ADOLESCENTS AGED 6 TO 17 YEARS WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER


*Timothy Wigal, Ph.D. University of California, Irvine Child Development Center, 19722 MacArthur Blvd, Irvine, CA 92612, Floyd Sallee, M.D., Ph.D., Andrew Lyne, M.Sc., C.Stat., Gerald Tremblay, M.D, J.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to summarize responder rates and time to response of guanfacine extended release compared with placebo in children and adolescents with attention-deficit/hyperactivity disorder.

**SUMMARY:**


Introduction: Guanfacine extended release (GXR) is a selective alpha 2A-adrenoceptor agonist that has demonstrated efficacy as monotherapy for attention-deficit/hyperactivity disorder (ADHD). This analysis evaluated the percentage of children and adolescents aged 6 to 17 years with ADHD who responded to GXR treatment compared with placebo.

Methods: Data from 2 randomized, forced-dose titration pivotal trials were included. Subjects were randomized to placebo, 2, 3, or 4 mg/d GXR in 1 trial and placebo, 1, 2, 3, or 4 mg/d in the other trial. Change in ADHD Rating Scale-IV (ADHD-RS-IV) total score from baseline to endpoint was the primary efficacy measure. Responders were defined as subjects with a 25% reduction from baseline to endpoint in ADHD-RS-IV total score. ADHD symptoms within each study week were recorded at weekly visits. Response time was defined as the visit at which a 25% reduction was noted. Results were analyzed by randomized dose, actual dose, and weight-adjusted dose (in order to examine dose response by weight).

Results: Subjects' weights ranged from 53 to 275 lb. At endpoint, responder rates were significantly greater in each randomized treatment group vs placebo (placebo [n=141], 44.7%; 1 mg [n=57], 75.4%; 2 mg [n=147], 71.4%; 3 mg

[n=142], 71.8%; and 4 mg [n=144], 78.5%; P<.01 for all). Similarly, responder rates were significantly greater in each weight-adjusted actual dose group vs placebo (placebo, 44.7%; 0.01-0.04 mg/kg, 67.1%; 0.05-0.08 mg/kg, 71.6%; 0.09-0.12 mg/kg, 85.7%; and 0.13-0.17 mg/kg, 94.4%; P<.001 for all). The median time to response was significantly shorter for the active dose groups compared with placebo (14.0 days vs 20.0 days, P<.001).
Conclusion: GXR treatment (1 to 4 mg/d) was associated with higher response rates and shorter response times compared with placebo in children and adolescents aged 6 to 17 years with ADHD for both actual dose and weight-adjusted dose.

**REFERENCES:**


1. Pliszka SR: The neuropsychopharmacology of attention-defi cit/hyperactivity disorder. Biol Psychiatry 2005; 57:1385-1390
2. Waxmonsky JG: Nonstimulant therapies for attention-deficit hyperactivity disorder (ADHD) in children and adults. Essent Psychopharmacol 2005; 6:262-276


**NR6-041**

**AN 8-WEEK OPEN-LABEL STUDY OF ATOMOXETINE IN ADULTS WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER AND COMORBID SOCIAL ANXIETY DISORDER**


*Todd M Durell, M.D. Lilly Corporate Center, Indianapolis IN 46285, Lenard Adler, M.D., Michael Liebowitz, M.D., Richard Rubin, M.D., Meihua Qiao, Ph.D., Millie Hollandbeck, B.S., Ahmed Deldar, Ph.D., Paul Glaser, M.D., Ph.D., William Kronenberger, Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to discuss the effectiveness and safety of continued treatment with atomoxetine in patients with ADHD and comorbid Social Anxiety Disorder.

**SUMMARY:**


Introduction: Frequently, attention-deficit/hyperactivity disorder (ADHD) in adults is associated with comorbid anxiety disorders (Kessler et al. 2006). The efficacy and superiority of atomoxetine (ATX) over placebo (PBO) was demonstrated in children with ADHD and comorbid Social Anxiety Disorder (Geller et al. 2007) and more recently in adults in a double-blind trial. Presented are results of the adult open-label phase evaluating extended ATX treatment and safety.
Methods: The 8-week open-label phase followed a 16-week double-blind, PBO-controlled study conducted in adult patients with ADHD and comorbid Social Anxiety Disorder. Following a 2-week PBO lead-in, patients (n=442) were initially dosed with ATX (40-100 mg/day) or PBO for 14 weeks followed by all patients (n=256) receiving ATX 36-100 mg/day for 8 weeks. Mean change from open-label baseline to endpoint was assessed by a student's t-test on the Conners' Adult ADHD Rating Scale Total ADHD Symptom Score (CAARS), Liebowitz Social Anxiety Scale (LSAS), Clinical Global Impression – Severity (CGI), State-Trait Anxiety Inventory (STAI), Social Adjustment Scale (SAS), and Adult ADHD Quality of Life Scale (AAQOL). Safety and tolerability were assessed.
Results: Mean change ±SD (-3.81±7.91; p<.001) improvement on the CAARS was statistically significant from open-label baseline (21.18±11.08) as was the mean change ±SD (-7.46±16.64; p<.001) on the LSAS (57.38±29.88). Statistically significant mean change improvements were also demonstrated on the CGI, STAI State and Trait, AAQOL total, and SAS total scores. Twelve patients (4.7%) discontinued due to adverse events which most commonly included dry mouth and insomnia.
Conclusion: Treatment with ATX resulted in further significant reductions in symptoms of ADHD and Social Anxiety Disorder in adults for 8 weeks beyond the acute therapy. The data suggests that atomoxetine was well tolerated in the open-label period. Study sponsored by Eli Lilly and Company


**REFERENCES:**


1. Geller D, et al. Atomoxetine treatment for pediatric patients with attention-deficit/hyperactivity disorder with comorbid anxiety disorder. J Am Acad Child Adolesc Psychiatry. 2007; 46(9):1119-1127.
2. Kessler RC ,et al. The prevalence and correlates of adult ADHD in the United States: Results from the National Comorbidity Survey Replication. Am J Psychiatry 2006; 163(4):716-723.


**NR6-042**

**EFFICACY AND SAFETY OF LISDEXAMFETAMINE DIMESYLATE IN THE TREATMENT OF NON-CAUCASIAN CHILDREN AND ADULTS WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER**


*Valerie Arnold, M.D. CNS Healthcare/University of Tennessee301 Floral Vale Blvd, Suite 420, Memphis, TN 38119, Michael McManus, M.D., Kathleen Toups, M.D., Joseph Biederman, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to ;1)Compare the ethnicity-related effects on the Attention-Deficit/Hyperactivity Disorder Rating Scale (ADHD-RS) following 4 weeks of treatment with lisdexamfetamine dimesylate (LDX) in children aged 6 to 12 years and adults with ADHD.; and 2) Discuss the age- and ethnicity-related effects of LDX treatment on ADHD-RS in children aged 6 to 12 years of age and adults with ADHD.

**SUMMARY:**


Introduction: Clinical trials have evaluated the efficacy and safety of short-term treatment with lisdexamfetamine dimesylate (LDX) in children and adults with attention-deficit/hyperactivity disorder (ADHD). Effects of ethnicity were compared across these studies.
Methods: Changes in mean total ADHD Rating Scale (ADHD-RS) score from baseline to endpoint were measured in non-Caucasian subjects participating in phase 3, 4-week, randomized, placebo-controlled trials in children aged 6 to 12 years and adults aged 18 to 55 years with ADHD. Group results were compared within each trial. The clinical trial was not prospectively powered to detect statistical differences in ethnic subpopulations. Safety assessments included treatment-emergent adverse events (AEs), physical exams, vital signs, laboratory evaluations, and electrocardiogram results.
Results: The trial in children enrolled 285 subjects and 133 (46.7%) were non-Caucasian. The trial in adults enrolled 414 subjects and 46 (11.1%) were non-Caucasian. Least squares (LS) mean ± SE changes from baseline to endpoint in ADHD-

RS for non-Caucasian children were -10.1 ± 2.81, -18.5 ± 2.51, -20.2 ± 2.43, and -25.1 ± 2.67, for the placebo, 30-, 50-, and 70-mg/d LDX groups, respectively. Among non-Caucasians adults, LS mean ± SE changes from baseline to endpoint in ADHD-RS were -9.38 ± 4.95, -19.9 ± 3.67, -13.0 ± 5.27, and -17.1 ± 5.78, in the placebo, 30-, 50-, and 70-mg/d LDX groups, respectively. Most treatment-emergent AEs were mild to moderate and occurred during the first week. The most commonly reported AEs in non-Caucasian children and adults were decreased appetite, insomnia, and headache. Seven non-Caucasian children and 1 non-Caucasian adult discontinued due to AEs; all received LDX.

Conclusion: Observed short-term safety and efficacy appeared to be similar in LDX-treated non-Caucasian subjects for children aged 6 to 12 years and adults aged 18 to 55 years.

**REFERENCES:**


1. Biederman J, Krishnan S, Zhang Y, McGough JJ, Findling RL. Efficacy and tolerability of lisdexamfetamine dimesyl ate (NRP-104) in children with attention-deficit/hyperactiv ity disorder: a phase III, multicenter, randomized, double-blind, forced-dose, parallel-group study. Clin Ther 2007; 29:450-463
2. Biederman J, Boellner SW, Childress A, Lopez FA, Krishnan S, Zhang Y. Lisdexamfetamine dimesylate and mixed amphet amine salts extended-release in children with ADHD: a double-blind, placebo-controlled, crossover analog classroom study. Biol Psychiatry 2007; 62:970-976


**NR6-043**

## EFFICACY AND SAFETY OF ABT-089 IN ADULTS WITH ADHD


*Walid Abi-Saab, M.D. Abbott Laboratories100 Abbott Park Road, Abbott Park, IL 60064-3500, Walid Abi-Saab, M.D., Timothy E. Wilens, M.D., George Apostol, M.D. , Christopher J. Kratochvil, M.D., Weining Z. Robieson, Ph.D., Yili L. Pritchett, Ph.D., Michelle A. Collins, Ph.D., Mario Saltarelli, M.D., Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to evaluate the effects of the neuronal nicotinic receptor partial agonist, ABT-089, compared with placebo, in the treatment of adults with ADHD.

**SUMMARY:**


Objectives: To examine the dose-ranging efficacy and safety of the neuronal nicotinic receptor (NNR) partial agonist ABT-089 versus placebo in adults with attention-deficit/hyperactivity disorder (ADHD). Secondary efficacy analyses and exploratory health economics and outcomes research findings are presented in accompanying posters.

Methods: This multicenter, randomized, double-blind, placebo-controlled study used a 2 x 2 crossover design in which each subject received, in random sequence, both placebo (PBO) and active treatment. Five doses of ABT-089 were evaluated: 2 mg, 5 mg, 15 mg, or 40 mg once daily (QD), or 40 mg twice daily (BID). Each treatment period was 4 weeks, separated by a 2-week washout period. The protocol-specified primary efficacy endpoint was the Investigator-rated Conners' Adult ADHD Rating Scale (CAARS-Inv) Total Score obtained at the end of each treatment period, evaluated by an analysis of covariance with baseline score within each period as a covariate.

Results: The study enrolled 221 adults with ADHD, and 218 (male=148, female=70; mean age=38.6±years) were included in the safety dataset and 171 were included in the completers efficacy dataset. ABT-089 was clinically and statistically significantly superior to placebo on the CAARS-Inv Total Score at both 40 mg QD (n=31; PBO: 28.7±1.46; ABT-089: 24.4±1.46; 1-sided P=0.024) and 40 mg BID (n=35; PBO: 28.3±1.62; ABT-089: 25.3±1.62; 1-sided P=0.033). Overall, ABT-089 was safe and generally well tolerated. The most common adverse events (>10%) were headache (ABT-089 2 mg QD, 20%; PBO, 14.6%; ABT-089 40 mg BID, 17.5%; PBO, 11.4%) insomnia (ABT-089 2 mg QD 15.0%; PBO, 9.8%), and upper respiratory infection (ABT-089 40 mg QD, 10.8%; PBO, 6%).

Conclusions: The NNR partial agonist ABT-089, at doses of 40mg QD and 40 mg BID, was effective and generally well tolerated in the treatment of adults with ADHD.



Supported by funding from Abbott.


**REFERENCES:**


1. Wilens TE, Decker MW. Neuronal nicotinic receptor agonists for the treatment of attention-deficit/hyperactivity disorder: focus on cognition. Biochemical Pharmacology 2007;74:1212-1223.
2. Wilens TE, Verlinden MH, Adler LA et al. ABT-089, a neu ronal nicotinic receptor partial agonist, for the treatment of at tention-deficit/hyperactivity disorder in adults: results of a pilot study. Biol Psychiatry 2006;59:1065-1070.


**NR6-044**

## ASSOCIATION BETWEEN RELIGIOSITY AND DEPRESSIVE SYMPTOMS AMONG COLOMBIAN NINE-GRADE STUDENTS: A PILOT STUDY


*Adalberto Campo-Arias, M.D. Human Behavioral Research InstituteTransversal 93 No 53-48, Interior 68, BogotáColombia 13001, Miranda-Tapia G, Cogollo Z, MSc, Campo-Arias A, MD*


**EDUCATIONAL OBJECTIVE:**

At the end of this poster presentation, the participants should be able to recognize the relation between religiosity and depressive symptoms among Colombian nine-grade students dwelling in a violent and low-income neighborhood.

**SUMMARY:**


Objective: To establish the correlation between religiosity and depressive symptoms among nine-grade students in Cartagena, Colombia.

Method: A cross-sectional pilot study was done. Adolescent students participated, ages between 13 and 17 years, dwelling in violent and low-income neighborhoods. Participants completed two scales; the five-item form of the Francis scale of attitude toward Christianity (Francis-5) asked about God, Jesus and Prayer (higher scores suggest higher religiosity); and the WHO Well-Being Index (WHO-5) inquired depressive symptoms during the last two weeks (higher scores suggest more depressive symptoms). It was accepted as a significant correlation (rho) a coefficient higher than (+/-) 0.30.

Results: A total of 162 students participated in this research. The mean age was 15.1 (SD=1.1); and 55.6% were boys. The Francis-5 showed internal consistency of 0.74; and WHO-

5, 0.66. The Francis-5 scores were between six and twenty (Mean=17.8, SD=2.3, median=18, mode=20); and WHO-5 scores, between three and fifteen (Mean=9.6, SD=2.8, median=10, mode=11). Religiosity had a low positive correlation with depressive symptoms (Spearman´s rho=0.24). Conclusions: Religiosity is poorly associated with depressive symptoms among nine-grade students who live in a violent and low-income area of Cartagena, Colombia. This finding needs to be replicated with larger sample sizes in future Colombian studies.

Acknowledgments: This research was supported by the School of Nursing, University of Cartagena, and Human Behavioral Research Institute, Bogotá, Colombia.

**REFERENCES:**

1. Storch EA, Kovacs AH, Roberti JW, Bailey LM, Bravata EA, Storch JB. Strenght of religious faith and psychological adjustment in intercollegiate athletes. Psychol Rep 2004; 94: 48-50.
2. Good M, Willoughby T. The role of spirituality versus reli giosity in adolescent psychosocial adjustment. J Youth Ado lesc 2006; 35: 41-55.

**NR6-045**

## THE ASSOCIATION OF NEUROCOGNITIVE ABNORMALITIES AND STEROL DEFICITS IN SMITH LEMLI OPITZ SYNDROME

*Alka Aneja, M.D. Kennedy Krieger Institute-Psychiatry 3901 Greenspring Avenue, Baltimore, MD 21211, Forbes Porter, M.D., Ph.D., Susan Sparks, M.D., Halima Goodwin, MS.N., C.P.N.P., Walter Kaufmann, M.D., Ph.D., Elaine Tierney, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) recognize that Smith Lemli Opitz syndrome is a genetic disorder with behavioral and learning difficulties; and 2) understand that cholesterol deficit in individuals with Smith Lemli Opitz syndrome can contribute to their neurocognitive deficits.

**SUMMARY:**

Introduction: Smith-Lemli-Opitz syndrome (SLOS) is an autosomal recessive malformation syndrome with learning and behavioral deficits. SLOS is due to an inborn error of cholesterol synthesis, specifically a deficiency of 7-dehydrocholesterol (7DHC) reductase (DHCR7) activity (1). DHCR7 catalyzes the reduction of 7DHC to cholesterol. Although the SLOS phenotypic spectrum is variable, the majority of patients meet the diagnostic criteria for an autism spectrum disorder (2). Hypotheses: We hypothesized that 1) the neurological problems in Smith-Lemli-Opitz syndrome are likely due to a combination of fixed neurodevelopmental problems and functional deficits due to the abnormal sterol composition in the central nervous system, and 2) the greater the sterol impairment, the greater would be the autism features, adaptive behavior deficits, and the lower the IQ. Methods: We measured plasma and CSF sterol levels in 15 SLOS subjects for whom we had concurrent results of the ADI, ADOS, Vineland, and Mullen or Stanford-Binet while the subjects were on cholesterol supplementation. Results: Although the blood-brain-barrier separates peripheral and brain cholesterol metabolism, plasma DHC levels were significantly correlated with CSF C ($p<0.005$), CSF DHC levels ($p<0.05$), and the CSF C C/total sterol ratio ($p<0.0001$). Linear regression analyses with CSF C/total sterol ratio showed significant correlations of with ADI present state ($p<.0001$), IQ ($p<.001$) and Vineland ($p<.002$). Linear regression analyses with plasma C/total sterol ratio showed significant correlations of with ADI present state ($p<.0004$), IQ ($p<.0001$) and Vineland ($p<.0003$). We demonstrated in these subjects that the greater the sterol impairment, the greater were the autism features, adaptive behavior deficits, and lower was the IQ. Thus these neurocognitive deficits in SLOS may be due to the abnormal sterol composition in the central nervous system.

**REFERENCES:**

1. Tint GS, Irons M, Elias ER, Batta AK, Frieden R, Chen TS, et al. Defective cholesterol biosynthesis associated with the Smith-Lemli-Opitz syndrome. New England Journal of Medi cine 1994; 330: 107-113.
2. Tierney E, Nwokoro NA, Porter FD, Freund LS, Ghuman JK, Kelley RI. Behavior phenotype in the RSH/Smith-Lemli-Opitz syndrome. Am J Med Genet 2001; 98:191-200.

**NR6-046**

## INTERNAL CONSISTENCY AND FACTOR ANALYSIS TO THE INTERNET ADDICTION TEST IN COLOMBIANS CHILD AND ADOLESCENTS

*Álvaro A Navarro-Mancilla, M.D. calle 157 No 19-55 Cañaveral Parque, Bucaramanga; Colombia, 1642, Luis Alfonso Díaz-Martínez, M.D., M.Sc., German Eduardo Rueda-Jaimes, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to know the psychometrics properties of the Spanish version of Internet Addiction Test in Colombians child and adolescents.

**SUMMARY:**

Background: Internet addiction is considered a psychological dependence; studies have demonstrated an association between excessive internet use and mental disorders. There are many instruments to assess Internet addiction, but they have been validated in English speaking population. Objective: to determinate internal consistency and factors solution of Spanish translation of Internet Addiction Test among urban child and adolescents in Bucaramanga, Colombia. Method: This is a validation study. The Internet Addiction Test was translated independently from English to Spanish by two different English-fluent Colombia-born physicians, and both defined by consensus the final Spanish version; this last version was retro-translated by seven proficient English users with B1 rating on the Common European Framework Scale. Three populations were evaluated; two were sampled at random in middle and high schools and another was child and adolescents who did not attend school. The survey asked about age, gender, academic level, and Internet Addiction Test. Internal consistency was established using Cronbach's a test and a factorial analysis was made. Results: 1191 child and adolescents were included: 412 middle school, 636 high school and 143 non-school attending ones; 43.7% were males, mean age was 15.3. Internet Addiction Test scores ranged from 20 to 100 points (median: 30 points, IQR 23 to 40). Child and adolescent who attending school have higher scores (median: 30 points) than adolescents non-school attending (median: 24 points). Cronbach's a for all participants was 0.914 (men: 0.981; women: 0.927). Factorial

solution includes only ten items in three principal factors; this factorial solution is similar by age, gender or school attendance groups. Conclusion: Internet Addiction Test is a validity tool for research and screening internet addiction between child and adolescents; items number may be reduced for the Spanish version.

**REFERENCES:**


1. Shapira NA, Goldsmith TD, Keck PE Jr, Khosla UM, McEl roy SL. Psychiatric features of individuals with problematic Internet use. J Affect Disord 2000; 57:267-72.
2. Morahan-Martin J, Schumacher P. Incidence and correlates of pathological Internet use among college students. Comput Human Behav 2000; 16:13-29.


**NR6-047**

**EFFICACY OF ATOMOXETINE IN PEDIATRIC PATIENTS WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER AND COMORBID OPPOSITIONAL DEFIANT DISORDER**


*Andrea Rossi, B.S. via Gramsci 731, Sesto fiorentinoItaly 50019, G. Dell'Agnello M.D., D. Maschietto M.D., A. Pascotto M.D., F. Calamoneri M.D., G. Masi M.D., P. Curatolo M.D., A. Rossi Mo.S., S. Frediani M.D., F. Mancini MoS, L. Poole M.D., R. Escobar M.D., A. Zuddas M.D., for the LYCY Study Group*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand the effects of treatment on patients affected by ADHD comorbid with ODD

**SUMMARY:**


Introduction. The primary objective of this study was to assess the efficacy of atomoxetine in improving symptoms of ADHD in paediatric patients with ADHD and comorbid ODD, who did not respond to an initial parent training intervention.
Methods. Patients aged 6 to 15 years, with ADHD and ODD (DSM-IV criteria) and with a score at least 1.5 SD above the norm for the ADHD subscale of the SNAP-IV scale, a SNAP-IV ODD subscale score= 15 and a CGI-S= 4 were enrolled in the study. They entered a 6-week parent support; only subjects who did not respond to this program were randomized to receive atomoxetine or placebo in the following 8-week, double-blind phase. SNAP IV ADHD and ODD scores; CGI-S; CPRS-R:S and CTRS-R:S; CHIP-CE were assessed at the beginning and at the end of both the parent training and the double-blind phase.
Results. Completers (137 patients) were analysed for efficacy. All parameters did not significantly change during the parent training phase. In the randomised treatment phase, atomoxetine was associated with a significant decrease from baseline in mean scores of all SNAP-IV subscales ($p<0.01$ vs placebo), and with a decrease from baseline in mean CGI-S score ($p<0.001$ vs. placebo). The CPRS-R:S (all subscales) and the oppositional subscale of the CTRS-R:S showed a significant improvement of the problem behaviours in both the familiar and the school environment. The CHIP-CE total and all domains scores improved from baseline in the atomoxetine group: statistically significant differences vs. placebo were found for risk avoidance domain ($p<0.05$), emotional comfort ($p<0.01$) and individual risk avoidance ($p<0.01$) subdomains.
Conclusions. Conversely to previous publications which did not show significant differences between the drug and placebo on ODD symptoms in our study atomoxetine was associated with improvement in symptoms of ADHD and ODD, as well as in specific aspects of quality of life and general health.


**REFERENCES:**


1. Bangs M et al.: Atomoxetine for the Treatment of Attention-Deficit/Hyperactivity Disorder and Oppositional Defiant Disorder. Pediatrics; in press
2. Turgay A. Atomoxetine in the treatment of children, adoles cents and adults with attention deficit hyperactivity disorder. Therapy. 3(1)(pp 19-38), 2006.


**NR6-048**

**ACUTE EFFICACY AND TOLERABILITY OF ARIPIPRAZOLE FOR THE TREATMENT BIPOLAR I DISORDER IN PEDIATRIC PATIENTS**


*Andy Forbes, Ph.D. Otsuka Pharmaceutical Development & Commercialization, 100 Overlook Ctr; Suite 1, Princeton, NJ 08540, K Chang, M.D., M. Nyilas, M.D., RA Forbes, Ph.D., N Jin, M.S., B. Johnson, M.S., R Owen, M.D., A Pikalov, M.D., Ph.D., RD McQuade, Ph.D., T Iwamoto, Ph.D., WH Carson, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the importance of thorough diagnosis in the clinical trial setting in pediatric patients. Participants should recognize the advantages of the described dosing schedule, including a low starting dose, and the tolerability associated with doses between 10mg and 30mg. Participants should be able to correlate the described treatment methodology with presented tolerability and efficacy profile of aripiprazole.

**SUMMARY:**


Objective: The purpose of this study was to assess the efficacy and safety of aripiprazole in the treatment of pediatric bipolar I disorder. Methods: 296 youths, ages 10-17 with a *DSM-IV* diagnosis of bipolar I disorder, manic or mixed episode with or without psychotic features were randomized to receive placebo or a fixed dose of aripiprazole 10 mg or 30 mg reached after a 5 or 13 day titration, respectively. This 4-week multi-center, double-blind trial was conducted on an outpatient basis (with option for inpatient hospitalization, if needed). The primary efficacy endpoint was change from baseline to week 4 on the YMRS total score. Secondary efficacy endpoints included change from baseline on the CGAS score, CGI-BP severity score, CRRS-R score, GBI and ADHD-RS-IV. Patient response (>50% improvement in YMRS total score) was also assessed. Tolerability assessments included AE frequency and severity; BARS, SAS, AIMS, as well as blood chemistries, body weight change and prolactin. Results: 80% of patients completed this study. At week one, aripiprazole 10 mg and 30 mg groups were superior to placebo ($p< .05$) on the primary endpoint. Efficacy was sustained through the end of the four week trial ($p< .0001$). Both doses demonstrated significant improvement on the CGAS, CGIS-BP severity score, GBI, and ADHD-RS-IV. Response rates for 10 mg and 30 mg doses were 45% and 64%, respectively, which were significantly higher ($p< .01$ and $p< .0001$) than placebo (26%). Seven percent of aripiprazole treated patients discontinued due to adverse events, compared to 2% for placebo. Most common adverse events were somnolence, extrapyramidal disorder and fatigue. Weight gain in aripiprazole treated patients was not significantly different from placebo.

Conclusions: Aripiprazole 10 mg and 30 mg doses were superior to placebo in the acute treatment of pediatric patients with bipolar I disorder. Aripiprazole was generally well tolerated and weight gain was minimal.

**REFERENCES:**

1. Bebbington P, Ramana R. The epidemiology of bipo lar affective disorder. Soc PsychiatryPsychiatry Epidemiol. 1995;30(6):279-92.
2. Post RM, Kowatch RA. The health crisis of childhood-onset bipolar illness: some recommendations for its amelioration. J Clin Psychiatry 2006 Jan; 67(1):115-25.

**NR6-049**

## LONG-TERM EFFICACY OF ARIPIPRAZOLE IN PEDIATRIC PATIENTS WITH BIPOLAR I DISORDER

*Andy Forbes, Ph.D. Otsuka Pharmaceutical Development & Commercialization, 100 Overlook Ctr; Suite 1, Princeton, NJ 08540, Robert L Findling, M.D., Margaretta Nyilas, M.D., Robert A. Forbes, Ph.D., Catherine Aurang, B.S., Na Jin, M.S., Randy Owen, M.D., Taro Iwamoto, Ph.D., Robert D. McQuade, Ph.D., William H. Carson, M.D., Gabrielle A. Carlson, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the importance of thorough diagnosis in the clinical trial setting in pediatric patients. Participants should recognize the advantages of the described dosing schedule, including a low starting dose and tolerability up to 30mg. Participants should be able to correlate the described treatment methodology with presented long-term efficacy profile of aripiprazole.

**SUMMARY:**

Background: There is a shortage of published data from controlled trials with which to guide treatment decisions. The efficacy and safety of aripiprazole was assessed in this long-term study. Methods: 296 youths, ages 10-17 year-old with a DSM-IV diagnosis of bipolar I disorder w/wo psychotic features were randomized 1:1:1 to receive either placebo or aripiprazole (10mg or 30mg) in a 4-week double-blind trial. Completers continued randomly assigned treatments for an additional 26 weeks (double-blind). Efficacy endpoints included mean change from the pretreatment baseline to Week 30 on the Young-Mania Rating Scale (Y-MRS); Children's Global Assessment Scale (CGAS), Clinical Global Impressions Scale-Bipolar Version (CGI-BP) severity score, Children's Depression Rating Scale-Revised (CDRS-R) score, General Behavior Inventory Scale (GBI) score, Attention Deficit Hyperactivity Disorders Rating Scale (ADHD-RS-IV) score, time to discontinuation due to all reasons, and response rate (defined as > 50% reduction from baseline in the YMRS total score). The study was conducted on an outpatient basis with the option for inpatient hospitalization, if needed. A 5-member, independent, Data Safety Monitoring Board (DSMB) provided frequent assessment of patient safety. Results: In the double-blind continuation phase of this study, aripiprazole 10 mg and 30 mg groups demonstrated significant superiority to placebo at all scheduled visits through Week 30 on mean change from baseline in the Y-MRS total score ($p<.0001$, all visits). Significant improvements were observed on the CGAS, CGI-BP, ADHD-RS-IV total score, time to discontinuation (10 mg vs. placebo, $p < 0.0001$; 30 mg vs. placebo, $p = 0.0124$), and response rate (10 mg (50%) vs. placebo (27%), $p<.0001$; and 30 mg (56%) vs. placebo (27%), $p<.0001$). Conclusions: Aripiprazole 10mg and 30mg doses were superior to placebo in the long-term treatment (up to 30 weeks) of pediatric bipolar patients.

**REFERENCES:**

1. Post RM, Kowatch RA. The health crisis of childhood-onset bipolar illness: some recommendations for its amelioration. J Clin Psychiatry 2006 Jan; 67(1):115-25.
2. Bebbington P, Ramana R. The epidemiology of bipo lar affective disorder. Soc PsychiatryPsychiatry Epidemiol. 1995;30(6):279-92.

**NR6-050**

## ASSOCIATION BETWEEN PRECOCIOUS PUBERTY AND PSYCHIATRIC DISORDERS: LARGE-SCALE RETROSPECTIVE CLAIMS ANALYSIS OF FLORIDA MEDICAID-ENROLLED CHILDREN

*Cheryl S Hankin, Ph.D. PO Box 129, Moss Beach, CA 94038, Lawrence Silverman, M.D., Amy Bronstone, Ph.D., Zhaohui Wang, M.S.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize that children with precocious puberty are 4 times more likely to be diagnosed with any mental disorder and, in particular, are at increased risk for organic brain disorder, substance abuse, eating disorders, sleep disorders, tic disorders, somatization disorder, and impulse control disorders.

**SUMMARY:**

Purpose: We conducted a large-scale claims analysis to confirm case reports suggesting associations between precocious puberty and psychiatric disorders.1-3

Methods: This analysis compared Florida Medicaid-enrolled children (1997-2004) aged 3-7 years with and without precocious puberty (ICD-9 259.1, precocious sexual development and puberty, including premature thelarche and adrenarche). Results: Among 720,931 children, 1,644 (0.23%) were diagnosed with precocious puberty. Adjusting for age, sex and race, compared to those without the disorder, children with precocious puberty were 4 times more likely to be diagnosed with any psychiatric disorder (OR 3.8, 95% CI 3.4-4.2, $p<0.0001$); 26 times more likely to have an organic brain disorder (OR 25.8, 95% CI 11.8-56.4, $p<0.0001$); 13 times more likely to have a substance abuse disorder (OR 12.7, 95% CI 6.5-24.8, $p<0.0001$); and 5 to 10 times more likely to be diagnosed with an eating (OR 10.0, 95% CI 5.7-17.9, $p<0.0001$), tic (OR 10.5, 95% CI 5.3-20.3, $p<0.0001$), sleep (OR 9.1, 95% CI 4.8-17.1, $p<0.0001$), somatization (OR 7.7, 95% CI 4.3-13.7, $p<0.0001$), or impulse control disorder (OR 6.6, 95% CI 4.3-10.1, $p<0.0001$). Conclusions: This is the first large-scale analysis to show a strong association between precocious sexual development and psychiatric disorders. Increased rates of psychiatric disorders could be attributable to organic brain lesions sometimes coexisting with precocious sexual development, attendant hormonal imbalances, other pathophysiological causes, or psychosocial distress associated with illness presentation. Results suggest that patients with signs of precocious sexual development should be evaluated for co-occurring psychiatric disorders. This research was supported by Indevus Pharmaceuticals.

**REFERENCES:**
1. Yoshimura K, Naiki Y, Horikawa R, Tanaka T. Three patients with autism and central precocious puberty. Clin Pediatr Endocrinol 2005; 14:55-7.
2. Rosenberg DR, Crowner S, Thomas C, Gourash L. Psychosis and idiopathic precocious puberty in two 7-year-old boys. Child Psychiatry Hum Dev 1992; 22:287-92.

**NR6-051**

## ELECTROCARDIOGRAPHIC CHANGES WITH ZIPRASIDONE IN CHILDREN AND ADOLESCENTS TREATED WITHIN THE ADULT DOSE RANGE: AN OPEN-LABEL PROSPECTIVE STUDY

*Christoph U. Correll, 75-59 263rd Street, Glen Oaks, NY 11004, Johnny D. Lops, D.O., Anil K. Malhotra, M.D., John M. Kane, M.D., Peter Manu, M.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to: 1) evaluate the cardiac safety of ziprasidone in children and adolescents treated within the adult dose range; and determine the clinical relevance of electrocardiographic changes in the treatment selection of antipsychotics for pediatric patients.

**SUMMARY:**
Objective: To assess the electrocardiographic (EKG) and clinical safety of ziprasidone in pediatric patients treated with doses <240 mg/day. Method: Prospective, open study of ziprasidone (mean dose: 112.8+/-50.6 mg/day) in 29 subjects with mixed psychiatric diagnoses (44.8% male, mean age: 15.3+/-2.9 years). Patients were followed for 99.3+/-108.7 days, receiving 107 EKGs (mean: 3.7+/-1.4). EKGs were obtained fasting in the AM at baseline, monthly for 3 months and three-monthly thereafter. Manual QT measurements in at least 6 leads were performed by two internists blinded to ziprasidone dose and time point. We compared baseline to peak rate-corrected QT (QTc) intervals and EKG dispersion. Furthermore, we tested the correlation between QTc changes and ziprasidone dose, and ziprasidone and potassium level. Results: The mean QTc increased from 410.5+/-24.9 ms to a peak of 433.4+/-25.0 ms at 47.6+/-45.2 days ($p<0.0001$). The mean QTc dispersion increased from 47.0+/-24.8 ms to a peak of 59.7+/-24.4 ms at 60.4+/-72.1 days ($p<0.0001$). Three patients (10.3%) had new onset QTc of 451-499 ms (ie, borderline EKG) without other abnormalities. Four patients (13.8%) had at least one potentially clinically relevant abnormality (2 had QTc dispersion >100 ms, one had QTc >500 ms, and one had an increase in QTc compared with baseline of >60 ms with new-onset QTc 451-499 ms). The changes in QTc did not correlate with ziprasidone dose ($p=0.67$) or the plasma level ($p=0.68$, 50 EKGs), but had a modest correlation with lower serum potassium in the 40 EKGs with concurrent potassium data ($p=0.067$). Conclusion: Ziprasidone treatment of pediatric patients within the adult dose range was associated with statistically significant, but dose-independent prolongations of QTc and QTc dispersion. 13.8% of patients developed EKG abnormalities, but none had symptomatic arrhythmias. EKG monitoring should be performed in ziprasidone treated youths at baseline, during titration and at target dose.

**REFERENCES:**
1. Blair J, Scahill L, State M, Martin A. Electrocardiographic changes in children and adolescents treated with ziprasidone: a prospective study. J Am Acad Child Adolesc Psychiatry 2005; 44:73-9.
2. Blair J, Taggart B, Martin A. Electrocardiographic safety pro file and monitoring guidelines in pediatric psychopharmacol ogy. J Neural Transm 2004; 111:791-815.

**NR6-052**

## A RANDOMIZED CONTROLLED TRIAL OF TWO FORMS OF COMPUTERIZED WORKING MEMORY TRAINING IN ADHD

*Christopher P Lucas, M.D. NYU Child Study Center, 215 Lexington Avenue, #1515, New York, NY 10016, Howard Abikoff, Ph.D., Eva Petkova, Ph.D., Weijin Gan, B.M.D, M.S., Solomon Sved, Lindsey Bruett, Brittany Eldridge, B.A.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to understand the effects of computerized working memory training on improving visuospatial working memory and independent ratings of behavior in children and adolescents with ADHD.

**SUMMARY:**
Working memory (WM) deficits are frequently found in subjects with Attention-Deficit Hyperactivity Disorder (ADHD). Previous studies suggest that computerized training on (particularly) visuospatial WM tasks can improve WM deficits and reduce ADHD symptoms. In a randomized double-blind trial comparing two forms of computerized WM training, 46 children aged 6-11 with ADHD attending an intensive 8-week, behaviorally based, summer treatment program were randomized to receive Verbal (n=22) or Visuospatial (n=24) WM training. This commenced in week 2 and was continued 4 days/week until week 7 for a maximum of 25 sessions. Pre-post assessments of WM capacity were made before (week 2) and after (week 8), blind to group assignment using 5 subtests from the Automated Working Memory Assessment (AWMA). Weekly counts were also recorded of positive behaviors observed during the camp. Results showed that visuospatial training was associated with significantly greater gains in visuospatial WM: Dot Matrix (Effect Size (ES)=0.52, $p=0.01$) and Block Recall (ES=0.40, $p=0.06$). There were no differences between groups in verbal WM. There were significantly greater numbers of positive behavior points earned in the camp during weeks 4, 5 and 6 by the group receiving visuospatial WM training compared to those in the verbal WM training group (ES=0.50, $p=0.03$). Although a similar proportion of subjects in both groups entered the summer camp on psychotropic medication it is possible that the observed effects may be explained by a differences in the medication treatment having occurred during the course of the study in one group by chance – ongoing analyses seek to address this potential bias. This pilot study suggests that computerized training on visuospatial tasks can produce changes in WM performance on tasks that were not specifically trained upon. Furthermore, visuospatial, but not verbal WM training appears associated with improvements in observed behaviors during training.

**REFERENCES:**
1. Westerberg H, Hirvikoski T, Forssberg H, Klingberg T (2004), Visuo-spatial working memory: a sensitive measure ment of cognitive deficits in ADHD. Child Neuropsychology

10(3), 155–161.
2. Klingberg T, Fernell E, Olesen P, Johnson M, Gustafsson P, Dahlström K, Gillberg CG, Forssberg H, Westerberg H (2005), Computerized Training of Working Memory in Chil dren with Attention-Deficit/Hyperactivity Disorder – a Con trolled, Randomized, Double-blind, Trial. J. Am. Acad. Child Adolesc. Psychiatry, 44(2):177–186.

**NR6-053**

**THE USE OF ECT IN ADOLESCENTS**

*Frank K Zaw, M.B.B.S Adolescent Psychiatric Intensive Care UnitHuntercombe Hospital, Ivetsey Bank, Staffordshire, Wheaton Aston, United Kingdom ST19 9QT, Rajasekar R. Dhanushkodi, M.B.B.S M.R.C.Psych*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to realize that ECT is a useful treatment, which is effective and safe in adolescents for similar clinical diagnoses as it is in adults. Additionally the issues specifically relating to adolescents, for example, consent and ethical issues are discussed.

**SUMMARY:**

Introduction: ECT has remained controversial . The main indications, include Catatonia and Affective Disorder . ECT can be considered as a life saver in Depressive or Catatonic stupor and extreme excitement and in NMS . The use of ECT in adolescents should follow the same principles as in adults. The clinical presentation and severity could indicate the use of ECT as an urgent measure. Method: 6 adolescents were treated with modified ECT after having obtained a second and third opinions . We informed the parents, had discussions and sough their consent. 5 out of 6 patients were detained under the Mental Health Act (1983) and all of the patients initially lacked capacity. We explained the decision process and about ECT . The diagnosis was either schizophrenia or affective disorder and in 4 there was concurrent catatonia. We used DSM IV and ICD-10.Modified Roger's scale was used to quantify catatonia. Results: In 2 patients, the catatonic symptoms had started to respond to Zolpidem and the residual symptoms were cleared up by ECT. The positive response of Affective Disorder to ECT was notable. The affective symptoms were resistant to medication in five before ECT. In 2, the catatonic symptoms got notably better with medication, however the accompanying affective disorder necessitated ECT. Swift and dramatic results were observed in only one. Sustained improvement was observed in all 6. The number of ECT varied between 12 and 20. Conclusion: ECT is effective for both Catatonia and Affective Disorders in adolescents as in adults and it is safe. Side effects were mainly complaints of headache immediately after ECT treatments, which responded to conventional symptomatic treatment with analgesics There were no complaints of cognitive impairment. The extent of acknowledgement of the efficacy of ECT and use amongst Child Psychiatrists is difficult to determine. Appropriate, judicious and cautious use of ECT should be considered for adolescents.

**REFERENCES:**

1. AACAP Official Action - Practice parameters for use of electroconvulsive therapy with adolescents J Am. Acad.Child Adoles.Psychiatry 2004; 43: 1521-1539.
2. Zaw KM: ECT and the youth. In Catatonia in Autism Spectrum Disorders, edited by Dhossche D, Wing L, Ohta M, Neumarker K-J Academic Press International Review of Neu robiology 2006 Vol.72 pp 207-231.

**NR6-054**

**DETECTION OF MENTAL HEALTH PROBLEMS IN AN EGYPTIAN PEDIATRIC OUTPATIENT CLINIC**

*Ghada R Taha, Alamal Complex for Mental Health, Dammam, PO 5054, Saudi Arabia 31422, Ghada Ibrahim Gad, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the importance of screening of childhhod patients for mental illness, know the risk of different psychiatric disorders in pediatric OPD patients, and identify the scales used for screening of these patients.

**SUMMARY:**

Objectives: To screen and evaluate children attending an Egyptian pediatric outpatient clinic for mental health problems using simple screening questionnaire, identify risk factors related to positive scores on screening and explore the relationship between medical and psychiatric disorders in positively screened children. Methods: A cross-sectional hospital-based study was conducted at the pediatric outpatient clinic in Ain Shams University. Children aged from 4- 15 years were recruited. The final sample included 262 out of 300 randomly selected children. They underwent assessment for detection of medical diseases. Corresponding parents were asked to complete a screening questionnaire (Pediatric Symptom Checklist; PSC) in addition to taking socio-demographic information. Children scored positive on PSC were evaluated in another session by a psychiatrist to detect mental health problems using ICD-10. Results: The rate of positive PSC screening was 21 % (n= 55) of the final sample. Specifically, 11 out of 70 (15.7 %) preschool aged children (< 6 years) were PSC positive and 44 out of 192 (22.9 %) school-aged children (6 years or older) were PSC positive. Factors related to positive scores on PSC included male sex, parental non-education, low income, single parent family and history of mental health use. Conclusion: Mental health screening can be effectively implemented in pediatric practice. Short screening questionnaire as PSC is useful for the early detection of psychosocial problems in preventive child healthcare.

**REFERENCES:**

1. Pagano M, Murphy JM, Pederson M. Screening for psychoso cial problems in four-and five year-olds during routine EPSDT examinations; validity and reliability in a Mexican-American sample. Clinical Pediatrics, 1996, 35:139-146.
2. Briggs-Gowan MJ, Horwitz SM, Schwab-Stone ME, Leven thal JM, Leaf PJ. Mental health in pediatric settings: distribu tion of disorders and factors related to service use. Journal of American Academy of Child and Adolescent Psychiatry, 2000, 39(7):841-849.

**NR6-055**

**ESCITALOPRAM IN THE TREATMENT OF ADOLESCENT DEPRESSION**

*Graham Emslie, M.D. UT Southwestern Medical Center*

*5323 Harry Hines Blvd., Dallas, TX 75390-8589, Ivan Gergel, M.D., Anjana Bose, Ph.D., Daniel Ventura, Ph.D., Stavros Tourkodimitiris, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation the participant should be able to compare the safety and efficacy of escitalopram relative to placebo in the treatment of major depressive disorder in adolescent patients.

**SUMMARY:**

Introduction: Treatment options for depressed adolescents (12-17 years) are limited. This presents the results from a prospective, randomized, double-blind, placebo-controlled trial of escitalopram in adolescent patients with major depressive disorder (MDD). Methods: Male and female adolescents with *DSM-IV* defined major depressive disorder were randomly assigned to 8 weeks of double-blind treatment with escitalopram 10-20 mg/day (n=155) or placebo (n=157). The primary efficacy parameter was change from baseline to Week 8 in Children's Depression Rating Scale-Revised (CDRS-R) score using last observation carried forward (LOCF) approach. Results: Mean baseline CDRS-R score at baseline was 57.6 for escitalopram and 56.0 for placebo. A total of 259 patients (83%) completed 8 weeks of double-blind treatment. Significant improvement was seen in the escitalopram group relative to placebo at endpoint in CDRS-R score (-22.1 vs. -18.8; P=0.022; LOCF). Discontinuation rates due to adverse events were 2.6% escitalopram, 0.6% placebo. There were no completed suicides. Serious adverse events were reported by 2.6% and 1.3% of escitalopram and placebo patients, respectively. The only adverse event with an incidence for escitalopram twice that of placebo was influenza-like symptoms (7.1% vs 3.2%). Conclusion: Escitalopram shows evidence of efficacy and is well tolerated in depressed adolescents. This study and its presentation were supported by Forest Laboratories, Inc.

**REFERENCES:**

1. Wagner KD, Jonas J, Findling RL, Ventura D, Saikali K: A double-blind, randomized, placebo-controlled trial of escitalo pram in the treatment of pediatric depression. J Am Acad Child Adolesc Psychiatry 2006; 45: 280-288.
2. Poznanski EO, Cook SC, Carroll BJ: A depression rating scale for children. Pediatrics 1979; 64: 442-450.

**NR6-056**

## BIPOLAR DISORDER: OVERDIAGNOSIS OR UNDERDIAGNOSIS?

*Jagan K Chilakamarri, M.D. Atlanta Psychiatric Institute 11050 Crabapple Rd Suite D-113A, Roswell, GA 30075, Aliza Wingo M.D., Megan M. Filkowski B.A., S. Nassir Ghaemi M.D., M.P.H.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand potential overdiagnosis of bipolar disorder in children in terms of reliability rather than validity.

**SUMMARY:**

Objective: There is much controversy as to whether bipolar disorder is overdiagnosed in children. Most studies purporting overdiagnosis involve taking samples of children with the bipolar diagnosis given by clinicians and reassessing them using *DSM-IV* criteria. This method assesses reliablity, rather than validity, however. No studies have assessed overdiagnosis by examining children who have validly been assessed by researchers as not having bipolar disorder, and then assessing whether they had received the bipolar diagnosis by clinicians before their current valid non-bipolar diagnosis. This will be the first such study in children. Method: 60 children, recruited from a community primary care mental health setting, will be identified in three diagnostic groups based on structured diagnostic interview assessments applying DSM-IV critiera (Kiddie-SADS): 20 children with bipolar disorder type I (BD), 20 children with ADHD, and 20 children with major depressive disorder (MDD). The clinical and diagnostic histories of those children will be examined through interviews of the children, their parents, and all available family members, as well as through examination of medical records, pharmacy records, and any other available clinical data. Their past diagnoses will be recorded temporally and clinical and demographic features of the groups will be recorded. Results: The results to be presented will be consistent with overdiagnosis of children with bipolar disorder if the following pattern occurs: the BD is mostly diagnosed with BD as the first diagnosis given by clinicians; the ADHD and MDD groups are commonly diagnosed with BD as the first diagnosis given by clinicians. The results to be presented will be consistent with underdiagnosis of children with bipolar disorder if the following pattern occurs: the BD is mostly diagnosed with other diagnoses (like ADHD or MDD) as the first diagnosis given by clinicians; the ADHD and MDD groups are mostly diagnosed w

**REFERENCES:**

1. Kahana SY; Youngstrom EA; Findling RL; Calabrese JR: Employing parent, teacher, and youth self-report checklists in identifying pediatric bipolar spectrum disorders: An examina tion of diagnostic accuracy and clinical utility. J Child Ado lesc Psychopharmacol. 2003; 13(4):471-88
2. Youngstrom E; Meyers O; Youngstrom JK; Calabrese JR; Findling RL: Diagnostic and measurement issues in the as sessment of pediatric bipolar disorder: implications for under standing mood disorder across the life cycle. Dev Psycho pathol. 2006; 18(4):989-1021

**NR6-057**

## CORRELATION OF MOTHER'S EMOTIONAL STATUS DURING PREGNANCY WITH INFANT'S TEMPERAMENT IN THE FIRST TWO MONTHS OF LIFE

*Jocelyn G Gayares, M.D. Rm 214 Northpoint Bldg, BS Aquino Dr, Bacolod City, Negros Occidental 6100, Philippines, Ma. Jocelyn Gayares, MD and Antonio Gauzon, MD*

**EDUCATIONAL OBJECTIVE:**

Upon reading this poster, the participant should be convinced and teach others that pregnant mothers need to be anxiety-free to avoid more fussy and less cuddly infants. This would give a greater chance for a good parent-child dyad which leads to an infant developing and becoming a more emotionally stable adult.

**SUMMARY:**

INTRODUCTION: Temperament is an inborn behavioral style of an individual. It is said to influence how a child interacts with the people, events, and objects in his environment. It is important in the parent-child dyad. A faulty interactional

process between temperament and environment may give rise to parent-child problems which may be brought on to adult life. OBJECTIVE: The aim of this study is to determine the correlation of mother's emotional status during pregnancy with infant's temperament in the first two months of life. METHODS: Seventy one (71) mothers were screened. Mothers were given the Beck Depression Index Questionnare and the Clinical Anxiety Scale Questionnaire once each during the 2nd and the 3rd trimesters. Forty seven (47) infants and their mothers were included in the analysis. Infants were assessed using the Early Infancy Tempermanet Questionnaire for 1-4 Month-Old Infants and the Profile sheet for 1-2 month-old infants. Results were analyzed using the Pearsons Correlation Coefficient. RESULTS: There is no significant difference between the 2nd and 3rd trimester of the mothers. Pearson's correaltions coefficient was statistically significant to a confidence level of 0.01 for mother's Clinical Anxiety Scale scores and Infant's Activity (0.643978) as well as Infant's Approachability (0.440995). It was not statistically significant for mother's Beck Depression Index scores and temperament. DISCUSSION AND CONCLUSION: Behavioral styles influence interactions, family relationships, and risk for development of behavioral disorders in childhood. A more fussy and less cuddly infant can cause frustrations for the already anxious mother. Freudian theories support that faulty parent-child relationships can lead to behavioral problems in adult life. This study showed that an anxious mother would produce an infant who is 41.5% more active/fussy and 19.5% more withdrawn/less cuddly than normal population.

**REFERENCES:**


1. Barr, RG, Kramer, MS, Pless, IB, Boisjoly, C, Leduc, C: Feeding and temperament as determinants fo early infant cry ing/fussing behavior. PEdiatrics 1989; 84(3): 514-521.
2. Morilak, D, Proteus, M, Ciaranello, R: Molecular and cellular mechanisms of brain development. NAtional Institute of Mental Health, 2000.


**NR6-058**

## THE COMPARATIVE METABOLIC IMPACT OF MOOD STABILIZERS AND ANTIPSYCHOTICS ON BIPOLAR ADOLESCENT MALES.


*John Hardy, M.D. 1115 N. Grand Ave., Pueblo, CO 81003, Terrance J. Bellnier, RPh, MPA, Sara Bingel, Pharm.D., Richard Simon, Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to Describe the metabolic risks associated with mood stabilizers and antipsychotics in male adolescents with bipolar disorder. Identify the differences between 2nd generation antipsychotics and mood stabilizers related to weight change, diabetes and dyslipidemias.

**SUMMARY:**


Objective: Obesity and its metabolic consequences are approaching epidemic proportions in children and adolescents in the general population. Drug associated weight gain from mood stabilizers and antipsychotics may be an additional risk for diabetes and dyslipidemias.

Method: The CBR-Youth Connect is a residential psychiatric treatment center. A retrospective chart review of all patients admitted from 1996 through 2006 was conducted. An intent-to-treat patient assignment to medication groups was made after 1 month in residence. Patient demographics, treatment and metabolic parameters were evaluated at admission, 1 month, 6 months and 12 months. Data at admission and 12 months will be analyzed.

Results: Subject characteristics: N=123, Age-14.9 +- 1.5 y/o, 24% African American, 7% Hispanic, 7% Native American, Length of stay 549 +- 233 days. Patients were assigned to the following groups: mood stabilizer alone (M) N=16, mood stabilizer plus antipsychotic (M/A) N=46, aripiprazole (AR) N=16, ziprasidone (ZI) N=13, risperidone (RI) N=14 and olanzapine (OL) N=18. BMI, fasting glucose (GLU), and triglycerides (TG) were compared with no significant difference between groups at baseline. Significant between group differences: BMI:M/A to AR: 2.64 +- 1.5 to 0.09 +- 1.16 (P<.0001, t=6.01, df=59), GLU:M/A to M and AR: 4.6 +- 11.8 to -13.8 +- 41.4 (P=.004, t=2.73, df=59), 4.6 +- 11.8 to -1.56 +- 6.6 (P=.045, t=1.72, df=59), AR to RI: -1.56 +- 6.6 to 7.1 +- 7.6 (P=.002, t=3.049, df=27),RI to OL: 7.1 +- 7.6 to .61 +- 11.7 (P.04, t=1.77, df=31),TG: AR to RI: -32.8 +- 69.4 to 143.4 +- 135.2 (P<.0001, t=4.58, df=28), RI to OL: 143.4 +- 135.2 to -9.22 +- 78.4 (P=.0001, t= 4.01, df=30)

Conclusion: Aripiprazole in male adolescents may have less risk of weight gain, diabetes, and dyslipidemias than other treatments for bipolar disorder. Our sample size limits our ability to make population inferences. More comprehensive randomized, controlled trials to determine safety are needed.


**REFERENCES:**


1. Cheng-Shannon J, McGough JJ, Pataki C, McCracken JT. Second-generation antipsychotic medications in children and adolescents. J Child Adolesc Psychopharmacol. 2004 Fall;14(3):372-94.
2. Henry CA, Zamvil LS, Lam C, Rosenquist KJ, Ghaemi SN. Long-term outcome with divalproex in children and adoles cents with bipolar disorder. J Child Adolesc Psychopharma col. 2003 Winter;13(4):523-9.
3. Henry CA, Zamvil LS, Lam C, Rosenquist KJ, Ghaemi SN. Long-term outcome with divalproex in children and adoles cents with bipolar disorder. J Child Adolesc Psychopharma col. 2003 Winter;13(4):523-9
4. Henry CA, Zamvil LS, Lam C, Rosenquist KJ, Ghaemi SN. Long-term outcome with divalproex in children and adoles cents with bipolar disorder. J Child Adolesc Psychopharma col. 2003 Winter;13(4):523-9.


**NR6-059**

## DEPRESSIVE SYMPTOMS, STRESS RESPONSES AND QUALITY OF LIFE IN CAREGIVERS OF ATTENTION DEFICIT HYPERACTIVITY DISORDER PATIENT


*Jong-Hyun Jeong, M.D. 93-6, Ji-dong, Paldal-gu, Suwon, Gyeonggi-do, Suwon, South Korea 442-723, Jong-Hyun Jeong, M.D., Yoon-Kyoung Shin, M.D., Seung-Chul Hong, M.D., Jin-Hee Han, M.D., Sung-Pil Lee, M.D.Department of Psychiatry, St. Vincent Hospital, The Catholic University of Korea, Korea*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to know that physicians should consider integrated approaches

for caregiver's psychopathology and subjective quality of life in the management of ADHD.

**SUMMARY:**

Objective:

This study was designed to investigate depression, anxiety, alexithymia, stress responses and subjective feeling of quality of life in caregivers of patients with attention deficit hyperactivity disorder.

Methods:

The subjects were 38 attention deficit hyperactivity disorder patients' caregivers(38 women, mean age: 37.5±6.5). Patients were diagnosed with *DSM-IV-TR* ADHD criteria. Korean version of Beck Depression Inventory(BDI), State and Trait Anxiety Inventory(STAI), Toronto Alexithymia Scale(TAS), Stress Response Inventory(SRI) and Korean version of WHOQOL-BREF(World Health Organization Quality of Life assessment instrument Abbreviated Version) were used for assessment.

Results:

1) The BDI scores of ADHD patient's caregiver group were significantly higher than control group(16.4±7.1 vs. 10.9±5.5)(p=0.011). 7 of the 38 caregivers(18.4%) and none of control group(0%) had BDI scores over 20 points(p=0.021). Calculated relative risk for ADHD in the presence of caregivers' depression was 1.516 overall(95% confidence interval, 1.234 - 1.862).

2) In ADHD patient's caregiver group, the scores of Stress Response Inventory were significantly higher than control group(44.2±20.2 vs. 26.5±16.8)(p=0.006).

3) No significant differences were found in the score of STAI, STAI-S, STAI-T, TAS and WHOQOL-BREF, overall QOL between caregiver and control group.

4) Total score of WHOQOL-BREF(r=0.437, p=0.007) and physical health domain(r=0.370, p=0.024) were correlated with caregiver's educational age.

5) The score of environmental domain were significantly increased with caregiver's educational age(r=0.482, p=0.003), but decreased with patient's age(r=0.328, p=0.044).

Conclusion:

This study suggests that ADHD patients' caregivers are likely to have more depressive symptoms and higher stress response level than control group. Although the quality of life in caregivers of ADHD patient had not significantly decreased than control, the quality of life

**REFERENCES:**

1. Beardslee WR, Keller MB, Lavori PW, Staley J, Sacks N: The impact of parental affective disorder on depression in off spring: a longitudinal follow-up in a nonreferred sample. J Am Acad Child Adolesc Psychiatry 1993;32:723-730
2. Sawyer MG, Whaites L, Rey JM, Hazell PL, Graetz BW, Baghurst P. Health-related quality of life of children and adolescents with mental disorders. J Am Acad Child Adolesc Psychiatry 2002;41:530-537

**NR6-060**

## DIVIDED ATTENTION IN ADOLESCENTS WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER

*Ju-Wei Hsu, M.D. 12030 Little Patuxent PKWY, AptI, Columbia, MD 21044, Li-Ching Lee, Ph.D., Ying-Sheue Chen, M.D., Yi-Wei Huang, M.Sc., Ian-Kai Shan, Ed.D., Tung-Ping Su, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to recognize that the attention impairment in adolescents with ADHD is dependent upon whether visual, acoustic, or combined stimuli are presented.

**SUMMARY:**

Introduction: Attention-Deficit/ Hyperactivity Disorder (ADHD) is a common neuropsychiatric disorder in children. Much research work has been done to find ways of improving academic performance but little is known about their attention operation. Research on attention operation in ADHD children will help in developing effective intervention targets to improve learning difficulties. The object of the study is to compare performance differences in divided attention tasks in adolescents with ADHD and unaffected controls.

Methods: Newly diagnosed, drug-naïve adolescents with ADHD (N=52) and unaffected controls (N=44) between the ages of 11-16 years were included. Children with mental retardation, head injury, or other neurological disorders were excluded. An IQ test (WISC) and the Divided Attention Task (DAT) were administered.

Results: Cases and unaffected controls were not statistically different in age and IQ. However, there were more males in the case (79%) than control group (57%) (p=.02). Results indicated significantly fewer correct responses using visual, acoustic, or combined stimuli in cases than controls. Cases showed more compromised performance in responding to visual stimuli (e.g. higher omission rate, etc.) than controls when acoustic stimuli were present. However, the same pattern was not observed when responding to acoustic stimuli in the presence of visual stimuli.

Conclusion: Although inattention is one of the core symptoms of ADHD, not all attentional functioning is impaired. We found children with ADHD showed more impaired attention in responding to visual stimuli when acoustic stimuli were present. But attention to acoustic stimuli was not compromised by the presence of visual stimuli. Intervention programs targeted to improve attention capacity and academic performance in children with ADHD need to recognize the attentional differences between ADHD-affected and ADHD-unaffected children in responding to stimuli from different modalities.

**REFERENCES:**

1. Barkley RA: Adolescents with attention-deficit/hyperactivity disorder: an overview of empirically based treatments. J Psy chiatr Pract 2004; 10(1):39-56
2. Koschack J, Kunert HJ, Derich G, Weniger G, Irle E: Impaired and enhanced attentional function in children with attention deficit/hyperactivity disorder. Psycho Med 2003; 33:481-489

**NR6-061**

## LIFE EXPERIENCES, TEMPERAMENT, AND CANDIDATE GENES IN CHILDREN AT RISK FOR DEVELOPING PEDIATRIC BIPOLAR DISORDER

*Meghan E Howe, M.S.W. 401 Quarry Rd, Palo Alto, CA 94304, Jess Yee, B.S., Melissa Pease, B.A., Erica Weitz, M.A., Joachim Hallmer, M.D., Kiki Chang, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able

to learn more about pediatric bipolar disorder and children at risk for pediatric bipolar disorder.

**SUMMARY:**
Objective: We sought to study biological offspring of parents with bipolar disorder and assess the possible etiologies of early-onset BD by evaluating the relationship with life experiences, temperament, and candidate genes that have been shown to be associated with bipolar disorder.
Method: We have genetic and clinical data from 63 non-related children who are offspring of parents with BD. Using the WASH-U-KSADS for diagnosis , the PERI to assess stressful life events, and the DOTS-R for temperament children ages 6-18 were interviewed and categorized as either BD or Healthy. A "healthy" at risk child was considered to not meet criteria for any disorder. Blood samples were obtained and standard genetic methods were applied to characterize polymorphic status for two genes of interest: SERT,BDNF.
Results: In this cohort, 40 children were categorized in the BD group and 23 children in the Healthy group. Both groups of children described problems with parents, siblings, and home environment at similar rates (p=.88; df=1). Children with bipolar were more likely to have decreased scores in mood, task orientation, sleep, and flexibility on the DOTS-R (p = .03; df=1). Children with the short "s" allele were significantly (p=.01; df=1) more likely to have a diagnosis of BD than children without. Additionally, children with low scores in mood, sleep, and task orientation were significantly more likely to have the short "s" allele (p= .02; df=1). Children with the short allele also were significantly more likely to report self-injurious behaviors, school problems, and friendship difficulties (p= .02; df=1).
Conclusion: These findings suggest that in a high risk population, SERT may play a role in early- onset BD. Both groups reported similarly high rates of environmental problems possibly highlighting the influence of genetics in temperament and early-onset bipolar disorder.

**REFERENCES:**

1. Birmaher B, Axelson D, Strober M (2006): Clinical Course of Children and Adolescents with bipolar spectrum disorders. Arch Gen Psychiatry.;63:175-181.
2. Chang, K, Steiner, H, Ketter, TA (2003): Studies of off spring of parents with bipolar disorder. Am J Medical Genet ics. 123C:26-35.

**NR6-062**

## SOCIODEMOCRAPHIC CHARACTERISTICS AND EMOTIONAL AND BEHAVIORAL PROBLEMS RELATED WITH INTERNET ADDICTION TENDENCY IN ADOLESCENTS

*Nam Hee Kim, M.D. Department of Psychiatry, Seoul Metropolitan Eunpyeong Hospital, San 6, Eungam 2-dong, Eunpyeong-gu, Seoul, South Korea, 122-913, Yun Mi Shin, M.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to recognize important sociodemographic factors and emotional and behavioral problems which are helpful to prevent, assess and treat internet addiction in adolescents.

**SUMMARY:**
Introduction: The objective of this study is to investigate the relations of internet addiction to sociodemographic characteristics and emotional and behavioral problems of adolescents in Korea.
Methods: We assessed 1722 middle school students in the city of Osan, Korea. We administered a self-reported questionnaire including sociodemographic data, Korean versions of Internet Addiction Scale (K-IAS), Youth Self Report (K-YSR) and Children's Depression Inventory (K-CDI). In this study, we defined upper 30% of internet addiction scores as 'addiction group' and lower 30% as 'control group'. Chi-square and t-test were used to compare the addiction group with the control group. After the correlations among each characteristics and problems were performed, the multiple regression analysis was conducted to identify the predictable factors of internet addiction tendency.
Results: The addiction group (K-IAS>=43, N=549) had significantly higher rate of males, older students, cigarette smoking and alcohol misuse than the control group (K-IAS=<30, N=543). The percent of both-working parents and need of psychiatric service were also significantly higher in addiction group. The addiction group showed earlier starting age of internet use and higher rate of their parents' internet use. And the addiction group had significantly higher mean scores of all scales of K-YSR and K-CDI. Multiple regression analysis showed that attention problems, male and delinquency could explain 26.2% of internet addiction tendency.
Conclusions: These results suggested that the earlier familial education and environmental intervention of internet use would be helpful to prevent internet addiction. Attention problems, male and delinquency were predictable factors of internet addiction, and this is well compatible with more male prevalence in ADHD and disruptive behavior disorders. This suggested that more male focused intervention to prevent and treat internet addiction could be effective.

**REFERENCES:**

1. Lee MS, Oh EY, Cho SM, Hong MJ, Moon JS: An Assess ment of Adolescent Internet Addiction Problems Related to Depression, Social Anxiety and Peer Relationship. J Korean Neuropsychiatr Assoc 2001; 40:616-626
2. Whang LS, Lee S, Chang G: Internet over-users' psychologi cal profiles: a behavior sampling analysis on internet addic tion. Cyberpsychol Behav 2003; 6:143-150

**NR6-063**

## COMBINED OROS METHYLPHENIDATE IN ATOMOXETINE PARTIAL RESPONDERS

*Paul G Hammerness, M.D. 185 Alewife Brook Parkway Suite 2000, Cambridge, MA 02138, Timothy E. Wilens M.D., Robert Doyle M.D., Linsey Utzinger B.A., Mary Schillinger B.A., Robert Sawtelle B.A., Joseph Biederman M.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this presentation, the participant should be able to demonstrate knowledge of the efficacy and safety of combined OROS methylphenidate and atomoxetine, in children with Attention Deficit Hyperactivity Disorder (ADHD).

**SUMMARY:**
Introduction: Stimulants and atomoxetine (ATMX) are the most common agents for pediatric ADHD. Given that approximately

30-40% of children receiving ATMX do not manifest a robust response, adjunctive treatment with stimulants may be used to accentuate efficacy. However, there is a dearth of systematically collected data. Our hypothesis that the addition of OROS methylphenidate (OROS-MPH) to ATMX partial responders will be safe and effective in the treatment of pediatric ADHD. Methods: A two-phase, seven-week, open-label study in children (6 to 17 years) with ADHD. Phase one initiates and maintains ATMX treatment for four weeks (to 1.4mg/kg/day). Phase two adds OROS-MPH (to 54mg/day) for three weeks to subjects who are ATMX partial responders; ADHD Clinical Global Impression (CGI)-Improvement = minimally improved, and CGI-Severity of = mildly ill, or ADHD Symptom Checklist Severity Scale (ADHD RS) > 18. Response to treatment is assessed by ADHD RS, CGI-Severity and Improvement. Results: Fifty subjects were exposed to OROS-MPH and 40 subjects completed Phase two. Overall, there was a statistically and clinically significant reduction in the ADHD RS at endpoint; the addition of OROS-MPH to ATMX resulted in an approximate 30% decline in ADHD symptoms ($p < 0.05$), and clinically significant reductions in CGI-Severity and Improvement. There were no serious adverse events, nor significant changes in laboratory or cardiovascular assessments. Select side effects (headache, appetite loss) were greater in the combination treatment. Younger children were more culpable to adverse events. Discussion: OROS-MPH added to partial responders of ATMX improves ADHD symptoms, with an additive side effect profile, greatest in younger children. Future controlled investigations are recommended for this combined strategy.

This research is supported by an investigator-initiated grant from McNeil Consumer & Specialty Pharmaceuticals

**REFERENCES:**

1. Michelson D et al. Once daily atomoxetine treatment for chil dren and adolescents with ADHD: a randomized double blind placebo controlled study. Am J Psychiatry 2002;159:1896-1901
2. Practice Parameter for the assessment and treatment of chil dren and adolescents with ADHD. Washington DC, American Academy of Child and Adolescent Psychiatry, 2007

**NR6-064**

## ANTIDEPRESSANT TREATMENT OF MEDICAID-INSURED YOUTH WITH CANCER

*Satish Valluri, M.S. 220 Arch Street, 12th FL Baltimore, MD 21201, BaltimoreMD 21201, J. M. Zito, Ph.D., E. Ballard, B.A., D. Safer, M.D., J. Korelitz, Ph.D., L. Magder, Ph.D., L. Horowitz, Ph.D., M.P.H., Allan Wayne, M.D., Donald Mattison, M.D., Maryland Pao, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to describe the increased likelihood of antidepressant usage in the pediatric oncology population. Participants should be able to list factors that impact antidepressant use in a cancer diagnosed pediatric population.

**SUMMARY:**

Introduction: The prevalence of distress, psychopathology and psychotropic medication use is unknown in children with cancer. Previous efforts to collect these data have been limited by small sample sizes, lack of comparison groups and sparse multi-institutional data. Methods: Data were extracted from the administrative claims files of 7 state Medicaid programs. Youth, ages 2 through 17 years, who were continuously enrolled in Medicaid for 3 or more months during 2000-2001 were included. A cancer case (n = 1,040) was designated if at least two ICD-9-CM cancer codes were present in the outpatient physician visit claims data and the youth was enrolled for at least 3 months following the first of these cancer diagnoses (index date). The comparison group (n = 10,400) was formed by randomly selecting for each case 10 gender, age, and race matched individuals who did not receive a cancer diagnosis or a chemotherapeutic drug. Antidepressant use was defined as having one or more antidepressant prescriptions dispensed after the index date. Antidepressant use was compared in the two groups using a hazards ratio. Results: After controlling for gender, age, race and psychiatric co-morbidities, the likelihood of antidepressant use in cancer cases relative to the comparison youth was 1.87 (95% CI 1.43-2.44). Gender was not associated with antidepressant use, but Black and Hispanic youth had lower rates of antidepressant use (0.39, 95% CI 0.28-0.55 and 0.40, 95% CI 0.26-0.61 respectively) compared to white youth. The presence of ADHD or another psychiatric diagnosis excluding anxiety and depression increased the likelihood of antidepressant use (5.41, 95% CI 4.31-6.79 and 3.94, 95% CI 3.14-4.93 respectively). Conclusion: Data from outpatient visits of Medicaid-insured youth in 7 states suggest that antidepressant use is approximately twice as likely in cancer-diagnosed youth relative to a gender, age, and race matched non-cancer group, after adjusting for psychiatric diagnoses.

**REFERENCES:**

1. Pao M, Ballard ED, Rosenstein D, Wiener L, Wayne A: Psychotropic Medication Use in Pediatric Patients with Can cer. Arch Pediatr Adolesc Med 2006; 160:818-820.
2. Kersun LS, Elia J: Depressive symptoms and SSRI use in pediatric oncology patients. Pediatr Blood Cancer 2007; epub ahead of print

**NR6-065**

## PERSONALITY CHARACTERISTICS ON MMPI OF THE MOTHERS OF CHILDREN WITH ADHD

*Soon Jeong Lee, M.D. Psychiatric Department of Seoul Metropolitan Eunpyong Hospital, Eunpyong-Gu Eungam-Dong San 6-4, Seoul, Korea, SeoulKorea 122-010, Yu Jin Lee, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize personality characteristics of mothers with ADHD children.

**SUMMARY:**

Introduction: Prior studies have suggested that parents of ADHD (Attention Deficit Hyperactivity Disorder) could have various psychopathologies including characteristic personality traits, depression, anxiety and so on. The current study investigated maternal personality characteristics of ADHD children using MMPI (Minnesota Multiphasic Personality Inventory). Methods: Forty-nine biological mothers (average age of 37.6±4.0 years) of ADHD children (40 boys, 9 girls; average age of 8.8±2.0 years) diagnosed by structured interview with DSM-IV criteria and 59 biological mothers (average age of

37.2±2.2 years) of healthy children (37 boys, 22 girls; average age of 7.6± 1.0 years) completed the Korean version of the MMPI. IQ scores of all children participants were measured by Wechsler Intelligence Scale for Children.
Results: After controlling for maternal age, children's sex and performance IQ, maternal MMPI of ADHD showed significantly higher D (2) score, Hy (3) score and Pt (7) score than healthy children's mother (p=0.026, p=0.031, p=0.046, respectively). ADHD children were older (p=0.000), and the proportion of boys in ADHD was higher (20.3% vs. 8.3%, p=0.034). Total IQ, performance IQ, and verbal IQ in ADHD Children were significantly lower compared to those in healthy children (103.4±13.6 vs. 111.5±14.5, p=0.003; 103.6±15.1 vs. 110.9±14.4, p=0.012; 101.8±12.5 vs. 110.5±15.0, p=0.001; respectively).
Conclusion: Current results suggested that regardless of ADHD symptom severity, mothers of ADHD children might have tendency to be depressed, histrionic and anxious. But, cautious interpretations of these personality characteristics as their own temperaments or results from more maternal stress will be needed.

**REFERENCES:**


1. Lahey BB, Russo MF, Walker JL, Piacentini JC. Personality characteristics of the mothers of children with disruptive behavior disorders. J Consult Clin Psychol. 1989;57(4):512-5
2. Kepley HO, Ostrander R. Family characteristics of anx ious ADHD children: preliminary results. J Atten Disord. 2007;10(3):317-23.


**NR6-066**

**CLINICAL CHARACTERISTICS AND SLEEP ARCHITECTURES OF REM SLEEP-DEPENDENT DISORDERED BREATHING.**


*Soon Jeong Lee, M.D. Psychiatric Department of Seoul Metropolitan Eunpyong Hospital, Eunpyong-Gu Eungam-Dong San 6-4, Seoul, Korea, 122-010, Yu Jin Lee, M.D., Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to know characteristics of REM Sleep-Dependent Disordered Breathing.

**SUMMARY:**


Introduction: REM sleep in which shows muscle atonia and increased upper respiratory track resistance can be vulnerable to sleep apnea. Previous studies reported that REM sleep-dependent (or related) disordered breathing could be a part of sleep disordered breathing spectrums. The current study aimed to investigate clinical findings and polysomnographic variables of REM sleep-dependent disordered breathing.
Methods: Fifty-six patients diagnosed as sleep disordered breathing by overnight polysomnography (AHI>5) were included (average age of 53.7±16.7 years, 42 males). REM sleep-dependent disordered breathing (REM-SBD) was defined as AHI-REM/AHI-NREM ratio>2. We compared clinical and polysomnographic findings between REM-SDB and nonREM-SDB patients.
Results: Among 56 patients, 37.5% (21 patients, average age of 52.3±19.7 years, 14 males) met the REM-SDB criteria. There were no significant differences in age, sex and body mass index between two groups. After controlling for age, sex, body mass index and periodic legs movements index, AHI-REM was positively correlated with oxygen desaturation events (No. of hour) in REM-SDB group (p=0.019). After controlling for age, sex, body mass index and periodic legs movements index, AHI-REM was positively correlated with oxygen desaturation events (No. of hour) in REM-SDB group (p=0.002, p=0.019, respectively). Conclusion: Current results suggested that 37.5% of patients with sleep disordered breathing could be diagnosed as REM-dependent disordered breathing. REM-dependent disordered breathing was more common in mild severity of disordered breathings, equally prevalent in both sexes and accompanied with sleep architecture changes. In addition, apneic events during REM sleep in REM-dependent disordered breathing patients were related to their oxygen desaturations during sleep.


**REFERENCES:**


1. Haba-Rubio J, Janssens JP, Rochat T, Sforza E. Rapid eye movement-related disordered breathing: clinical and poly somnographic features. Chest 2005;128:3350-7.
2. O'Connor C, Thornley KS, Hanly PJ. Gender differences in the polysomnographic features of obstructive sleep apnea. Am J Respir Crit Care Med. 2000;161:1465-72.


**NR6-067**

**SHORT TERM, MULTICENTER, OPEN-LABEL STUDY OF CLINICAL EFFICACY AND ADVERSE EFFECTS OF OROS-METHYLPHENIDATE IN KOREAN CHILDREN WITH ADHD**


*Wan Seok Seo, M.D. Department of psychiatry, Yeungnam University hospital, Daemyung-dong, Namgu, Daegu, Korea 705-717, Bon H. Koo, M.D., Jin S. Kim, M.D.,Yeung C. Jeung, M.D., Hyung M. Sung, M.D.*


**EDUCATIONAL OBJECTIVE:**

The goad of this study is to identify short term effecicacy and side effects of Oros-methylphenidate in children with attention deficit hyperactivity disorder.

**SUMMARY:**


Objective: This study was conducted to evaluate the clinical efficacy and adverse effects of Oros-Methylphenidate(MPH) in children with attention deficit hyperactivity disorder.
Methods: A four week, open-label trial with forced flexible dosing strategy of Oros-methylphenidate was performed with 83 children with ADHD. For parental evaluation, parental version of SNAP-IV and visual analogue scale(VAS) were applied at baseline and endpoint. CGS-S and adverse events chart were applied by the research clinicians every week. Baseline and endpoint body mass index(BMI) and blood pressure were also evaluated.
Results: Significant improvement in VAS and SNAP-IV were demonstrated between baseline and week four. Significant improvement of CGI-S in every week after trial of Oros-MPH, especially in first two weeks.
78.3% of all the participants experienced at least one adverse effects.
Anorexia and insomnia were the most common adverse effects, which lasted for about two weeks. Significant decrease in BMI and significant elevation of diastolic blood pressure were observed.
Conclusion: This study showed that Oros-MPH significantly

reduced symptoms of ADHD in Korean children with ADHD, especially early period of medication trial. Meanwhile, many participants also experienced adverse effects such as anorexia, insomnia. Moreover, increase in diastolic BP suggested that cautious evaluation of cardiac function should be needed.

**REFERENCES:**


1. Steele M, Weiss M, Swanson J, Wang J, Prinzo RS, Binder CE: A randomized, controlled effectiveness trial of OROS-methylphenidate compared to usual care with immediate-re lease methylphenidate in attention deficit-hyperactivity disor der. Can J Clin Pharmacol 2006;13:50-62
2. Wilens T, Pelham W, Stein M, Conners CK, Abikoff H, At kins M, et al: ADHD treatment with once-daily OROS meth ylphenidate: interim 12-month results from a long-term open-label study. J Am Acad Child Adolesc Psychiatry 2003;42:424-433


**NR6-068**

## PREDICTORS OF IMPAIRMENT IN ROLE FUNCTIONING IN CHILDREN AND ADOLESCENTS WITH DEPRESSIVE ILLNESS.


*Yuli Grebchenko, M.D. 1 st Ave at 16 st, New York, NY 10003, Kozlova I, M.D., Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to identify predictors of impairment in role functioning in children and adolescent with depression.

**SUMMARY:**


Objective:

There are many uncertainties regarding predictors of impairment in role functioning in childhood depressive disorder. Different predictors have been considered to play a role in development and persistence of impairment (1,2). The aim of this study was to examine the family, clinical and personal correlates of impairment in male and female children and adolescents separately.

Methods The study was conducted in collaboration with the Mental Health Research Institute in Moscow. Sixty-eight inpatient children and adolescents ages 11 years and older (mean age 12.7) who met the criteria for ICD-10 depressive disorder were recruited. Subjects were divided based on level of impairment in home and school role functioning into 4 groups (without impairment, with impairment in one area, in two areas and in three areas).Family predictors included quality of family relationship, adverse childhood events, socio-economical status, scores and test of parental relationship. Clinical predictors included: quality of premorbid pathology, type of depressive episode, number and average length of depressive episodes, age of first episode, and time before first mental health contact. Personal factors included IQ and personality type. Associations of these predictors with impairment were assessed using Kruskal-Wallis tests conducted separately in male and females. Results In boys, single-parent family and level of aggression in the family, type of premorbid functioning, type of depressive episode and number of episodes were associated with impairment at a statistically significant level. In girls, perinatal abnormalities, type of depression, time before first mental health contact and number of episodes were associated with impairment. Decrease in cognitive functions was an important predictor of impairment in both genders.

Conclusion:Impairment in role functioning in childhood depression is associated with a number of clinical, familial and personal factors suggesting t


**REFERENCES:**


1. Sullivan F. (2000) Genetic epidemiology of major depression: review and meta-analysis. Am J Psychiatry 157: 1552-1562.
2. Lewinsohn PM. et all (2000) Natural course of adolescent major depressive disorder in a community sample: Predictors of recurrence in young adults. Am.J.Psychiatry 157: 1584-1591


**NR6-069**

## PREDICTING FUTURE ONSET OF PTSD USING ASD VERSUS PTSD DIAGNOSES IN A MAJOR BURN POPULATION: A LONGITUDINAL STUDY


*Jodi B McKibben, Ph.D. USUHS, Department of Psychiatry Building 7, Floor 5, 8901 Wisconsin Ave., Bethesda, MD 20889, Shawn T. Mason, Ph.D., Brendan Klick, Sc.M, and James A. Fauerbach, Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to; 1) Demonstrate an understanding of the prevalence rates of ASD and PTSD and the stability of PTSD in those with major burn injuries over a 2 year time period; 2) Recognize the importance and similarity of the relationships between both ASD and PTSD assessed acutely and the future onset of PTSD; and 3) Recognize the need for mental health interventions for those diagnosed with either ASD or PTSD shortly after major burn injuries.

**SUMMARY:**


Introduction: A critical debate concerning the prediction of chronic PTSD is whether or not an ASD diagnosis, with its emphasis on dissociative symptoms, is a better predictor than a PTSD diagnosis made at the same time (Bryant, 2005; Creamer, O'Donnell, & Pattison, 2004). This study considers this question within a population of burn patients using established self-report measures of ASD and PTSD in the presence of socio-demographic, burn injury, and general distress factors.

Methods: A total of 178 hospitalized patients >18 years of age with major burns based on ABA criteria participated in this longitudinal outcome study. They completed the Stanford Acute Stress Reaction Questionnaire (SASRQ) and the Brief Symptom Inventory (BSI) at discharge, and the Davidson Trauma Scale (DTS) at 1 month, 6 months, 1 year, and 2 years post-discharge.

Results: The participants were 73.6% male, 65.1% Caucasian, a mean of 41.1 years old (SD=15.2) with a mean total body surface area burned (TBSA) of 15.8% (SD=15.9).

A series of logistic regression analyses compared the ability of the ASD diagnostic cutoff and a modified PTSD diagnostic cutoff on the SASRQ (assessed at discharge) to predict the future onset of PTSD on the DTS in the presence of sex, TBSA, number of surgeries, general distress on the BSI, and previous mental health treatment. Both the ASD and PTSD diagnostic cutoffs were significant predictors of future onset PTSD at 1 month (ORs = 4.6 and 5.2), 6 months (ORs = 4.8 and 7.8), and 12 months (ORs = 4.2 and 4.5). Their predictive ability was not significantly different at any time. Neither cutoff was a significant predictor at 24 months.

Conclusions: While the dissociative symptoms specific to ASD may be essential components of the disorder, they may not be critical in the prediction of the future onset of PTSD. This has important implications for the early assessment of traumatic stress reactions and associated interventions aimed at the prevention of PTSD.

**REFERENCES:**


1. Bryant R: Predicting posttraumatic stress disorder from acute reactions. Journal of Trauma and Dissociation 2005; 6(2):5-15.
2. Creamer M, O'Donnell ML, Pattison P: The relationship between acute stress disorder and posttraumatic stress disor der in severely injured trauma survivors. Behaviour Research and Therapy 2004; 42:315-328.


**NR6-070**

## DEFINITIONS OF RECOVERY AND OUTCOMES OF MAJOR DEPRESSION: A CONTRIBUTION TO DSM-V FROM A MULTI-CENTER 10-YEAR FOLLOW-UP STUDY IN JAPAN


*Toshiaki A. Furukawa, M.D.Mizuho-cho,Mizuho-ku, Nagoya, Japan 467-8601, Akiko Fujita, M.D., Hiroaki Harai, M.D., Reiji Yoshimura, M.D., Ph.D., Toshinori Kitamura, FRC-Psych, Kiyohisa Takahashi, M.D., Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to; 1)Recognize the importance of operational definitions of remission and recovery in the description of the course of major depression; 2) Propose the more rational, evidence-based operational diagnostic criteria for remission and recovery of major depression for the up-coming discussion of the *DSM-V* / ICD-11; and 3)And apply the data-driven, optimized criteria in the treatment and assessment of major depressive episodes.

**SUMMARY:**


Objective: Consensus operational definitions for critical change points in the course of a major depressive episode, such as remission and recovery, have been proposed but only irregularly followed, apparently because of lack of empirical support. This report represents the first empirical study to date on the predictive validity of different durations of remission required before declaring recovery.

Method: A multi-center prospective follow-up study of an inception cohort of heretofore untreated unipolar major depressive episodes (n=95) for 10 years. Time to recovery and time to recurrence after recovery were estimated by Kaplan-Meier survival analyses for alternative definitions requiring 2, 4, 6 or 12 months of remission to declare recovery, in order to elucidate the change point at which a return of the syndrome becomes reasonably unlikely.

Results: The median duration of index episode was 3.0, 4.0, 4.0 and 12.0 months if we require 2, 4, 6, or 12 months respectively of remission before declaring recovery. The index episode lasted longer than 24 months in 9.4%, 9.2%, 12.6% and 24.5% of the cohort. The median time to subthreshold recurrence was 16.0, 32.0, 42.0 and 74.0 months respectively.

Conclusions: Either 4-month or 6-month duration of remission defined a change point before which the episode was continuous and after which the recurrence was reasonably unlikely. The present findings should inform the discussion on the definitions of recovery and recurrence of major depression in the upcoming DSM-V.



Acknowledgments: This paper was prepared on behalf of the Group for Longitudinal Affective Disorders Study (GLADS). This study was supported by Research Grants 3A-6, 6A-4, 8B-2, 11A-5, 14A-3 and 17A-5 for Nervous and Mental Disorders from the Ministry of Health, Labour and Welfare, Japan.


**REFERENCES:**


1. Frank E, Prien RF, Jarrett RB, Keller MB, Kupfer DJ, Lavori PW, Rush AJ, Weissman MM: Conceptualization and ra tionale for consensus definitions of terms in major depressive disorder. Remission, recovery, relapse, and recurrence. Arch Gen Psychiatry 1991; 48:851-855
2. Furukawa TA, Kitamura T, Takahashi K: Time to recovery of an inception cohort with hitherto untreated unipolar major depressive episodes. Br J Psychiatry 2000; 177:331-335


**NR6-071**

## THE IMPACT OF RATING SCALE CHOICE ON THE DIAGNOSIS OF DEPRESSION IN THE MEDICALLY ILL


*William J Burke, M.D. 985580 Nebraska Medical Center, Omaha, NE 68198-5580, Ashish Sharma, M.D., Dennis P. McNeilly, Psy.D., William M. Lydiatt, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to; recognize the impact of choosing a particular rating scale on the rate of depression detected in the medically ill.

**SUMMARY:**


Introduction: Detection of major depression in the context of medical illness continues to be a challenge. We evaluated the relative effectiveness of depression rating scales in a group of pilot study patients beginning treatment for head and neck cancer (HNC) who received prophylactic treatment with citalopram to prevent depression.

Methods: Non-depressed subjects with HNC about to begin cancer treatment, were randomized to receive placebo or citalopram 20-40 mg/d for 12 weeks, and evaluated every four weeks. Major depression was diagnosed using the MINI depression module. Depression severity was measured using the Hamilton Depression Rating Scale (HAMD) and the Geriatric Depression Scale (GDS-15)(designed to avoid false-positives resulting from reports of somatic symptoms). Compared here are the depression rates at endpoint on the three depression rating scales (MINI, HAMD and GDS-15).

Results: 28 subjects were not depressed at baseline and began study medication; and 23 completed the randomized trial. Subjects did not significantly differ by age, gender, tumor grade, type or location. Forty percent of the placebo group and 17% of the citalopram group (p=ns) met criteria for major depression on the MINI . Fifty percent of the placebo and 8% of the citalopram group ($x2 = 4.7$, $p < .03$) met criteria for major depression on the HAMD (cut-off > 15), whereas 30% and 23% respectively (p=ns), met criteria for depression on the GDS-15 (cutoff > 6).

Conclusions and Discussion: This study demonstrates that choice of depression rating instrument can have a significant impact on the detection of major depression in patients with HNC. The strongest drug-placebo difference was found in the

rating scales which include somatic symptoms as a dimension of depression (MINI & HAMD).

**REFERENCES:**


1. Lydiatt WM, Denman, DA, McNeilly, DP, Pumula S, Burke, WJ: A randomized placebo-controlled trial of citalopram for the prevention of major depression during treatment of head and neck cancer. Archives of Otolaryngology-Head and Neck Surgery, in press.
2. Cowles MK, Nemeroff CB: Depression - A Systemic Illness. In: Psychosomatic Medicine, edited by Blumenfield, Strain JJ, Philadelphia, Lippincott Williams & Wilkins, 2006, pp 47-65


**NR6-072**

## SEX DIFFERENCES IN CLINICAL PRESENTATION AND TREATMENT UTILIZATION IN BORDERLINE PERSONALITY DISORDER: RESULTS FROM THE WAVE 2 NESARC


*Attila J Pulay, M.D. Laboratory of Epidemiology and Biometry, Room 3080, Division of Intramural Clinical and Biological Research, National Institute on Alcohol Abuse and Alcoholism National Institutes of Health, M.S. 9304, 5635 Fishers Lane, BethesdaMD 20892-9304, Bridget F. Grant, Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the main sex differences in the clinical characteristics and related health care utilization of the borderline personality disorder, which can help them addressing their patient's diagnostic and treatment needs at an improved level.

**SUMMARY:**


Introduction: Epidemiologic surveys suggest that borderline personality disorder (BPD) does not differ significantly in prevalence by sex, but sex differences in clinical presentation of BPD and treatment utilization (TxU) have not been investigated in the general population. This study addresses these questions in a large, nationally representative sample. Methods: Data were derived from the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC) Wave 2 (n=34,653), in which 2,231 respondents were diagnosed with BPD. Prevalence of BPD symptom criteria, comorbid 12-month substance use, mood, and anxiety disorders and lifetime personality disorders (PDs), and 12-month TxU for Axis I disorders were assessed among individuals with BPD, using chi-square tests ($p<0.01$) to test sex differences. Logistic regression models with 99% confidence intervals measured comorbidity of Axis I disorders by sex and associations of sex with TxU for Axis I pathology in individuals with BPD, adjusted for sociodemographic factors and psychiatric comorbidity. Results: Men with BPD were more likely to endorse the impulsivity criterion and had higher rates of most substance use disorders and narcissistic and antisocial PDs, while suicidal behavior, affective instability and chronic feeling of emptiness, and most mood and anxiety disorders were more common among women. Associations of BPD with Axis I disorders did not differ by sex. Except for substance use disorders, the prevalence of TxU was higher among women, and women outnumbered men among treatment utilizers. After adjusting for sociodemographic factors and psychiatric comorbidity, TxU was significantly greater among women only for depressive episodes. Conclusions: Women with BPD have different clinical presentation and higher rates of TxU than men, which might contribute to the female excess of BPD diagnoses in clinical samples. However, except for depressive episodes, sex is not independently associated with TxU.


**REFERENCES:**


1. Skodol AE, Bender DS. Why are women diagnosed border line more than men? Psychiatr Q. 2003; 74:349-60.
2. Johnson DM, Shea MT, Yen S, Battle CL, Zlotnick C, San islow CA, Grilo CM, Skodol AE, Bender DS, McGlashan TH, Gunderson JG, Zanarini MC. Gender differences in borderline personality disorder: findings from the Collabora tive Longitudinal Personality Disorders Study. Compr Psy chiatry 2003; 44:284-92.


**NR6-073**

## OUTCOME OF A SHORT TERM PSYCHOTHERAPEUTIC PROGRAM FOR PATIENTS WITH SEVERE PERSONALITY DISORDERS


*Brian Petersen, Day Treatment Unit, Psychotherapeutic Department, Aalborg Psychiatric Hospital, Molleparkvej 10, Aalborg-Denmark 9000, John Toft, Nils Balle Christensen, Leslie Foldager, Povl Munk-Jørgensen, Kjersti Lien, Kristian Valbak*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to consider psychotherapeutic daytreatment as an option to treat severe personality disorders.

**SUMMARY:**


Introduction: This study analyses treatment effectiveness by comparing a psychotherapeutic day treatment programme with a treatment as usual (TAU) situation as given to personality disordered patients on a waiting list. Methods: The intervention group included 38 patients, and 28 patients were included in the comparison group. All were diagnosed according to standard criteria (SCID II). Intervention included psychodynamic and cognitive based therapy in a group/individual setting for 5 months. Outcome measures were self-rated (SCL-90-R; IIP-C; TC; CPSAS, number of suicide attempts) and observer-rated (GAF, number of hospitalizations) multidimensional evaluation of functioning relevant to personality disordered patients. Results: About half of the patients lived alone. The unemployment rate was high. Both groups used mental health services extensively. Half of the patients in both groups reported aggressive/self-destructive acts and one third previous drug or alcohol abuse. Borderline personality the sample was 43.7 at baseline, corresponding to a severe range (41-50) of symptoms and impairment. The day treatment programme did significantly better in reducing hospitalizations in acute ward ($P=0.001$), psychiatric hospitalizations and suicide attempts ($P=0.01$). The psychosocial functioning (GAF, $P<0.0001$; CPSAS, $P=0,04$) and complaints that lead to treatment (TC, $P<0.0001$) improved significantly with medium to large effect. Regarding self-reported measures on symptoms (SCL-90-R) and interpersonal problems (IIP-C) there was no significant difference between the intervention group and the comparison group. Conclusion: The intensive short term day-treatment programme stabilized the patient's functioning, but did not lead to changes on personality traits for which more extensive treatment might be necessary.


**REFERENCES:**

1. Bateman A, Fonagy P: Effectiveness of partial hospitalization in the treatment of borderline personality disorder: a random ized controlled trial. Am J Psychiatry 1999; 156:1563-9.
2. Karterud S, et al: Day Treatment Of Patients With Personality Disorders: Experiences From A Norwegian Treatment Re search Network. J Personal Disord 2003; 17:243-62.

**NR6-075**

## DO DIFFERENT KINDS OF CHILD MALTREATMENT PREDICT TO DIFFERENT KINDS OF PERSONALITY DISORDERS?

*Catherine J Theo, M.D. 333 River street, HobokenNJ 07030, Jisha Philip, M.D., Simay Gokbayrak, B.A., Igor Galynker, M.D., Ph.D., Lisa J. Cohen, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should understand the relationship between different types of childhood maltreatment and different types of personality pathology.

**SUMMARY:**

Background: Although there is robust evidence documenting a general relationship between childhood maltreatment and adult personality pathology, there is little data evaluating whether specific types of childhood maltreatment result in specific forms of personality pathology. To investigate this question, we will study 150 non-psychotic psychiatric patients from outpatient and inpatient services. Specifically, we predict a select association between childhood sexual abuse and borderline traits, childhood physical abuse and antisocial traits, childhood emotional abuse and avoidant, narcissistic and depressive traits and childhood neglect and schizotypal, schizoid and paranoid personality traits. Methods: Our measures include the Childhood Trauma Questionnaire (CTQ), The Multidimensional Neglect Scale (MNS), Tactics in Conflict Questionnaire – Parent-Child Adult Recall Version and The Personality Diagnostic Questionnaire (PDQ-4). To date 28 subjects have been recruited. Results: Regression analyses documented significant and select relationships between 1) childhood sexual abuse and borderline scores; 2) physical abuse and antisocial scores; 3) emotional abuse and avoidant scores, (marginally with depressive but not with narcissistic scores); and 4) neglect with schizoid but not paranoid or schizotypal scores. Conclusion: To date, our findings confirm our original hypotheses and do indeed show that specific types of child maltreatment appear to result in specific types of personality pathology.

**REFERENCES:**

1. Ciccheti, D. & Barnett, D. (1991). Toward the development of a scientific nosology of child maltreatment. In W. Grove & D. Ciccheti (Eds.) Thinking clearly about psychology: Essays in honor of Paul E. Meehl: Vol 2. Personality and psychopa thology (pp.346-377). Minneapolis, MN: University of Min nesota Press
2. Erickson, M.F., & Egeland, B. (1987). A developmental view of the psychological consequences of maltreatment. School Psychology Review, 1987, 16 (2), 156-168.

**NR6-076**

## STUDY OF CLONINGER'S DIMENSION OF PERSONALITY IN PATIENTS WITH MOOD DISORDERS

*Yasser A Elsayed, M.D. Institute of Psychiatry , Faculty of medicine, Ain Shams University Abbasia, Cairo, Egypt, CAIROEgypt AIN SHAMS UNIVERSITY, Abd El Meguid M., M.D.,Kamel M., M.D.,Omar A.,M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to; 1) identify the different dimensions of personality in patients with mood disorders; 2) know the impact of different personality dimensions on clinical features of mood disorders

**SUMMARY:**

The relationship between mood disorders and personality has been of longstanding interest to clinicians. Moreover, personality traits have a strong influence on the course and outcome of depressive and bipolar disorders. The aim of the study is to assess Cloninger's dimension of personality in subjects with mood disorders may impact the clinical picture and severity of illness. Personality profile affects age of onset of illness, clinical picture, severity of illness, suicidality, the frequency of relapse, frequency of hospitalization and duration of admission in hospital. Subjects and methods: The cases were selected from inpatients admitted in the Institute of Psychiatry. The sample is a selective one including the first 50 patients admitted at the institute and fulfilling the criteria of bipolar or unipolar mood disorders according to DSM-IV. Patients were diagnosed by SCID-I, personality was assessed using TCI-R, Suicidal ideation was assessed using Beck scale for suicide ideation.Results: Higher mean scores of Novelty Seeking (NSt), Harm Avoidance (HAt) (p= 0.011), Reward Dependence (RDt), cooperativeness (Ct) were found in patients with major depressive disorder. Higher mean scores of Persistence (PSt), Self Directedness (SDt) and Self Transcendence (STt) were found with patients with bipolar mood disorder. Direct relation was found between the age of onset of illness and RD1 (p=0.04) and reciprocal relation with ST2 (p=0.015). A reciprocal relationship between the frequency of hospitalization and HA1 (p=0.04) and a direct relationship between the frequency of hospitalization and C1 (p=0.007) with a highly significant statistical difference. A reciprocal relationship between the duration of hospitalization and HA2 (p=0.027) difference and a direct relationship was found with STt (p=0.048).Correlation of Cloninger temperament and character to Scores of patients in Beck Scale for suicide ideation revealed Direct relationship with total scales of personal

**REFERENCES:**

1. Mulder RT., JoycePR., Cloninger CR. (1994): Temperament and early environment influence comorbidity and personality disorders in major depression. Compr. Psychiatry 35,225–233.
2. Mulder TR. (2002): Personality Pathology and Treatment Outcome in Major Depression: A Review. Am J Psychiatry 159:359-371

**NR6-077**

## NON-RESTORATIVE SLEEP AS A COMPONENT OF INSOMNIA DISTINCT FROM DIFFICULTY INITIATING OR MAINTAINING SLEEP: A NON-INTERVENTIONAL OBJECTIVE STUDY

*Alan Lankford, Ph.D. Sleep Disorders Center of Georgia 5505 Peachtree Dunwoody Road, Suite 548, Atlanta, GA 30342,*

*David Mayleben, Ph.D., Verne Pitman, PharmD, David Clark, M.R.C.P., Theresa Stern, Ph.D, John Werth, Ph.D, Thomas Roth, Ph.D*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to: 1) recognize non-restorative sleep (NRS) as a core component of insomnia, distinct from difficulty initiating and/or maintaining sleep, consistent with *DSM-IV* criteria for insomnia; and define characteristics of NRS based on a combination of objective and subjective measures.

**SUMMARY:**
Introduction DSM-IV criteria recognize core components of insomnia as difficulty initiating or maintaining sleep (DIS or DMS) and non-restorative sleep (NRS). Surveys have identified subjects with NRS and have shown functional impairment in this group. Here we report the first study to validate NRS using objective measures. Methods Subjects complaining of waking unrestored or unrefreshed (NRS) ³3 times/week over a 3 month period were assigned to cohorts (DIS, DMS, DIS+DMS, or NRS only) based on self-reports, then verified by polysomnography (PSG) on 2 consecutive nights. Healthy volunteers (HV) were also assessed. Initial PSG and repeat PSG after 1 month provided objective measures of DIS (latency to persistent sleep [LPS]) and DMS (wake after sleep onset [WASO]). Patient-reported measures of daytime function, including the Epworth Sleepiness Scale (ESS), Multidimensional Assessment of Fatigue (MAF) and Pittsburgh Insomnia Rating Scale (PIRS), were collected at the same timepoints. Results Enrolled subjects assigned themselves to the following cohorts: DIS (n=138), DMS (n=44), DIS+DMS (n=125), NRS only (n=192), HV (n=80); PSG confirmed 56 (41%), 18 (41%), 37 (30%), 115 (60%) and 52 (65%) cases, respectively. On initial PSG, mean LPS was similar in NRS only and HV cohorts (13 vs 10 min) compared with >60 min in DIS and DIS+DMS cohorts. Mean WASO was 32 min in NRS only and 30 min in HV, compared with >90 min in DMS and DIS+DMS cohorts. Repeat PSG after 1 month replicated this pattern. In contrast, initial mean ESS scores were 8.6 in NRS only subjects, compared with 5.9–7.5 in other insomnia cohorts and 2.4 in HV. In the same cohorts, MAF scores were 24, 23–27 and 3, and PIRS scores were 45, 62–76 and 5. Similar patterns were seen 1 month later. Conclusion This study validated via PSG a group with subjective NRS in the absence of DIS or DMS. These subjects exhibited daytime functional impairment similar to that seen with DIS and DMS.
Research sponsored by Pfizer Inc.

**REFERENCES:**
1. Roth T, et al. Sleep problems, comorbid mental disorders, and role functioning in the national comorbidity survey replica tion. Biol Psychiatry 2006;60:1364–71.
2. Ohayon MM. Prevalence and correlates of nonrestorative sleep complaints. Arch Intern Med 2005;165:35–41.

## NR6-078

## FREQUENCY AND TIMING OF MIDDLE-OF-THE-NIGHT (MOTN) AWAKENINGS AS DESCRIBED USING AN INTERACTIVE VOICE RESPONSE SYSTEM

*Andrew D. Krystal, M.D. Box 3309, Durham, NC 27710, Russell Rosenberg, Ph.D., Jenny Novak, B.A., YuPing Maguire, Ph.D., Christine Mordy, M.P.H., Nikhilesh Sing, Ph.D., Murray Maytom, M.B.Ch.B.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to describe middle-of-the-night-awakening patterns in insomnia patients who complain of sleep maintenance difficulties.

**SUMMARY:**
Introduction: Frequent middle-of-the-night (MOTN) awakenings are a common insomnia complaint. A recent epidemiological survey found that many individuals with frequent nocturnal awakenings also present with other insomnia symptoms. During a study evaluating the efficacy of sublingual zolpidem tartrate (SZT) 3.5mg lozenges, the frequency and timing of subjects' nocturnal awakenings during a two week screening period were evaluated. Methods: Adults (N=638) with a diagnosis of *DSM-IV-TR* primary insomnia and a history of prolonged MOTN awakenings participated in a two week, single blind, placebo controlled screening period for a 28 day out-patient study. Subjects called into an Interactive Voice Response System (IVRS) after each MOTN awakening that persisted for at least 10 minutes. Subjects also called the IVRS every morning to confirm they had 4 hours remaining in bed at the time of their MOTN awakening. At the end of the 14 day single blind screening period, 299 subjects with significant MOTN insomnia were randomized to 4 weeks of double-blind treatment based on an IVRS screening record of at least 2 MOTN awakenings >30 minutes and 1 MOTN awakening >60 minutes per week. Results: On average, all screened subjects experienced awakenings on 5.2 nights per week; and the mean number of awakenings with 4 hours sleep remaining was 4.4 per week. The 299 randomized subjects had a mean of 5.2 awakenings with 4 hours sleep remaining per week; and the 339 non-randomized subjects had 3.5 per week. Conclusions: In adults with insomnia characterized by sleep maintenance difficulties, MOTN awakenings occur on average about 5 nights per week. About 85% of these awakenings occur with 4 hours of sleep remaining and thus are early enough in the night to allow prn MOTN dosing with the SZT 3.5mg lozenge. This study was fully funded and supported by Transcept Pharmaceuticals, Inc., Richmond CA.

**REFERENCES:**
1. KA, Beyene Y, Paparrigopoulos TJ, Dikeos DG, Soldatos CR. Circadian rhythms and sleep patterns in urban Greek couples. Biol Res Nurs. 2007 Jul;9(1):42-8.
2. Grandner MA, Kripke DF. Self-reported sleep complaints with long and short sleep: a nationally representative sample. Psychosom Med. 2004 Mar-Apr;66(2):239-41.

## NR6-079

## PHARMACOKINETICS OF A LOW DOSE, SUBLINGUAL FORMULATION OF ZOLPIDEM TARTRATE IN ELDERLY SUBJECTS

*Andrew D. Krystal, M.D. Box 3309, Durham, NC 27710, Martin B. Scharf, Ph.D., Christine Mordy, M.P.H., Nikhilesh Sing, Ph.D., Murray Maytom, M.B.Ch.B.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to describe the PK differences seen with a sublingual formulation of zolpidem tartrate in healthy elderly vs. adult subjects.

**SUMMARY:**
Introduction: To maintain a favorable risk/benefit profile with hypnotic drugs in elderly subjects (>65 years), the doses employed have been half those used in non-elderly adults to account for the expected increase in exposure arising from reduced clearance. This study evaluated the pharmacokinetics and safety of a novel low dose, sublingual zolpidem tartrate (SZT) formulation in elderly subjects. Methods: Healthy elderly (N=24) and non-elderly adults (N=24) participated in this randomized, open-label, crossover study to compare the pharmacokinetics of two doses (1.75, 3.5 mg) of sublingual zolpidem tartrate (SZT) lozenges in the elderly with a 3.5 mg dose of SZT in non-elderly adults. PK assessments began prior to dosing and continued for 12 hours post-dose. Results: A zolpidem plasma concentration that would be expected to produce sedation was reached at approximately 15 minutes with SZT 1.75 and 3.5 mg in the elderly and 3.5 mg in adults. Cmax was slightly lower in the elderly dosed with SZT 1.75 mg (40.66 ng/ml) versus that in adults dosed with SZT 3.5 mg (61.87 ng/ml). Similarly, the total exposure over 4 hours (AUC0-4hr) was lower in the elderly 1.75 mg group (100.45 ng*hr/ml) than the adult 3.5 mg group (149.99 ng*hr/ml). The elimination half-life was essentially unchanged, being 2.75 hrs in the elderly 1.75 mg group, and 2.62 hrs in the non-elderly 3.5 mg group. Conclusions: Sublingual zolpidem tartrate produces dose-proportional plasma concentration curves in the elderly. When given to elderly individuals, the SZT 1.75 mg lozenge produces Cmax and AUC levels lower than those seen in non-elderly adults dosed with SZT 3.5 mg. Both 1.75 and 3.5 mg SZT lozenges were safe and well tolerated in both populations. This study was fully funded and supported by Transcept Pharmaceuticals, Inc., Richmond CA.

**REFERENCES:**
1. Dolder C, Nelson M, McKinsey J. Use of non-benzodiazepine hypnotics in the elderly: are all agents the same? CNS Drugs. 2007;21(5):389-405.
2. Klotz U. Effect of age on pharmacokinetics and phar macodynamics in man. Int J Clin Pharmacol Ther. 1998 Nov;36(11):581-5.

**NR6-080**

## SLEEP IMPAIRMENT IN ADULTS WITH AND WITHOUT ADHD

*Craig B Surman, M.D. MGH Adult ADHD Research Program, Suite 2000, 185 Alewife Brook Parkway, Cambridge, MA 02138, Joel J Adamson, B.A., Joseph Biederman, M.D., Deborah Kenealy, B.A., Stephen V. Faraone, Ph.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to recognize that: there may be an elevated risk for sleep impairment among adults with Attention Deficit Hyperactivity Disorder; that this risk for sleep disturbance is not accounted for by comorbidity or ADHD pharmacotherapy; and that it is important to evaluate sleep impairment when working with adults with ADHD.

**SUMMARY:**
Objective: To examine whether sleep impairment is associated with Attention Deficit Hyperactivity Disorder in adults, independent of the effects of comorbidity and current treatment for ADHD. Method: We identified sleep characteristics in a community sample of 182 ADHD case and 117 non-ADHD controls age 18 to 55. ADHD status, current and lifetime psychiatric comorbidity, and pharmacologic treatment for ADHD in the past year were systematically identified with the Structured Clinical Interview for DSM IV and modules from the Schedule for Affective Disorder and Schizophrenia for School-Age Children, Epidemiologic Version. Sleep problems were characterized for the prior six months using the self-report Child Sleep Behavior Scale. Analyses examined the association between ADHD and sleep impairments, accounting for effects of socioeconomic status, age, comorbidity, age of ADHD onset, and ADHD pharmacotherapy, using a p-value threshold of 0.05 for significance. Results: ADHD individuals reported significantly more difficulty going to sleep, difficulty sleeping restfully, greater tendency to talk during sleep, and more difficulty waking in the morning, and these findings were not accounted for by current or lifetime diagnoses of depression, bipolar disorder, generalized anxiety, substance abuse, presence of multiple anxiety disorders, and were also not accounted for by ADHD medication treatment within the past year. These findings remained significant when the ADHD sample was restricted to subjects with onset of ADHD symptoms by the age of 7. Conclusions: Our findings suggest that adults with ADHD are more likely to present with sleep disturbance symptoms which are unlikely to be attributable to ADHD treatment or mental health comorbidity. Clinicians should evaluate adults with ADHD for sleep impairment, and consider treating sleep dysfunction if it is clinically significant. Supported in part by NIH grant R01MH57934 to Dr. Faraone.

**REFERENCES:**
1. Schredl M, Alm B, Sobanski E: Sleep quality in adult patients with attention deficit hyperactivity disorder (ADHD). Eur Arch Psychiatry Clin Neurosci 2007 Apr;257(3):164-8.
2. Surman CB, Thomas RJ, Aleardi M, Pagano C, Biederman J: Adults with ADHD and sleep complaints: a pilot study iden tifying sleep-disordered breathing using polysomnography and sleep quality assessment. J Atten Disord 2006; 9:550-555.

**NR6-081**

## APD125, A SELECTIVE SEROTONIN 5-HT2A RECEPTOR INVERSE AGONIST, SIGNIFICANTLY IMPROVES SLEEP MAINTENANCE PARAMETERS IN PATIENTS WITH PRIMARY INSOMNIA

*Emil Chuang, M.D. Arena Pharmaceuticals, 6166 Nancy Ridge Dr, San Diego, CA 92121, Russell Rosenberg, Ph.D, David Seiden, M.D., Steven Hull, M.D., Milton Erman, M.D., Howard Schwartz, M.D. Warren Prosser, B.S., Christen Anderson, M.D. Ph.D., Matilde Sanchez, Ph.D., Emil Chuang, M.D., Thomas Roth, Ph.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to understand the mechanism of action of APD125 and its effects in improving the parameters of sleep maintenance and sleep consolidation, including number of awakenings, arousals and sleep architecture.

**SUMMARY:**
Introduction: Chronic insomnia is a condition affecting 10-15% of the adult population, and for most, particularly the

elderly, sleep maintenance is the major issue. APD125 is a highly selective inverse agonist of the 5-HT2A receptor. In phase 1 studies, APD125 improved sleep maintenance and was well tolerated. Methodology: Adult patients (n=173) with DSM-IV defined primary insomnia characterized by difficulty maintaining sleep were randomized into a multicenter, double-blind, placebo-controlled, 3-way crossover study to compare 2 doses of APD125 (10mg and 40mg) with placebo. Each treatment period was 7 days with a 7-9 day washout period between treatments. Paired polysomnographic readings (PSGs) were performed at screening and at N1/2 and N6/7 for each treatment period.
Results: APD125 was associated with significant improvements in key PSG sleep maintenance parameters. Wake time after sleep onset (WASO) decreased by 52.5min (10mg) and 53.5min (40mg) from baseline to N1/2, ($p<0.0001$ for both), by 51.7min ($p=0.0131$) and 48.0min ($p=0.1994$) at N6/7, respectively, and by 37.8min at N1/2 and 44.0min at N6/7 for placebo. Robust APD125 effects were also seen with wake time during sleep (WTDS) ($p<0.0001$ N1/2, $p<0.001$ N6/7). Importantly, the number of arousals and awakenings improved significantly with APD125 treatment as compared to placebo, as did slow wave sleep ($p<0.0001$ for both doses at both timepoints). As expected based on the subject population and the mechanism of action of APD125 there were no improvements in LPS. No SAEs were reported and no meaningful differences in AE profiles were observed between APD125 and placebo. APD125 did not result in next day cognitive impairment.
Conclusions: APD125 produced clinically and statistically significant improvements in parameters of sleep maintenance and sleep consolidation and was well tolerated in adults with primary chronic insomnia characterized by difficulty maintaining sleep.

**REFERENCES:**


1. Rosenberg, R., et al. "An assessment of the efficacy and safety of eszopiclone in the treatment of transient insomnia in healthy adults." Sleep Med 6.1 (2005): 15-22.
2. Roth, T. "Understanding neuronal pathways: novel targets for the management of insomnia." J Clin Psychiatry 68 Suppl 5 (2007): 4-5.


**NR6-082**

## SLEEP DISTURBANCE IN YOUNG ADULTS IN RURAL CHINA


*Fung Kum, Helen Chiu, M.B.B.S Department of Psychiatry Multi-Centre, Tai Po Hospital, 9 Chuen On Road, Tai Po NT, Hong Kong, China Nil, J. Dai, Ph.D. candidate., S. Chan, M.B.Ch.B., T. Leung, M.Sc.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of the presentation, the participant should be able to understand more about the prevalence of sleep problems in young adults in rural China and the associated risk factors.

**SUMMARY:**


Introduction: There is a high rate of suicide in young females in rural China, and a paucity of data of sleep problems in young people in rural China. This study examined the prevalence and correlates of sleep disturbance in young adults in rural china. Method: This is an epidemiological survey with face to face interview of young adults (aged 16 to 34) in the rural areas of Sichuan province in China. The subjects were asked if they had difficulty in falling asleep, maintaining sleep or early morning wakening in the month prior to the interview. Sleep disturbance was considered to be present if any of the sleep problems occurred frequently. In addition, information on socio-demographic data, depressive symptoms on the CESD, presence of suicidal ideas and life events were obtained. Results: A total of 1642 subjects were interviewed, 47.2% were male. Average daily sleep duration for this group of adults was 8.3 hrs. 3.5% had persistent problem in falling asleep, 5.2% maintaining sleep and 4.3% early morning wakening. Overall, 8% of the subjects had at least one of the above sleep disturbances. Among the subjects with sleep disturbance, 4.6% used sleeping pills, 3.1% Traditional Chinese Medicine and 3.1% used both western and Chinese medicines. Factors associated with sleep disturbance included poor financial status, greater depressive symptoms, presence of suicidal ideas and total number of life events. Multivariate analysis showed that only greater depressive symptoms and poor financial status were significantly associated with sleep disturbance. Conclusions: Sleep disturbance is less common in this sample of young adults in rural China compared with rates in other studies in the literature. However, presence of sleep disturbance is strongly associated with depressive symptoms and financial status. Our findings suggest that young adults in rural China with sleep disturbance may merit more attention to their mental health.


**REFERENCES:**


1. Ohayon MM, Caulet M, Priest RG, Guilleminault C: DSM IV and ICD-90 insomnia symptoms and sleep dissatisfaction. Br J Psychiatry 1997; 171:382-388.
2. Liu X, Uchiyama M, Okawa M, Kurita H: Prevalence and correlates of self-reported sleep problems among Chinese adolescents. Sleep, 2000; 23:1-8.


**NR6-083**

## DOXEPIN 3 AND 6 MG IN A 35-DAY TRIAL OF ADULTS WITH PRIMARY INSOMNIA: EFFECTS FOLLOWING DISCONTINUATION


*H. Heith Durrence, Ph.D. 3721 Valley Centre Drive, Suite 500, San Diego, CA 92122, Thomas Roth, Ph.D., Andrew Krystal, M.D., Alan Lankford, Ph.D., Phillip Jochelson, M.D., Roberta Rogowski, B.S.N, Jeff Kittrelle, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to evaluate the effects of discontinuing low-dose doxepin after 5 weeks of treatment.

**SUMMARY:**


One of the concerns with hypnotic medication usage is rebound insomnia. This study evaluated the effects of discontinuing doxepin (DXP), a selective H1 antagonist at the doses studied, after 5 weeks of treatment.
Adults meeting *DSM-IV-TR* criteria for primary insomnia were randomly assigned to nightly doses of DXP 3mg (N=75), 6mg (N=73) or placebo (PBO; N=73) for 35 days, followed by 2 nights of single-blind placebo (PBO) to evaluate discontinuation (DC) effects. A total of 203 patients (67 PBO, 67 DXP 3mg, 68 DXP 6mg) had discontinuation data. Rebound insomnia was defined as =35 minute increase in wake after sleep onset (WASO) compared to baseline. Withdrawal symptoms were

assessed with the benzodiazepine withdrawal symptom scale and with spontaneously reported adverse events.
Mean WASO remained improved relative to baseline for DXP 3 and 6 mg on the 1st DC night (PBO=21 minutes; DXP 3mg=18 minutes; DXP 6mg=24 minutes), with sustained improvement on the 2nd DC night. Additionally, the incidence of rebound insomnia was similar across groups. Across the two nights, rebound insomnia was experienced by 1% of the PBO group, 1% of the DXP 3mg group, and 4% of the DXP 6mg group. The mean change in the benzodiazepine withdrawal symptom scale was similar across groups. Approximately 8% of patients in each treatment group experienced an adverse event during the 2 DC nights. There was no evidence of physical dependence, withdrawal syndrome, or worsening insomnia.
As reported previously, administration of DXP 3 and 6mg in adults with chronic primary insomnia resulted in significant and clinically meaningful effects on sleep onset, sleep maintenance, and prevention of early morning awakenings that were sustained across the trial. These sleep improvements were not followed by rebound insomnia or withdrawal syndrome upon discontinuation of DXP treatment.
This study was funded by Somaxon Pharmaceuticals.
**REFERENCES:**
1. Roth T, Rogowski R, Hull S, et al. Efficacy and Safety of Doxepin 1, 3 and 6 mg in Adults with Primary Insomnia. Sleep 2007;30: 1555-1561
2. Hajak G, Rodenbeck A, Voderholzer U, et al. Doxepin in the treatment of primary insomnia: A placebo-controlled, double-blind, polysomnographic study. J Clin Psychiatry, 2001;62:453-463.

**NR6-084**

## EFFICACY OF DOXEPIN 3 AND 6 MG ON EARLY MORNING AWAKENINGS IN ADULTS WITH PRIMARY INSOMNIA

*H. Heith Durrence, Ph.D. 3721 Valley Centre Drive, Suite 500, San Diego, CA 92122, Tom Roth, Andrew Krystal, Alan Lankford, Phil Jochelson, Roberta Rogowski, Jeff Kittrelle*
**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to evaluate the effects of doxepin 3 and 6 mg on early morning awakenings, a core component of insomnia.
**SUMMARY:**
Chronic insomnia is often accompanied by waking too early and being unable to fall back to sleep. Though it is a core symptom of DSM-IV insomnia, it is seldom addressed in sleep trials. The present analysis examined the impact of doxepin (DXP), a selective H1 antagonist at the doses studied, on parameters associated with this symptom.
Selected endpoints from a randomized, double-blind, placebo-controlled study of adults with insomnia are reported. Patients reported =3 months of *DSM-IV-TR* insomnia. Patients were randomly assigned to nightly doses of DXP 3mg (N=75), 6mg (N=73) or placebo (PBO; N=73) for 35 days. Efficacy was evaluated with polysomnography (PSG) over an 8-hr period; data from first and last timepoints, nights 1 (N1) and 29 (N29), are reported. PSG endpoints of early morning awakenings included wake time after sleep (WTAS), sleep efficiency (SE) in the last quarter-of-the-night (SE-LQN), SE in the last third-of-the-night (SE-LTN), and SE at hour 8. Next-day residual effects were assessed using the Digit Symbol Substitution Test (DSST), the Symbol Copying Test (SCT), and a Visual Analog Scale (VAS) for sleepiness.
On N1, DXP 3 and 6mg significantly improved SE-LQN ($p=0.0008$), SE-LTN ($p=0.0002$), WTAS ($p=0.0030$), and SE at hour 8 ($p<0.0001$), all compared with PBO. These improvements were sustained at N29, with significance versus PBO maintained for 6mg on all but WTAS. In terms of next-day residual effects, there were no significant group differences in the DSST, SCT, or VAS at any timepoint during the trial.

In adults with chronic insomnia, DXP 3 and 6mg significantly improved PSG parameters associated with early morning awakenings, a prevalent but neglected symptom. These improvements were sustained through the final hour of the night with no next-day residual effects. These data suggest that DXP 3 and 6mg are effective at preventing early morning awakenings without causing next-day residual effects.
This study was funded by Somaxon.
**REFERENCES:**
1. Roth T, Rogowski R, Hull S, et al. Efficacy and Safety of Doxepin 1, 3 and 6 mg in Adults with Primary Insomnia. Sleep 2007;30: 1555-1561
2. Hajak G, Rodenbeck A, Voderholzer U, et al. Doxepin in the treatment of primary insomnia: A placebo-controlled, double-blind, polysomnographic study. J Clin Psychiatry, 2001;62:453-463.

**NR6-085**

## SLEEP DISTURBANCE AMONG PATIENTS WITH DEPRESSION: RESULTS OF A NATIONAL ONLINE SURVEY

*John W Winkelman, M.D. 1505 Commonwealth Ave. 5th Floor, Brighton, MA 02135, Linda Carpenter, M.D., Larry Culpepper, M.D., Ph.D., Ibrahim Gunay, M.D., M.B.A.*
**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to understand the prevalence and consequeces of sleep complaints in patients with depression.
**SUMMARY:**
Background: The majority of patients with depressive disorders report sleep disturbance. Most antidepressant medications do not restore sleep adequately; initiation of some antidepressant medications may perturb sleep patterns. A nationwide online survey was conducted among US patients with depression to gain further insight on the patients' experience with depression and sleep disturbance.
Methods: A survey questionnaire was developed by a panel of experts specializing in psychiatry, primary care and sleep medicine. Survey implementation, data collection, and tabulation were conducted by Harris Interactive® (HI). In May 2007, 6,300 patients were randomly selected from HI's online Chronic Illness Panel, recruited by email, and invited to take an anonymous, self-administered online questionnaire. Patients were offered incentives via an HI incentive program.
Results: Respondents (N=505) were aged 18-64 years, diagnosed with "depression" by their report, and were either currently taking (N=435) or had recently (within =2 years) been

taking (n=70) a prescription antidepressant medication. Nearly three-quarters of the sample (72%) indicated that they had experienced some type of insomnia. Of the 52% that identified a sleep disturbance as accompanying their depressive disorder (n=264), over half (57%) were taking a prescription medication for sleep disturbance. The majority (66%) of respondents currently taking prescription antidepressants reported onset or persistence of insomnia after starting the medication, and over a third (38%) reported insomnia or daytime sedation as a side-effect of their prescription antidepressant.
Conclusions: Sleep disturbance is a common symptom of depressive disorders and also can be a side effect of antidepressant medications necessitating the use of additional prescription drugs. Supported by funding from Novartis Pharmaceuticals Corporation.

**REFERENCES:**


1. Wilson and Argyropoulos. Antidepressants and sleep: a quali tative review of the literature. Drugs. 2005; 65(7):927-47
2. Ferguson J. SSRI Antidepressant Medications: Adverse Ef fects and Tolerability. Prim Care Companion J Clin Psychia try. 2001 Feb;3(1):22-27.


**NR6-086**

## APPLICATIONS OF A SLEEP QUALITY SCALE AND THE MEDICAL OUTCOMES STUDY SLEEP SCALE IN SUBJECTS WITH FIBROMYALGIA: PSYCHOMETRIC EVALUATION AND MEDIATION


*Joseph Cappelleri, Ph.D. Pfizer Inc, Global Research and Development, Eastern Point Road (MS 8260-2222), Groton, CT 06340,Andrew G. Bushmakin, M.S., Susan Martin, M.S.P.H., Charles D. Petrie, Ph.D., Ellen Dukes, Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation the participant should be able to 1) describe the measurement properties of two sleep scales for patients with fibromyalgia; 2) understand the differential effect of pregabalin on sleep benefit --a direct effect separate and distinct from the mediated effect through improvement in pain.

**SUMMARY:**


Objective: Investigate the application of the multi-domain Medical Outcomes Study (MOS) Sleep Scale and the one-item,10-category Sleep Quality Scale in subjects with fibromyalgia (FM).
Method: Data were obtained from two double-blind, controlled Phase 3 studies with pregabalin (300, 450, 600mg/d) in approximately 1500 subjects with FM. For the MOS Sleep Scale, confirmatory factor analyses, Cronbach alphas, and corrected item-to-total correlations were undertaken at baseline and follow-up. Clinical important differences were estimated using the Patient Global Impression Scale. A mediation model was undertaken to identify and explicate the mechanism that underlies an observed relationship between treatment and sleep outcomes.
Results: In most instances, the Bentler's Comparative Fit Index (CFI) on the MOS Sleep Scale was >=0.9, indicating acceptable model fit. Cronbach's alphas increased over time for the multi-item domains on Sleep Disturbance (range: 0.78-0.87), Sleep Somnolence (0.71-0.78), and Adequacy (0.36-0.77). For Sleep Quality, estimated test-retest reliability based on seven pre-treatment days was 0.91. Clinical important difference on the MOS Sleep Disturbance domain and the Sleep Quality Scale were estimated to be 7.9 and 0.83, respectively. Mediation models showed that pregabalin directly improved sleep disturbance and sleep quality. Approximately 66 to 80% of the improvement in Sleep Disturbance and 43 to 61% of the improvement in Sleep Quality were the direct result of pregabalin not related to the pain.
Conclusion: The structure of the MOS Sleep Scale is confirmed in patients with FM. In general, this scale's internal consistency reliability is satisfactory except for earlier assessments on the two-item Adequacy domain. The Sleep Quality Scale as measured has high test-retest reliability. On both scales, clinical important differences manifest themselves. Much improvement in Sleep Disturbance and in Sleep Quality comes directly from pregabalin.



Study funded by Pfizer Inc.


**REFERENCES:**


1. Kline RB: Principles and Practice of Structural Equation Modeling, Second Edition. NY: The Guilford Press, 2005
2. Arnold LM, Crofford LJ, Martin SA, et al: The Effect of Anxiety and Depression on Improvement in Pain in a Randomized, Controlled Trial of Pregabalin for Treatment of Fibromyalgia. Pain Medicine, 2007; 8(8):632-638


**NR6-087**

## EVALUATION OF NEXT-DAY FUNCTIONING WITH ECOLOGICAL MOMENTARY ASSESSMENT AFTER INDIPLON TREATMENT IN ADULTS WITH BOTHERSOME AWAKENINGS DURING THE NIGHT


*Martin B Scharf, Ph.D. TriState Sleep Disorders Center 1275 East Kemper Rd Cincinnati, Ohio, 45246, An Lankford, PhD; David Mayleben, Ph.D.; Ann Ashinger, M.S., B.S.N.;Melissa Holmes; Raúl Harris-Collazo, Ph.D; Gary Zammit, Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand the effects of a PRN dosing strategy in which sedative hypnotics are used in response to a bothersome nighttime awakening. This research will also educate the participant as to the functional benefits of hypnotics that have not been previously shown. The presentation will also increase the participant's

**SUMMARY:**


troduInction: Ecological Momentary Assessment (EMA) methods have been utilized with insomnia patients over a short period (1 week) to demonstrate deficits in functioning that mimic the natural circadian rhythm (Buysse et al., 2007). To date, no study has utilized EMA to demonstrate that dosing with a hypnotic, during the night, results in improved functioning the next day. An objective of this study was to evaluate the next-day functioning of patients following indiplon treatment taken "when needed" to effectively manage self defined bothersome nighttime awakenings with difficultly returning to sleep in insomnia patients.
Methods: During this single blind study, adults (N=50) meeting *DSM-IV* criteria for primary insomnia with frequent nighttime awakenings were given placebo during a 2-week lead-in period then enrolled into 4 weeks of treatment with indiplon capsules 10mg taken upon a bothersome nighttime awakening (provided

4 hours of bedtime remained). The endpoints examined were next-day Visual Analog Scale scores for each of five symptoms (alertness/sleepiness, attention/concentration, irritability, energy/fatigue, and mood) captured at two time points during the day: afternoon (noon–3pm) and evening (6pm–11:45pm).
Results: During the indiplon treatment period, patients reported improvements in all five categories of possible daytime impairment measured relative to the baseline placebo lead-in period. Improvements in functioning relative to the placebo lead-in period were noted at both the afternoon and evening EMA time points after both 2 and 4 weeks of treatment. Patients were compliant in completing daily EMAs throughout the 6-week study.
Conclusions: Patients with chronic insomnia characterized by bothersome nighttime awakenings with difficulty returning to sleep showed sustained improvement in next day functioning as measured by EMA methodology in the afternoon and evening while using a when needed/if needed dosing regimen with indiplon capsules.

**REFERENCES:**


1. Sullivan SK, Petroski RE, Verge G, Gross RS, Foster AC, Grigoriadis DE. Characterization of the interaction of indip lon, a novel pyrazolopyrimidine sedative-hypnotic, with the GABAA receptor. J Pharmacol Exp Ther 2004;311:537-546
2. Buysse DJ, Thompson W, Scott J, Franzen PL, Germain A, Hall M, Moul DE, Nofzinger EA, Kupfer DJ. Daytime symp toms in primary insomnia: A prospective analysis using eco logical momentary assessment. Sleep Medicine 2007; 8:198-208.


**NR6-088**

## ZOLPIDEM EXTENDED-RELEASE, CO-ADMINISTERED WITH ESCITALOPRAM, IMPROVES INSOMNIA IN PATIENTS WITH COMORBID INSOMNIA AND MAJOR DEPRESSIVE DISORDER


*Maurizio Fava, M.D. 15 Parkman Street, WACC-812, Boston, MA 02114, Greg Asnis, M.D., Ram Shrivastava, M.D., R. Bruce Lydiard, M.D., Ph.D., Bijan Bastani, M.D., David Sheehan, M.D., M.B.A., Thomas Roth, Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to comprehend the clinical evidence regarding the efficacy and safety of zolpidem extended-release 12.5mg in the nightly treatment of sleep maintenance and sleep onset symptoms of insomnia in adult patients with comorbid insomnia and major depressive disorder, who are treated concomitantly with escitalopram 10mg/day over a two-phase, 24-week study.

**SUMMARY:**


Introduction: This study aimed to show improved insomnia in patients with comorbid insomnia and major depressive disorder (MDD) treated with zolpidem extended-release (zolpidem ER) plus escitalopram. Methods: Multicenter, double-blind, parallel-group, placebo-controlled study in patients with comorbid insomnia and MDD (N=385, age 18–64) receiving escitalopram 10mg/day and either nightly zolpidem ER 12.5mg or placebo. Sleep variables were assessed by morning questionnaires for 8 weeks (Phase 1). Patients whose depression responded (>=50% reduction in HAM-D17) were treated for another 16 weeks (Phase 2). Safety was assessed by AEs and sleep variables upon discontinuation. Results: 119/193 and 67/96 zolpidem ER patients and 125/192 and 60/95 placebo patients completed Phase 1 and Phase 2 respectively. Zolpidem ER significantly improved the following measures from baseline at each 2-week assessment: total sleep time (TST; Week 8 primary endpoint), wake time after sleep onset (WASO), number of awakenings (NAW), sleep quality (SQ) and sleep latency (SL) (P<=.0003 vs placebo for each measure/timepoint). For Phase 2, at each 4-week assessment, zolpidem ER significantly improved: TST (Wk 12, 16); WASO (Wk 16, 20), NAW (Wk 12–24), SQ (Wk 12–24); P<.05 vs placebo for each measure/timepoint. Significant improvements in morning energy and sleep impact on daily activities were observed for zolpidem ER for all timepoints in Phase 1 and 2 (P<.05 vs placebo for each measure/timepoint). Zolpidem ER did not significantly augment improvements in HAM-D17 during the study. Most frequent AEs (>10%) in zolpidem ER/escitalopram vs placebo/escitalopram groups were headache (14.1%/17.9%) and nausea (10.9%/8.4%). No evidence of rebound insomnia upon discontinuation. Conclusion: Zolpidem ER significantly improved multiple insomnia symptoms over 24 weeks in patients with comorbid insomnia and MDD receiving concomitant escitalopram treatment. Study funding was provided by sanofi-aventis.


**REFERENCES:**


1. Roth T, Roehs T, Pies R: Insomnia: pathophysiology and implications for treatment. Sleep Med Rev 2007; 11:71-79.
2. Krystal A, Erman M, Zammit G, Soubrane C, Roth T: Long-term efficacy and safety of zolpidem extended-release 12.5 mg, administered 3 to 7 nights per week for 24 weeks, in patients with chronic primary insomnia: a 6-month, random ized, double-blind, placebo-controlled, parallel-group, multi center study. Sleep 2008; In press.


**NR6-089**

## ZOLPIDEM EXTENDED-RELEASE 12.5MG IMPROVES SLEEP AND NEXT-DAY FUNCTIONING IN PATIENTS WITH COMORBID INSOMNIA AND GENERALIZED ANXIETY DISORDER


*Maurizio Fava, M.D. 15 Parkman Street, WACC-812, Boston, MA 02114, David Sheehan, M.D., M.B.A., Greg Asnis, M.D., Ram Shrivastava, M.D., R. Bruce Lydiard, M.D., Ph.D., Bijan Bastani, M.D., Thomas Roth, Ph.D., Maurizio Fava, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to comprehend clinical efficacy and safety evidence for the nightly use of zolpidem extended-release 12.5mg for the treatment of sleep maintenance and sleep onset insomnia symptoms in adult patients with comorbid insomnia and generalized anxiety disorder, who are treated concomitantly with escitalopram 10 mg/day over an 8-week treatment period.

**SUMMARY:**


Introduction: This study examined zolpidem extended-release (zolpidem ER), given with escitalopram, in the treatment of insomnia in patients with comorbid insomnia and generalized anxiety disorder (GAD). Methods: Multicenter, double-blind, parallel-group, placebo-controlled, 8-week trial in adults (n=383, 21–64 years) with comorbid insomnia and GAD randomized to either nightly zolpidem ER 12.5mg or placebo;

all patients received open-label escitalopram 10mg/day. Sleep and next-day functioning parameters were assessed using a morning sleep questionnaire. The Massachusetts General Hospital Cognitive and Physical Functioning Questionnaire (MGH-CPFQ) was given at Week 4 and 8. Safety was assessed by AE reports. Results: 116/192 zolpidem ER and 126/191 placebo patients completed the study. Significant improvements from baseline were seen in the zolpidem ER group vs placebo at Week 8 for total sleep time (106.0 vs 68.2 min), nocturnal awakenings (–1.33 vs –0.76), wake time after sleep onset (–40.7 vs –28.8 min) and sleep latency (–55.1 vs –26.8 min), and at all other timepoints (P<.0001 for all comparisons). Zolpidem ER also significantly improved ratings of morning energy, morning concentration, sleep impact on daily activities and sleep quality (P<.0001 for all comparisons). From MGH-CPFQ, zolpidem ER significantly improved scales of motivation/interest/enthusiasm (Week 4 only, P=.0049), wakefulness/alertness (P<.02) and energy (P<=.02). Group improvements in mental acuity, memory, word finding and attention did not differ. Zolpidem ER did not augment the anti-anxiety response. Most frequent AEs: zolpidem ER/escitalopram vs placebo/escitalopram: nausea (21.5%/16.8%), dizziness (14.1%/6.8%), headache (12.6%/15.3%), fatigue (10.5%/5.3%), dry mouth (7.3%/10.5%). Conclusion: Zolpidem ER 12.5mg with escitalopram improved multiple insomnia symptoms and sleep impact on daily activities in patients with comorbid insomnia and GAD. This study was supported by sanofi-aventis.

**REFERENCES:**


1. Nutt DJ, Ballenger JC, Sheehan D, Wittchen HU: Generalized anxiety disorder: comorbidity, comparative biology and treat ment. Int J Neuropsychopharmacol; 2002; 5(4):315-325.
2. Krystal A, Erman M, Zammit G, Soubrane C, Roth T: Long-term efficacy and safety of zolpidem extended-release 12.5 mg, administered 3 to 7 nights per week for 24 weeks, in patients with chronic primary insomnia: a 6-month, random ized, double-blind, placebo-controlled, parallel-group, multi center study. Sleep 2008; In press.


**NR6-090**

## EFFICACY AND SAFETY OF DOXEPIN 1 AND 3 MG IN A 3-MONTH TRIAL OF ELDERLY ADULTS WITH CHRONIC PRIMARY INSOMNIA


*Phillip Jochelson, M.D. 3721 Valley Centre Drive, Suite 500, San DiegoCA 92130, Mark Gotfried, M.D., Steven Hull, M.D., Bruce Corser, M.D., Martin Scharf, Ph.D., William Orr, M.D., Venkata Buddharaju, M.D., Howard Schwartz, M.D., Elizabeth Ludington, Ph.D., Roberta Rogowski, BSN, H. Heith Durrence, Ph.D., Thomas Roth, Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to evaluate the safety and efficacy of 1 mg and 3 mg of doxepin on measures of sleep for the treatment chronic insomnia in elderly adults.

**SUMMARY:**


Efficacy and safety of doxepin (DXP), a selective H1 antagonist at the doses studied, was evaluated in elderly insomniacs. Elderly adults meeting *DSM-IV-TR* criteria for primary insomnia were randomized to 12 weeks of DXP 1mg (N=77), 3mg (N=82), or placebo (PBO; N=81). Efficacy was assessed in the sleep lab with polysomnography and at home with sleep diaries (IVRS). Selected endpoints are reported corresponding to first and last assessment points.

DXP 3mg demonstrated significant improvement on night (N) 1 in wake time after sleep onset (WASO; p<0.0001), total sleep time (TST; p<0.0001), overall sleep efficiency (SE; p<0.0001), SE in each third-of-night (p<0.005) and SE in hours 7 (p<0.005) and 8 (p<0.0001), all versus PBO. Improvements were sustained at N85 for all variables, with significance maintained for WASO, TST, overall SE, SE in the 2nd and final third-of-night, and SE hour 7. DXP 3mg significantly improved the IVRS variables latency to sleep onset (wks 1 and 12, p<0.05), TST (wks 1 and 12, p<0.01), and sleep quality (wks 1 and 12, p=0.01). Several outcome-related parameters were also significantly improved, including the severity and improvement items of the CGI. Significant improvements were observed for DXP 1mg for several measures and at several timepoints, including WASO, TST and overall SE. There was no significant next-day residual sedation and no reports of anticholinergic effects or memory impairment. Safety profiles were comparable between groups.

In elderly adults with insomnia, DXP 1 and 3mg produced significant and clinically meaningful improvements in sleep onset, sleep maintenance and early morning awakenings that were maintained through the trial for most parameters. Both doses were well-tolerated, with no reports of amnesia or anticholinergic effects, and no next-day residual effects. These data suggest that DXP 1 and 3mg are effective and well-tolerated in elderly adults with insomnia.



This study was funded by Somaxon.


**REFERENCES:**


1. Roth T, Rogowski R, Hull S, et al. Efficacy and Safety of Doxepin 1, 3 and 6 mg in Adults with Primary Insomnia. Sleep 2007;30: 1555-1561
2. Hajak G, Rodenbeck A, Voderholzer U, et al. Doxepin in the treatment of primary insomnia: A placebo-controlled, double-blind, polysomnographic study. J Clin Psychiatry, 2001;62:453-463.


**NR6-091**

## EFFICACY AND SAFETY OF DOXEPIN 6 MG IN A 4-WEEK OUTPATIENT TRIAL OF ELDERLY ADULTS WITH PRIMARY INSOMNIA


*Scott Segal, M.D. 1065 NE 125 Street Suite 417, North Miami, FL 33161, , Alan Lankford, Ph.D, James Borders, M.D., Don Anderson, M.D., Roberta Rogowski, BSN, Elizabeth Ludington, Ph.D., H. Heith Durrence, Ph.D., Thomas Roth, Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to evaluate the effects of doxepin 6 mg on measures of sleep for the treatment chronic insomnia in elderly adults.

**SUMMARY:**


Efficacy and safety of doxepin (DXP), a selective H1 antagonist at the dose studied, was evaluated in elderly adults with sleep maintenance insomnia.This was a double-blind, placebo-controlled outpatient trial. Elderly adults meeting *DSM-IV-TR* criteria for primary insomnia were randomized to 4 weeks of nightly treatment with either DXP 6mg (N=130) or placebo (PBO; N=124). Efficacy was assessed with patient-reports

and clinician ratings. Patient-reported endpoints included total sleep time (TST), wake after sleep onset (WASO), latency to sleep onset (LSO), and Patient Global Impression scale (PGI). Primary analysis was Week 1 TST.
DXP 6mg demonstrated significant improvement in TST and WASO at Week 1 (both p-values <0.0001) compared with PBO. These significant improvements were maintained at Weeks 2, 3 and 4 (all p-values <0.05). Though there were no statistically significant changes in LSO, a significantly higher proportion of patients in the DXP 6mg group reported faster sleep onset (based on PGI) at Weeks 2, 3 and 4 (all p-values <0.05; Week 1 p=0.0564) compared with PBO. DXP 6mg significantly improved sleep quality (wks 1, 3 and 4, p<0.05) and several outcome-related parameters, including the severity and improvement items of the Clinician Global Impression scale (Weeks 1 and 2) and the Insomnia Severity Index (Weeks 1-4), all versus PBO. There was no significant next-day residual sedation and no reports of anticholinergic effects (eg, dry mouth) or memory impairment. Safety profiles were comparable between groups.
In elderly adults with insomnia, DXP 6mg produced significant improvements in sleep maintenance and duration that were sustained through the trial. Though LSO was not significantly improved versus PBO, significantly more patients taking DXP 6mg reported faster sleep onset. These data indicate that DXP 6mg is effective and well-tolerated in elderly adults with chronic primary insomnia.
This study was funded by Somaxon.

**REFERENCES:**

1. Roth T, Rogowski R, Hull S, et al. Efficacy and Safety of Doxepin 1, 3 and 6 mg in Adults with Primary Insomnia. Sleep 2007;30: 1555-1561.
2. Hajak G, Rodenbeck A, Voderholzer U, et al. Doxepin in the treatment of primary insomnia: A placebo-controlled, double-blind, polysomnographic study. J Clin Psychiatry, 2001;62:453-463.

**NR6-092**

## RAMELTEON POOLED ANALYSIS: EFFECTS OF RAMELTEON 8 MG ON OBJECTIVE SLEEP LATENCY AT NIGHTS 1 AND 2

*Sherry Wang-Weigand, M.D. Takeda Global Research and Development Center, Deerfield, IL 60015, Maggie McCue, M.S., RD, Francis Ogrinc, Ph.D., Louis Mini, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be aware of the effects of ramelteon 8 mg on reduction of latency to persistent sleep in adults with chronic insomnia.

**SUMMARY:**

Introduction: Ramelteon is an MT1/MT2 melatonin receptor agonist approved for the treatment of insomnia characterized by difficulty with sleep onset. Several previous clinical studies have demonstrated the ability of ramelteon to decrease time to sleep onset in subjects with chronic insomnia. The current pooled analysis of clinical trials examined the ability of ramelteon 8 mg to reduce latency to persistent sleep (LPS) at Nights 1 and 2.
Methods: The current study was a pooled analysis of 4 randomized, double-blind, placebo-controlled clinical trials of ramelteon in subjects with chronic insomnia. The primary endpoint of each trial was LPS, measured by polysomnography (PSG). Adults (age 18-83 years) with chronic insomnia who took ramelteon 8 mg or placebo were included in the pooled analysis. Mean LPS from Nights 1 and 2 were evaluated.
Results: A total of 566 subjects who took ramelteon 8 mg (mean age 46.7 years) and 556 subjects who took placebo (mean age 47.8 years) were included in the analysis. Baseline mean LPS was 66.6 minutes for the placebo group and 66.9 minutes for the ramelteon 8 mg group. At Nights 1 and 2, mean LPS for the ramelteon 8 mg group (30.2 min) was significantly less than the mean LPS for the placebo group (43.3 min). The LS mean difference from placebo was -13.1 minutes (p<0.001).
Conclusions: A pooled analysis of 4 clinical trials showed that ramelteon 8 mg, on average, reduced PSG-measured LPS by approximately 13 minutes compared to placebo on Nights 1 and 2 of treatment in adults with chronic insomnia. This mean reduction in LPS versus placebo is similar to what has been reported in meta-analyses of other classes of insomnia medications.
This study was supported by funding from the Takeda Pharmaceuticals Company, Ltd.

**REFERENCES:**

1. Buscemi N, Vandermeer B, Friesen C, Bialy L, Tubman M, Ospina M, Klassen T, Witmans M. The efficacy and safety of drug treatments for chronic insomnia in adults: a meta-analy sis of RCTs. J Gen Intern Med 2007;22(9):1335-1350.
2. Erman M, Seiden D, Zammit G, Sainati S, Zhang J. An ef ficacy, safety, and dose-response study of ramelteon in pa tients with chronic primary insomnia. Sleep Med 2006;7(1):17-24.

**NR6-093**

## INCREASED INCIDENCE OF SLEEP APNEA IN PSYCHIATRIC OUTPATIENTS

*Suhayl Nasr, M.D. 2814 S Franklin St, Michigan City, IN 46360, Burdette Wendt*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize that there is a high incidence of psychiatric outpatients who have comorbid obstructive sleep apnea. Patients who were comorbid needed more medications and scored more poorly on rating scales.

**SUMMARY:**

Introduction: Compared to studies that have looked at the rate of mood disorders in patients in sleep centers, little has been published on the incidence of sleep apnea in psychiatric patients.
Method: A retrospective chart review was performed on 330 consecutively seen psychiatric outpatients. Medication history, demographics, and the results of the most recent QIDS, SCL-90, TEMPS, and MiniSCID were collected. Patients were checked for a history of apnea through a review of session notes, along with the results of any polysomnograms that the patient had on file.
Results: The average age of the patients reviewed was 51.0 (±15). 67% of the patients were female. 54% of patients had a diagnosis of unipolar depression, 29% had a diagnosis of a bipolar disorder, and the remaining 17% had other diagnoses. 9.7% of the patients examined were positive for

sleep apnea. Patients who were positive for sleep apnea were on a significantly higher number of medications (3.2 vs. 2.4 $p<0.001$). They also scored significantly higher on 3 items on the QIDS: late insomnia (1.0 vs .54, $p<0.01$), energy level (1.2 vs. 0.76, $p<0.02$), and general interest (1.0 vs. 0.64, $p<0.04$). 63% of sleep apnea patients had tried modafinil, and 28% are currently taking it, vs. 28% of non-apnea patients who had tried it and 11% who are currently taking it. 53% of sleep apnea patients had tried other stimulants, with 19% currently on one, compared to 35% of non-sleep apnea patients who had tried them and 20% who are currently taking them.
Discussion: Sleep apnea is more prevalent in our outpatients than in the general population (9.7% vs approximately 2%). Identification of this comorbid condition will result in better treatment outcomes.

**REFERENCES:**


1. Sharafkhaneh A, Giray N, Richardson P, Young T, Hirshkow itz M.: Association of psychiatric disorders and sleep apnea in a large cohort. Sleep 2005;28:1405-11
2. Ohayon MM: The effects of breathing-related sleep disorders on mood disturbances in the general population. J Clin Psy chiatry 2003; 64:1195-1200


**NR6-094**

## INDIVIDUAL REBOUND INSOMNIA FOLLOWING ESZOPICLONE DISCONTINUATION IN PATIENTS WITH INSOMNIA CO-EXISTING WITH MDD OR GAD


*W. Vaughn McCall, M.D. Medical Center Boulevard, 8th Floor CSB, Winston-Salem, NC 27157, Andrew Krystal, M.D., Maurizio Fava, M.D., Mark Pollack, M.D., James Roach, M.D., Thomas Wessel, M.D., Kendyl Schaefer, MSc, David Amato, Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to identify the proportion of patients with insomnia comorbid with MDD and GAD who experience rebound insomnia after eszopiclone discontinuation.

**SUMMARY:**


Introduction: In previous studies, rebound insomnia, as assessed at the treatment group level, was not observed after eszopiclone discontinuation in patients with insomnia comorbid with Major Depressive Disorder (MDD) or Generalized Anxiety Disorder (GAD). In this analysis, the occurrence of individual rebound insomnia was examined in these populations.
Methods: In 2 separate studies, after a 7-day single-blind placebo (SBP) run-in, patients with MDD (n=545) and GAD (n=595) randomly received eszopiclone 3mg or placebo with an SSRI for 8 wks. Individual rebound was assessed on the first 3 nights of a 14-day SBP run-out (with continued SSRIs). Subjective total sleep time (TST), sleep latency (SL), and wake time after sleep onset (WASO) were collected. Individual rebound was defined as sleep during the run-out outside the range of baseline variability (based on the 90% CI using the run-in data) and also worse than the baseline mean by a clinically relevant amount (>15 min for SL and WASO, and >30 min for TST).
Results: Most patients did not have rebound insomnia. The percentage of MDD patients with rebound was similar in both groups and low on the 1st (TST: 8.3% for placebo and 3.8% for eszopiclone; SL: 5.0% and 3.0%; WASO: 7.1% and 7.1%) and 3rd nights (TST: 5.4% and 4.3%; SL: 7.5% and 5.3%; WASO: 8.5% and 4.1%) of the run-out. The percentage of GAD patients with rebound tended to be higher for eszopiclone than for placebo on Night 1 (TST: 12.7% and 24.5%; SL: 10.1% and 19.8%, and WASO: 7.8% and 15.9%), but not on Night 3 (TST: 18.7% and 12.6%; SL: 14.5% and 15.9%; WASO: 5.0% and 11.9%).
Conclusions: In this analysis, only a small percentage of placebo- and eszopiclone-treated patients with insomnia comorbid with MDD or GAD had rebound. The rates were higher for GAD than for MDD patients. By the 3rd night after discontinuation, the proportion of MDD and GAD patients with rebound was generally similar for each treatment.



Support for this study provided by Sepracor Inc.


**REFERENCES:**


1. Krystal A, Fava M, Rubens R, Wessel T, Caron J, Wilson P, Roth T, McCall WV. Evaluation of eszopiclone discontinua tion after cotherapy with fluoxetine for insomnia with coexisting depression. Journal of Clinical Sleep Medicine 2007;3(1):48-55.
2. Pollack M, Kinrys G, Krystal A, McCall WV, Roth T, Schae fer K, Rubens R, Roach J, Huang H, Krishnan R. Eszopi clone co-administered with escitalopram in patients with insomnia and comorbid generalized anxiety disorder. Ar chives of General Psychiatry 2007; in press.


**NR6-095**

## USE OF RISPERIDONE LONG ACTING INJECTABLE (RISPERDAL CONSTA) AMONG HISPANICS LIVING IN A RURAL BORDER COMMUNITY IN SOUTHERN CALIFORNIA


*Alvaro Camacho, M.D. 2417 Marshall Ave, Ste 1 Imperial, CA 92251,Bernardo Ng, M.D., Barbara Galangue, M.A., David Feifel, M.D., Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand the importance of using long acting injectable antipsychotics, in this case, Risperdal Consta, to improve compliance and level of functioning in Hispanics with schizophrenia living in a rural border region.

**SUMMARY:**


Background: The rate of medication non compliance among patients with schizophrenia has been estimated to be 60%. Poor compliance leads to clinical deterioration and increased disability in this population. Additionally, it adds to the burden cost of providing mental health services in underserved rural areas. Long term injectable antipsychotics are considered a valuable tool to counteract medication non-compliance. Objective: To describe the level of compliance and functioning among Hispanics receiving risperidone long acting injectable (RLAI) in a community clinic in a border area of rural southern California. Methodology: A retrospective chart review was conducted from January 2005 until December 2006 of patients receiving RLAI, looking at compliance of their scheduled appointments and improvement in their global assessment of functioning (GAF).
Results: Fifty patients were reviewed with schizophrenia and bipolar disorder. Thirty four received RLAI for at least

one year, 7 for at least six months and seven for at least three months. For patients receiving RLAI, there was a significant improvement in the patient's compliance with appointments. Their No-Show Rate improved from 27% to 15%. Similar improvement was found for those patients receiving RLAI for six and three months. For those patients receiving RLAI for one year, their GAF improved from a mean of 40.8 to 57.2 ($t=26.9$ $df=33$ $p<0.01$). Similar improvement was found in those receiving RLAI for six months (mean GAF improvement from 36.4 to 51.8 [$t=14$ $df=6$ $p<0.01$]) and three months (mean GAF improvement from 40.7 to 60.4 [$t=11.5$ $df=6$ $p<0.01$]). Conclusion: Compliance among Hispanics with disabling psychiatric conditions (schizophrenia and severe bipolar disorder) improves when they participate in a RLAI clinic. A longitudinal follow up study is needed to determine improvement in their quality of life, comorbid substance use, metabolic outcomes and evaluate long term remission of symptoms.

**REFERENCES:**


1. Csernansky JG, Mahmoud R, Brenner R, Risperidone, USA79, Study, Group: A comparison of risperidone and halo peridol for the prevention of relapse in patients with schizo phrenia. N Engl J Med. 2002; 346(1):16-22.
2. Vega WA, Sribney WM, Miskimen TM, Escobar JI, Aguilar-Gaxiola S: Putative psychotic symptoms in the Mexican American population: prevalence and co-occurrence with psychiatric disorders. J Nerv Ment Dis 2006; 194(7):471-7.


**NR6-096**

## POST-TRAUMATIC STRESS DISORDERS IN COLOMBIAN CHILDREN: ACUTE PHASE AND FIVE-YEAR FOLLOW-UP


*Carlos Sanchez-Russi, Ph.D. INSA-Colombia; Rincon de la Floresta # 208,, Duitama Colombia Boyaca, Wilma I. Castilla-Puentes, M.D.; Sandra R. Castilla-Puentes, M.D.; Ivan Gomez, M.D., Miguel Habeych, M.D., M.P.H., Ruby Castilla-Puentes, MD, Dr.P.H.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to identify perdictors of PTSD in children.

**SUMMARY:**


Background: To our knowledge, few or no studies have addressed prospectively post traumatic stress disorders (PTSD) among children exposed to traumatic events in Colombia.
A mass shooting resulting in murder of two men by gunmen driving motorcycles in a busy park from Belen, Boyaca, Colombia has provided a unique opportunity to study acute-phase and five-year follow-up of children responses to a this type of traumatic experience. Objective: This study describes a month and 5-year follow-up study of children exposed to a mass shooting incident. Methods: Diagnostic Interview Schedule/ Disaster Supplement and SCARED (parent and child versions) were used to assess 293 children (183 girls and 110 boys) of 8 to 18 years of age (mean age 13 years). Data on family history of anxiety disorders was also collected. Measures at 1-2 months and again five year later, with an 89% reinterview rate. Results: In the acute postdisaster period, 32.8% of children reported PTSD symptoms, and in 82.6% of all subjects SCARED scores were >=25. At follow-up, 24.6% of children reported symptoms of PTSD while scores >=25 on the SCARED scale was detected in 62.4% of subjects. There was a positive correlation between SCARED scores and PTSD symptoms in both acute phase and follow-up. Parent-history of anxiety disorders was the best predictor of presence and persistence of PTSD. Conclusion: Children with family history of anxiety may be most vulnerable to developing PTSD and therefore may deserve special attention from mental health professionals. Intervention programmes for children need to take into account familiar and cultural aspects, as well as characteristics of the communities involved.


**REFERENCES:**


1. North CS, Smith EM, Spitznagel EL: Posttraumatic stress disorder in survivors of a mass shooting. Am J Psychiatry 1994; 151:82-88.
2. Grace MC, Green BL, Lindy JL, Leonard AC: The Buffalo Creek disaster: a 14-year follow-up, in International Hand book of Traumatic Stress Syndromes. Edited by Wilson JP, Raphael B. New York, Plenum, 1993, pp 441-449.


**NR6-097**

## PROGRAM FOR ASSERTIVE COMMUNITY TREATMENT (PACT) IN KOREA: PRELIMINARY 6 MONTHS FOLLOW-UP STUDY.


*Yu Y Jechun , M.D. Department of Psychiatry, Eulji University Hospital, Dunsan-Dong Daejeon city, South Korea, DaeJeon-Korea ?, Jechun Yu M.D., Jaeho Shin M.D., Seonwan Kee M.D., Youngmoon Lee M.D., Soojung Kim R.A.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to Describe the purpose of Program for Assertive Community Treatment(PACT) and Know whether the modified PACT of the community mental health center in Korea could show the similar effect of the original PACT.

**SUMMARY:**


Introduction:. Since the legislation of the Mental Health Act in 1995, the community mental health has been started in South Korea. But the number of psychiatric beds is still increasing and the role of the community mental health center(CMHC) is not sufficient to help that the severely mentally ill(SMI) patients stay in the community. In Korea, CMHC has the central position in mental health service delivery system, but they have too many works to do such as day care program, case management, sheltered workshop, advocacy and even crisis intervention with the limited number of staff(5~10 for up to million population). So the adaption of PACT element is seems to be needed for the SMI patients to stay in the community, especially when we expect about the future deinstitutionalization.This study aimed to examine whether the modified PACT of the community mental health center in Korea could be adapted in Korea and would show the similar effect of the original PACT.
Methods: We applied the modified PACT on 20 SMI patients who had lived in two cities of Korea from Apr. to Nov. in 2007. They had been admitted in psychiatric hospitals for a long time or many times, and had had many familial conflicts or poor family support. We evaluated i) the number and duration of admission to psychiatric hospital, ii) clinical and social outcomes.
Results: The preliminary data showed the favorable results in many aspects of the patients' outcomes. The number

and duration of the admission was dramatically reduced and the clinical and social outcomes showed the significant improvement. (The final data of this study would be analyzed by the time of poster presentation)
Conclusions and Discussions: We altered and complemented the PACT for ours purpose, but the modified PACT of the CMHC was proved to be successful in applying for the SMI patients in Korea. Further case controlled, long term study with larger sample size should be carried out for more detailed result.

**REFERENCES:**


1. Leonard IS, Alberto BS: Assertive Community Treatment of Persons with Severe Mental Illenss. New York, W.W. Norton & Company Inc.,1998
2. Fam J, Lee C, Lim BL, Lee KK: Assertive Community Treat ment (ACT) in Singapore: a 1-year follow-up study. Ann Acad Med Singapore 2007;36:409-412


**NR6-098**

## DIFFERENTIAL DIAGNOSIS, TREATMENT RECOMMENDATIONS AND ADHERENCE OF PSYCHOGENIC NON-EPILEPTIFORM SEIZURES


*Amy Burleson, Psy.D. Dayton VA Medical CenterPrimary Care 4100 W. Third StreetDayton, OH 45428, DaytonOH 45428, Youssef Mahfoud, M.D. (presenting), Isabel Schuermeyer, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) identify the differential diagnoses associated with psychogenic seizures; 2) identify the treatment recommendations for psychogenic seizures; and 3) acknowledge the low follow-through adherence rate to treatment recommendations.

**SUMMARY:**


Introduction: Non epileptic seizures (NES) are a common reason for psychiatry consult during inpatient epilepsy monitoring at the Cleveland Clinic Foundation (CCF). Multiple diagnoses are associated with NES, including conversion disorder, factitious disorder, malingering, depression, and anxiety disorders. Standard treatment has typically been intensive psychotherapy and often antidepressants as well. However, what was not studied are the differential diagnoses, treatment recommendations, and the adherence to treatment recommendations after hospital discharge. The primary aim of this study is to review the differential diagnoses, treatments recommendations and adherence to treatment for patients admitted to our inpatient Epilepsy Monitoring Unit at CCF and diagnosed with psychogenic non-epileptiform seizures (1,2,3). Methods: A chart review of 200 sequential patients admitted to the EMU that were seen by the psychiatry consult-liaison service was completed. Data collected included general demographics, psychiatric history, final diagnosis by consult service, treatment recommendations, and treatment adherence. Symptoms at follow up were included in the data gathering. Results:
The most common diagnosis given by our consult service was Conversion disorder (56%), followed by depressive disorders. Psychotherapy was the most common treatment recommendation (91%). Evidence was found for adherence or non-adherence in only 30% of patients. Patients who adhered to treatment recommendations showed fewer symptoms. However, although a trend existed, there was no statistical difference. Conclusion:
As expected, the most common diagnosis and recommendation were similar to those found in the literature. Psychotherapy seems to reduce symptoms however results are limited by the small sample size. Our plan is to continue this study to track individual's follow-up.


**REFERENCES:**


1. D'Alessio, L., Giagante, B., Oddo, S., Silvia, W., Solis, P., Consalvo, D., Kochen, S: Psychiatric disorders in patients with psychogenic non-epileptic seizures, with and without comorbid epilepsy. Seizure 2006; 15(5): 333-339.
2. Jongsma MJ, Mommers JM, Renier WO, Meinardi H: Fol low-up of psychogenic, non-epileptic seizures : A pilot study-experience in a Dutch special centre for epilepsy. Seizure 1999; 8(3): 146-8.


**NR6-099**

## BODY IMAGE CONCERNS AND THE PREVALENCE OF BODY DYSMORPHIC DISORDER IN TURKISH ADOLESCENTS


*Burcu Goksan, M.D. Sisli Etfal Egitim ve Arastirma Hastanesi 19 Mayis mah. Sisli, Istanbul, Turkey 34340, K. Oguz Karamustafalioglu, M.D. (presenting)*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to diagnose and treat body dysmorphic disorder.

**SUMMARY:**


Objective: The purpose of the present study was to find the prevalence of BDD and common concerns about body parts in a sample of senior high school students in Istanbul, Turkey. Method: 271 students attending first grade in high school were invited to the study. All students accepted to participate to the study. The study was approved by the ethics committee. All students were asked to fill out self-report questionnaires; Body dysmorphic disorder questionnaire (BDDQ) and Body Dysmorphic Disorder Examination Self-Report (BDDE-SR), a sociodemographic form. The subjects who screened positive for BDD on BDDQ and BDDE–SR, a follow up interview was conducted and all were examined face to face. The subjects were evaluated by using the Structured Clinical Interview for DSM- IV (SCID). Mean scores, and frequencies were computed. The level of significance for all tests was set at 0.05. Results:63.7% of the female students, and 49% of the males were dissatisfied with their appearence. However 2.6 % fulfilled the criteria for BDD. Females were significantly more concerned about their appearence compared to males (p= 0,015). Females had significantly more dissatisfaction about their weight, thighs, legs, butt, hips, hands, nose, and skin compared to males. Females scored higher on specific BDDE- SR items compared to males. These items include greater appearence dissatisfaction (p=0.023), worrying more about appearence in public places (p<0.001), and worrying more about appearence where familiar people are around (p= 0.006). Discussion: In the Western societies face, skin, and hair are the most common areas of concern whereas in the Turkish adolescents hips and waist-abdomen are also the most common areas to focus on in addition to teeth, hair, and nose. Conclusion: It is possible that cultural influences might direct subjects'

concerns toward spesific body parts. The small sample size, as well as the restrictions on age range limited the generalizability of our results.

**REFERENCES:**


1. Phillips KA: The Broken Mirror: Understanding and Treat ing Body Dysmorphic Disorder New York, Oxford Univer sity Press, 1996.
2. Koff E, Benavage A, Wong B. Body image attitudes and psy chosocial functioning in Euro-American and Asian-American college women. Psychol Rep 2001;88:917-928.


**NR6-100**

## WHY HAVE THE DEPRESSED MORE SOMATIC SYMPTOMS THAN THE NON-DEPRESSED?: DIFFERENCE IN MALE AND FEMALE


*Jung Han-Young, M.D. Department of Psychiatry, College of Medicine, Soonchunhyang University Bucheon Hospital, 1174, Jung-dong, Wonmi-gu, Bucheon-si, Gyeonggi-Do, 420-767, Korea, BucheonSouth Korea 420-767, Joon-Ho Park, Ph.D., Soyoung Irene Lee, M.D., Ph.D., Yang-Rae Kim, M.D., Ji-Hyea Hong, M.D., Yu-Jin Lee, M.D., Tae-Youn Jun, M.D., Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to treat different way about the somatic symptoms of depressive group according to sex.

**SUMMARY:**


Objectives: Somatic symptoms are known to be a prominent characteristic in patients with depressive symptom. Many researchers have suggested the relationship between the somatic symptoms and depression with various mechanisms, but it still remains unclear. The purpose of this study was to test the cause of somatic symptoms in the depressive group. It was hypothesized that the mechanism of the relationship between the somatic symptoms and depression would be different according to the degree of depression and sex. Methods: Four-hundred and fifteen subjects from a psychiatric outpatient clinic participated in this study. Subjects who have a chronic medical illness were excluded from the beginning. They were asked to rate the depression scale of Symptom Checklist-90, Somatosensory Amplification Scale (SSAS), and Symptom Interpretation Questionnaire (SIQ). Subjects were divided into two groups. The depressive(DEP) group was over T65 score of the depression scale of SCL-90-R and the non-depressive(non-DEP) group was under T60 score of it. Results: The DEP group(M=7.28) had a higher frequency of somatic symptoms than the non-DEP group(M=5.55), $t(412)=-5.93$, $p<.01$. In both DEP and non-DEP group, SSAS(Beta=.22, $p<.05$; Beta=.27, $p<.01$) and SIQ(Beta=.13, $p<.10$; Beta=.12, $p<.10$) predicted somatic symptoms. In the male DEP group, SSAS(Beta=.35, $p<.05$) predicted significantly somatic symptoms. In the female DEP group, on the other side, SIQ(Beta=.20, $p<.05$) predicted significantly somatic symptoms. In the male and female non-DEP group, SSAS(Beta=.21, $p<.10$; Beta=.25, $p<.05$) predicted significantly somatic symptoms. Conclusions: The results of this study suggest that somatic symptoms are mainly caused by somatosensory amplification. However, physical interpretation cause somatic symptoms in the female DEP group.


**REFERENCES:**


1. Sayar K, Kirmayer LJ, Taillefer S: Predictors of somatic symptoms in depressive disorder. Gen Hosp Psychiatry 2003; 5:108-114
2. Sayar K, Barsky AJ, Gulec H: Does somatosensory amplifica tion decrease with antidepressant treatment? Psychosomatics 2005; 46:340-344


**NR6-101**

## SURGICAL AND MINIMALLY INVASIVE COSMETIC PROCEDURES AMONG PERSONS WITH BODY DYSMORPHIC DISORDER


*Katharine A Phillips, M.D. Butler Hospital, 345 Blackstone Blvd., Providence, RI 02906, Canice E. Crerand, Ph.D., William Menard, B.A., Katharine A. Phillips, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize that surgical/minimally invasive cosmetic treatments are received by many individuals with BDD but appear rarely effective.

**SUMMARY:**


Introduction: Individuals with body dysmorphic disorder (BDD) – a distressing or impairing preoccupation with an imagined or slight defect in appearance -- often seek and receive cosmetic treatment such as surgery and minimally invasive (MI) treatment (e.g., chemical peels, microdermabrasion, and injectable fillers). However, few studies have examined this topic. We previously reported on cosmetic treatment sought and received by a sample of BDD subjects; this report provides a more in-depth examination of surgical and MI treatment specifically. Methods: 200 individuals with DSM-IV BDD participated in a naturalistic, prospective study of the course of BDD. Data presented here are from the study's intake assessment. Data were obtained on cosmetic treatment ever sought or received for BDD concerns; treatment outcome was retrospectively assessed. Results: Subjects who had ever received surgical/MI treatment for BDD concerns (n=42; 21% of the sample) were significantly older and sought these treatments for more disliked body parts than those who sought such treatment but did not receive it. Surgical/MI treatments were more likely than other cosmetic treatments (e.g., dermatologic, dental) to decrease preoccupation with the treated body part; however, improvement was usually temporary. Only 2.3% (2 of 87) of surgical/MI treatments led to longer-term improvement in overall BDD severity. Sought surgical/MI treatments were less likely to be received than other types of sought cosmetic treatments (58.8% vs. 87.4%, $p<0.001$). The most common reasons sought surgical/MI procedures were not received were cost (29.5% of cases in which sought treatments were not received) and physician refusal to do the requested procedure (26.2% of cases). Conclusions: Surgical/MI treatment for BDD differed from other cosmetic treatments in several ways and appeared rarely effective for BDD. Prospective studies are needed to further examine this topic.


**REFERENCES:**


1. Crerand C, Phillips KA, Menard W, Fay C: Non-psychiatric medical treatment of body dysmorphic disorder. Psychoso matics 2005; 46:549-555.
2. Phillips KA: Body dysmorphic disorder, in Treatments of *DSM-IV-TR* Psychiatric Disorders. Edited by Gabbard G.

Washington, DC, American Psychiatric Publishing, Inc, 2007.

**NR6-102**

**EFFECTS OF STRESS SEVERITY AND DURATION ON EXACERBATIONS IN WOMEN WITH RELAPSING-REMITTING MULTIPLE SCLEROSIS**

*Charalampos Mitsonis, M.D. Department of Psychiatry, Eginition Hospital, Athens University Medical School 7, Metamorfoseos str., GR- 15234 Halandri-Athens, Greece, AthensGreece 15234, Ioannis Zervas, M.D., Ph.D., Nikolaos Dimopoulos, M.D., Ph.D., Georgios Sotiropoulos, M.D., Konstantin Potagas, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize that in women with relapsing-remitting Multiple Sclerosis (MS) there is a robust interaction between the risk of relapsing and the duration of stress but not the severity of stress. Long-term stress has a "dose depend" effect on MS exacerbations.

**SUMMARY:**

Objective: The relationship between psychological stress and Multiple Sclerosis (MS) has been suggested since the 19th century. However, the validity and the nature of this relationship remain unclear. The aim of this study was to investigate how Stressful Life Events' (SLEs) duration and severity interact with MS exacerbations. Method: Twenty six ambulating women (Expanded Disability Status Score, EDSS =3) with relapsing-remitting Multiple Sclerosis were followed for a mean of 56.3 (SD=20.8) weeks. Each week patients assessed SLEs in self reported weekly diaries that were collected at regular visits every 4 weeks. SLEs were classified as short-term if has no lasting effect and long-term if implies lasting changes at least 10-14 days after the event. The severity of SLEs was determined using the Recent Life Change Questionnaire.

Results: In total, 90.1% of relapses were associated with one or more SLEs in the prior 4 weeks. Three hundred and six (63.8%) of the SLEs had short-term duration and, 173 (36.2%) had a long term duration. A multivariate Cox regression analysis showed that at least one long- term SLE is associated with 3 times (95% CI 1.01 to 9.13, $p<0.05$) the rate of exacerbation during the following four weeks. Long-term SLEs were associated in a linear fashion with the risk of occurrence of a relapse. In the opposite, short-term SLEs had no effect in MS disease activity even if present in a high density (=3 events). There was no significant association between the severity of stressor and the risk for relapsing (95% CI 0.99 to 1.01, $p>0.05$).

Conclusions: Chronicity of a stressor seems to increase the risk for relapsing in MS contrarily to stress severity. The effect of long-term SLEs is cumulative. Further research is needed to determine if psychological interventions and pharmacological treatments can modify the effects of specific stress attributes on MS exacerbations.

**REFERENCES:**

1. Ackerman KD, Heyman R, Rabin BS, Anderson BP, Houck PR, Frank E, Baum A: Stressful life events precede exacerba tions of multiple sclerosis. Psychosom Med 2002;64:916-20.
2. Mohr DC, Hart SL, Julian L, Cox D, Pelletier D: Associa tion between stressful life events and exacerbation in multiple sclerosis: a meta-analysis. BMJ 2004;328:731.

**NR6-103**

**SOMATIC SYMPTOMS, ANXIETY AND DEPRESSION IN CHRONIC STRESSED WOMEN**

*Diana Molina, M.D. Insurgentes Sur 3700, Letra C, Col. Insurgentes Cuicuilco , Delegación Coyoacán , C.P. 04530 , México, D.F., Mexico City, Mexico 04530,*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the need of psychiatric support for mothers of chronically ill children and the relationship between depressive and anxious symptoms with somatic complains this group of chronic stressed women.

**SUMMARY:**

Introduction. There is evidence that chronic stress increases the risk for psychiatric and medical symptoms. Objective. Determine frequency of depressive, anxious and somatic symptoms in a group of women under chronic stress compared with non stressed women.

Methods. Sample were 30 mothers of children with leukemia under chemotherapy for more than 6 months. Control group were 22 mothers of healthy children working as administrative staff at the hospital, women with major life events occurred for the last 6 months were excluded. Both groups answered a Structured Clinical interview, Depression Beck Inventory and Sheehan Anxiety scales I and II. Results. No differences were found between sample and controls on mean age; 35.07 + 5.9 vs 36.63 + 5.4 ($p=0.88$), marital status ($p=.08$), family structure ($p=0.46$) or religion ($p=0.58$).

Sheehan I scored 54.1+ 33.5 for sample vs 16.7 + 14.6 controls ($p=.0001$). Sheehan II scored 14.3 +11.6 for sample vs 4.8+ 5.4 controls ( $p=0.0019$ ).Beck Inventory mean score was 18.8+10.2 for sample and 8.4+ 5.3 for controls ($p=0003$).

Of sample mothers 59% scored on depression range vs 9% controls ($p=.000$). Searching spiritual counseling by priests was reported by 40.7% of the sample and 4 %controls ($p=.005$). On sample group 70% had search for medical consultation the last 6 months vs 18.% controls ($p=0.0002$). Somatic symptoms were; digestive in 37% of sample vs 4.5% controls ($p=0.002$), muscle and articular pain 33% sample vs 4% controls ($p= 0.01$) and headache 48% sample vs 18% controls ($p=0.02$) No differences were found for infectious diseases ($p=1.00$), hypertension ($p=0.49$) or gynecologic symptoms ($p= 0.11$). Conclusions. There was a higher frequency of anxious, depressive and somatic symptoms among mothers of chronic stressed mothers of children with leukemia compared with mothers of healthy children.

**REFERENCES:**

1. Fava G. M.D: Psychological Factors Affecting Medical Condition: A New Proposal for DSM-V. Psychosomatics 2007; 48:103-111.
2. Simon E, MD. An International Study of the Relation be tween somatic symptoms and Depression. NEJM. 1999; 341: 1329-1335.

**NR6-104**

**EFFECT OF A TREATMENT WITH 10 HZ REPETITIVE TRANSCRANIAL MAGNETIC STIMULATION (RTMS) ON THE EEG ALPHA ACTIVITY OF**

**SCHIZOPHRENIC PATIENTS**

*Joachim Cordes, M.D. Department of Psychiatry and Psychotherapy Heinrich-Heine University Rhineland State ClinicsBergische Landstraße 2 Düsseldorf Germany 40629, Margarete Mittrach, M.S., M.A., Georgios Kotrotsios, M.D. cand., Mareke Arends, M.D., Wolfgang Wölwer, Ph.D., Georg Winterer, M.D., Jürgen Brinkmeyer, M.S.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should understand that rTMS can increase cortical alpha activity in schizophrenic patients. Moreover, the participant will learn about EEG correlates of cognitive function and psychopathology as a response to rTMS treatment in schizophrenia.

**SUMMARY:**

Introduction: Evidence for significantly increased delta and theta EEG activity over the temporal (Gattaz, 1992) or frontal (Winterer, 2000) brain regions has been found in schizophrenia, often associated with negative symptomatology. Only few studies have investigated the effect of therapeutic high frequeny rTMS on the EEG activity of schizophrenic patients. By means of quantitative analysis of EEG activity we aim to find out, if a 10 Hz rTMS treatment can increase alpha power over the prefrontal cortex of schizophrenic patients.

Methods: 26 schizophrenic patients were randomly assigned to a verum (N=14) and a control group (N=12). Patients in the verum group received 10Hz rTMS over the left dorsolateral prefrontal cortex with an intensity of 110% motor threshold for 10 days. The control group was treated with a sham coil. A 32-channel EEG was recorded before the first and on the day after the last rTMS session. In addition neuropsychological performance was assessed by the Trail Making Test B (TMT-B) and the Wisconsin Card Sorting Test (WCST). Psychopathology was rated on the Clinical Global Impressions Scale (CGI).

Results: No group differences were found regarding absolute power or frequency bands at baseline. After rTMS the verum group showed a significant increase in alpha activity compared to the sham group. Alpha frequency had a negative correlation with TMT-B in the occipital region and a positive correlation with the WCST in the parieto-temporal region ($p<0.05$). A significant correlation was also found between alpha power at Pz and decrease of the CGI severity score in the verum group.

Discussion: The EEG analysis demonstrates that rTMS can have a significant effect on cortical alpha activity. Further studies should investigate the assumed relationship between an increase of alpha power in frontal brain regions and the improvement of negative symptomatology after a high-frequency rTMS treatment in schizophrenia.

Sponsors: Janssen-Cilag, Medtronic

**REFERENCES:**

1. Gattaz WF, Mayer S, Ziegler P, Platz M, Gasser T. Hypofron tality on topographic EEG in schizophrenia. Correlations with neuropsychological and psychopathological parameters. Eur Arch Psychiatry Clin Neurosci 1992; 241(6):328-32
2. Winterer G, Ziller M, Dorn H, Frick K, Mulert C, Wuebben Y, Herrmann WM. Frontal dys-function in schizophrenia--a new electrophysiological classifier for research and clini cal applications. Eur Arch Psychiatry Clin Neurosci 2000; 250(4):207-14

**NR6-105**

**IMPACT OF REAL-WORLD ZIPRASIDONE DOSING ON TREATMENT DISCONTINUATION RATES IN SUBJECTS WITH SCHIZOPHRENIA OR BIPOLAR DISORDER**

*Leslie Citrome, M.D. Nathan S Kline Institute for Psychiatric Research 140 Old Orangeburg Road, Orangeburg, NY 10962, Christopher Reist, M.D., Liisa Palmer, Ph.D., Leslie Montejano, Brian Cuffel, Ph.D, James Harnett, PharmD, M.S., Kafi Sanders, M.P.H*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to discuss the relationship between the dose of ziprasidone and the time to discontinuation.

**SUMMARY:**

Objective: To evaluate the relationship between maximum dose of ziprasidone and time to discontinuation in clinical practice.

Methods: The 2001–2005 Thomson MarketScan Medicaid Database (Medicaid) and the 2001–2006 MarketScan Commercial Claims and Encounters Database (Commercial) were analyzed for maximum doses of ziprasidone achieved in a population of patients with schizophrenia/ schizoaffective disorder or bipolar disorder. Ziprasidone maximum dose groups were defined as low (20–60 mg/d), medium (61–119 mg/d), and high (120–160 mg/d). Outliers receiving doses in excess of 160 mg/d were considered separately. Time to discontinuation was evaluated across propensity score matched dosing groups. Cox proportional hazard models were used to adjust for confounding in comparing the high- and medium-dose groups with the low-dose group.

Results: Data were available for 19,301 subjects with bipolar disorder, of which 27.0% received low-dose, 25.4% medium-dose, and 47.6% high-dose ziprasidone. Of those subjects with schizophrenia (n = 26,629), 17.1% were receiving a maximum low dose of ziprasidone, 21.4% a medium dose, and 61.5% a high dose. Among the propensity score- matched dosing groups, the respective time to discontinuation for low, medium and high dose was 85.0, 111.2, 174.6 days within the bipolar cohort and 87.1, 117.8, 195.7 days within the schizophrenia cohort ($p < 0.001$ for all comparisons). The hazard ratios for discontinuing therapy were significantly lower for the medium- (0.81, 0.83) and high-dose (0.55, 0.58) groups relative to the low-dose group in schizophrenia and bipolar, respectively.

Conclusion: As antipsychotic dose titration is often required, this 5-year retrospective database analysis demonstrates that patients with schizophrenia or bipolar receiving a maximum ziprasidone dose of 120–160 mg/day experienced a statistically significant lower discontinuation rate compared with those receiving lower doses

Supported by funding from Pfizer Inc.

**REFERENCES:**

1. Joyce AT, et al. Effect of initial ziprasidone dose on length of therapy in schizophrenia. Schizophr Res. 2006;83:285–292.
2. Mullins DC, et al. Effect of initial ziprasidone dose on treat ment persistence in schizophrenia. Schizophr Res. 2006;83:277–284

**NR6-106**

## ADHD CHILDREN WITH DAT-1 9,9 DO NOT REQUIRE HIGHER STIMULANT DOSES

*Stephanie Hamarman, M.D. 200 Riverside Blvd #30A New York, NY 10069, New YorkNY 10069, Stephanie Hamarman MD, James Dermody PhD*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to; learn if Dopamine Transporter Genotype 9,9 correlates with clinical treatment outcomes in children with Attention Deficit Hyperactivity Disorder

**SUMMARY:**

OBJECTIVE: Stimulant medications, such as methylphenidate (MPH), are the most commonly used, effective treatment for ADHD. MPH acts primarily by inhibiting the dopamine transporter (DAT) (Swanson, 2000). Stein (2005) found that children homozygous for the 9-repeat DAT1 3'-UTR genotype had a poor response to methylphenidate. The aim of this study is to determine if the DAT 1,9 9 predicts responsiveness to stimulant medication (MPH) in children with Attention Deficit Hyperactivity Disorder. METHOD: 74 children ages 7-15, from an urban outpatient clinic, were enrolled. All were diagnosed clinically with ADHD and confirmed by DISC IV-P. Children were screened for the genetic polymorphisms in DAT using blood samples. These children with ADHD were treated with gradually increasing doses of MPH using a structured schedule based on serial responses to the Conners Global Index – Parent and Teacher versions. The "dose to achieve improvement" was determined for each child( defined by a 10 point incremental improvement on serial Conners' Global Index. Responsiveness to medication of the DAT 9,9 genotype versus other DAT -1 tandem repeat genotypes was compared for the 2 groups of children. Kaplan-Meier estimate curves were generated using "Dose to Achieve Improvement" as the independent variable and percentage of children achieving a ten -point improvement in the CGI-P as the clinical event. RESULTS: Among the 74 children enrolled, the genetic polymorphism DAT-1 9,9 genotype was noted in 4 children ( 5.4%). ADHD children with the DAT-1 9,9 genotype needed 19 mg of MPH to improve SEM=2; CI(14,23). The ADHD children without the DAT-1 9.9 genotype needed 25 mg of MPH to improve SEM=2 CI (22,27) log rank=1.86 , df=1, p=0.17.Power to detect a 10 mg difference >95%.CONCLUSIONS:In contrast to a the finding of another group, we did not replicate that children with ADHD and the DAT-1 9,9 genotype needed more MPH to improve.

**REFERENCES:**

1. Stein MA, Waldman ID, Sarampote CS, Seymour KE, Robb AS, Conlon C, Kim SJ, Cook EH. "Dopamine Transporter Genotype and Methylphenidate Response in Children with ADHD".Neuropsychopharmacology 2005 July; 30 (7) 1374-1382.
2. Hamarman S, Fossella J, Ulger C, Brimacombe M, Dermody J. "DRD4 7 Repeat Allele Predicts Methylphenidate Dose Response in Children with Attention Deficit Hyperactivity Disorder: A Pharmacogenetic Study" Journal of Child and Adolescent Psychopharmacology 2004; 14 (4) 564-574.

**NR6-107**

## RISPERDAL ORAL SOLUTION WITH ORAL LORAZEPAM VS HALOPERIDOL INJECTION WITH LORAZEPAM FOR ACUTE PSYCHOTIC SYMPTOM MANAGEMENT IN THE ELDERLY PATIENTS

*Tak Youn, M.D. Department of neuropsychiatry, Chonnam National University Medical School, 5 Hak-dong, Dong-gu, GwangjuKorea 501-746, Ha HW, M.D., Ph.D. Nampyeng Mirae Hospital, Naju, Korea Yoon JS. M.D., Ph.D. Department of psychiatry, Gwangju, Korea. and Clinical trial centoer*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to manage acute psychotic symptoms such as delirium in the elderly patients with oranic mental disorder more safely and easily.

**SUMMARY:**

Objective: The purpose of the present study was to investigate the effect, safety and tolerability of Risperdal Sachet (risperdal oral soultion packed by 1ml (risperdione 1mg) or 2ml (risperidone 2mg))with lorazepam tablet versus intramuscular haloperidol and lorazepam injection for management of acute psychotic symtoms in the elderly with organic mental disorder.
Methods: Total 37 patients who have dementia, medical or physical diseases, associated with acute psychotic symptoms were assigned randomly two groups. one group was treated with 1mg of Risperdal Sachet (oral solution) and lorazepam 1mg tablet (n=17), the other group was treated with intramuscular injection treatment with haloperidol 2.5mg and lorazepam 2mg (n=20). The change of CGI scores was used for the evaluation of efficacy.
Results: Mean of CGI scores at 15, 30, 60 and 120 minutes after drug administration were statistically significant at each time point in both groups ($P<0.001$). There were no group difference of treatment efficaty between two groups.
Conclusion: A single oral dose of Risperdal Sachet (oral solution)with lorazepam was effective and tolerable as parenterally administered haloperidol and lorazepam for the rapid control of acute psychotic symptoms in the elderly with organic mental disorder.

**REFERENCES:**

1. Goedhard LE, Stolker JJ, Heerdink ER, Nijman HL, Olivier B, Egberts TC. Pharmacotherapy for the treatment of aggres sive behavior in general adult psychitatry: a systemic review. J Clin Psychiatry 2006:67:1013-1024
2. Currie GW, Chou JC, Feifel D, Bossie CA, Turkoz I, Mahmoud RA. Acute treatment of psychotic agitation: a randomized comparison of oral treatment with risperidone and lorazepam versus intramulscular treatment with haloperi dol and lorazepam. J Clni Psychiatry. 2004:65:386-394

**NR6-108**

## CLINICAL AND FUNCTIONING OUTCOMES OF RISPERIDONE LONG-ACTING INJECTION VERSUS ORAL ANTIPSYCHOTICS IN SCHIZOPHRENIA

*Zhongyun Zhao, Ph.D. 700 Route 202 South, Raritan, NJ 08869, 700 Route 202 South, Raritan, NJ 08869, Jose M. Olivares, M.D. Ph.D., Alex Rodriguez-Morales, M.D., Joris Diels, M.S., Micheal Povey, M.S., Annette Lam, M. H. Econ,*

*An Jacobs, B.S., Zhongyun Zhao, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand better about clinical and functioning treatment outcomes of risperidone long-acting injection versus oral antipsychotics in a naturalistic treatment setting.

**SUMMARY:**

Objective: To assess clinical and functioning treatment outcomes of risperidone long-acting injection (RLAI) versus oral antipsychotics for patients participating in the electronic Schizophrenia Treatment Adherence Registry (e-STAR) in Spain.

Methods: e-STAR is a 2-year, multi-national, prospective, observational study of patients with schizophrenia who were initiated on RLAI or an oral antipsychotic. Data were collected retrospectively for 1-year and prospectively every three months for 2 years. Outcomes included clinical effectiveness measured by Clinical Global Impression of Illness Severity (CGI-S) and patient functioning assessed by Global Assessment of Functioning (GAF) scale. Clinical and functional outcomes are analyzed using a linear mixed model controlling for age, gender, disease duration, baseline hospitalization status and antipsychotic treatment patterns. Results presented in this report are based on the complete e-STAR data from Spain.

Results: A total of 1,622 patients (63.6% male, mean age 38.4±11.2 years) participated in e-STAR from Spain, 1,345 were initiated on RLAI and 277 were treated with oral antipsychotics. RLAI treated patients had significantly longer disease duration (12.6±9.5 years vs. 10.9±9.7, $p<0.01$) than those treated with oral antipsychotics. During the 2-year study, clinical symptoms and functioning improved in both groups. As revealed by the mixed-model regression, RLAI patients, compared to oral patients, had significantly greater improvement on CGI-S scores (-1.10 vs. –0.88, $p<0.02$) and GAF scores (16.4 vs. 14.6, $p<0.03$). Baseline hospitalization status and disease duration were significant explanatory variables in the mixed model regression.

Conclusions: This 2-year, prospective, observational study showed that compared to oral antipsychotics, RLAI treatment was associated with greater improvement in clinical symptoms and functioning in patients with schizophrenia.

**REFERENCES:**

1. Kane JM: Strategies for improving compliance in treatment of schizophrenia by using a long-acting formulation of an antipsychotic: clinical studies. J Clin Psychiatry 2003; 64 Suppl:34-40
2. Gastpar M. et al: Sustained improvement of clinical outcome with risperidone long-acting injectable in psychotic patients previously treated with olanzapine. J Psychopharmacol 2005;19 Suppl 1:32-38

**NR6-109**

## IMPROVEMENT IN PERSONAL AND SOCIAL FUNCTIONING IN SCHIZOPHRENIA PATIENTS TREATED WITH RISPERIDONE LONG ACTING INJECTION: 6-MONTH RESULTS FROM E-STAR

*Zhongyun Zhao, Ph.D. 700 Route 202 South, Raritan, NJ 08869, Jan Pecenak, Doc. MUDr., Ivan Tuma,Doc. MUDr., E. de Groot-Stam, M.D., Lars Eriksson, M.D., B. Bork, M.D., Loys Ligate, M.D., Michael Povey, M.S., Annette Lam, M. H. Econ, Kostas Trakas, Ph.D., Zhongyun Zhao, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand what the Personal and Social Performance scale measures and what domains are evaluated in the scale. Participants should also be able to recognize a piece of evidence of risperidone long-acting injection in improving the personal and social functioning of patients with schizophrenia.

**SUMMARY:**

Objective: To evaluate the effectiveness of risperidone long-acting injection (RLAI) treatment on personal and social functioning in patients with schizophrenia enrolled in the electronic-Schizophrenia Treatment Adherence Registry (e-STAR) from six countries (Canada, Czech Republic, Denmark, Netherlands, Slovakia, Sweden) that collected Personal and Social Performance (PSP) data.

Methods: e-STAR is an international, long-term, prospective, observational study of patients with schizophrenia who commence RLAI. Data are collected retrospectively for 1 year and prospectively every 3 months for 2 years. Personal and social functioning is measured using the PSP scale which evaluates four areas, socially useful activities, personal and social relationships, self-care, and disturbing and aggressive behaviour. Pooled results presented are based on data from patients who have completed their 6-month follow-up visit.

Results. To date, 1,831 are enrolled in e-STAR from the six countries, 1,232 patients who have been followed for at least 6 months are included in this analysis. Mean age was 38.4±12.5 years, 58.6% were male and mean time since diagnosis was 9.6±11.6 years. At 6 months, 95.5% of patients are still on RLAI. The mean PSP score significantly improved from 48.0±17.3 at baseline to 64.2±15.2 at 6 months ($p<0.001$). Improvement in PSP was similar for patients hospitalized at baseline versus those who were ambulatory patients (PSP score increased by 17.2 and 16.1, respectively, $p<0.001$ for both). Furthermore, significant improvement in PSP was seen as soon as the first assessment after RLAI treatment at 3 months.

Conclusions. These 6-month interim results indicate that personal and social functioning as measured by the PSP improved with risperidone long-acting injection treatment in patients with schizophrenia.

**REFERENCES:**

1. Nasrallah HA et al: Defining and measuring clinical effec tiveness in the treatment of schizophrenia. Psychiatric Ser vices 2005; 56:273-282
2. Patrick D et al: Reliability, validity and sensitivity to change of the Personal and Social Performance scale in patients with acute schizophrenia. Int J Neuropsychopharmacol 2006; 9 Suppl 1:S287-S288

**NR6-110**

## POSTTRAUMATIC RESPONSES, WORK FUNCTIONING AND IMPAIRMENT IN PUBLIC HEALTH WORKERS EXPOSED TO THE 2004 FLORIDA HURRICANES

*Carol S Fullerton, Ph.D. Department of Psychiatry Scientific Director, Center for the Study of Traumatic Stress Uniformed Services University School of Medicine*

*4301 Jones Bridge Road, BethesdaMD 20814, Jodi B. A. McKibben, Ph.D., Robert J. Ursano, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to; 1) Demonstrate an understanding of rates of PTSD symptoms of sleep disturbance and hyperarousal in public health workers exposed to multiple natural disasters: 2) Recognize the importance of the relationship between sleep disturbance and hyperarousal to workplace presenteeism, and emotional and functional impairment; and 3) Identify mental health interventions indicated for public health workers exposed to traumatic events.

**SUMMARY:**

Introduction: Although first responders to disasters have been studied (Fullerton et al., 2004), public health workers, critical to planning for interventions before, during, and in the aftermath of a disaster, have infrequently been studied (Grieger et al., 2003). The 2004 Florida hurricane season was unprecedented with four hurricanes and one tropical storm making landfall over the course of two months. This study examined posttraumatic responses as predictors of work functionality and impairment in Florida Department of Health (FDOH) employees 9 months following the 2004 Florida hurricanes.

Methods: Florida Department of Health employees (N=2249) completed surveys 9 months after the 2004 Florida hurricanes. Measures reported here included the PTSD Checklist (PCL-17), assessment of work presenteeism (reduced work performance), emotional and functional impairment.

Results: Hierarchical logistic regression analyses examined the relationship of sleep disturbance and hyperarousal to work presenteeism, and impairment adjusting for demographics. Sleep disturbance and hyperarousal significantly predicted work presenteeism (ORs=1.7 and 3.7, respectively), emotional impairment (ORs=2.2 and 7.3, respectively), and functional impairment (ORs=2.9 and 2.3, respectively).

Conclusions: The response and recovery efforts of FDOH following the 2004 Florida hurricanes demonstrate the extent to which state and local public health workers play a critical role as first responders. The predictive relationship of sleep disturbance and hyperarousal to presenteeism and impairment have implications for workplace intervention and training programs for public health workers. As we now confront future hurricanes and the prospect of an Asian influenza pandemic it is clear that public health workers have a critical role in protecting our nation's health.

**REFERENCES:**

1. Fullerton CS, Ursano RJ, Wang L: Acute stress disorder, post traumatic stress disorder, and depression in disaster or rescue workers. Am J Psychiatry 2004; 61:1370-1376.
2. Grieger TA, Fullerton CS, Ursano RJ: Posttraumatic stress disorder, alcohol use, and perceived safety after the terrorist attack on the pentagon. Psychiatric Services 2003; 54:1380-1382.

**NR6-111**

## NEUROPSYCHOPHYSIOLOGICAL CORRELATES OF CRIMINAL BEHAVIOUR P300 – COMPARATIVE STUDY IN SOME TYPES OF CRIME

*Ilja Zukov, M.D. Psychiatric clinic of the 1st Medical Faculty, Charles University, Ke Karlovu 1112808 Prague Czech Republic, Petr Kozelek, M.D., Tomas Hruby, M.D., Radek Ptacek, Psy.D., Ph.D., M.B.A., Jiri Raboch, M.D., Ph.D., Daniela Domluvilova, M.D., Slavomir Fischer, Psy.D., Ph.D., M.B.A.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant gets some new informations about neurobiological correlates of violent behaviour.

**SUMMARY:**

Event-related potentials are a simple non-invasive neurophysiological method that can grasp certain aspects of the cognitive processing of information in a human. The best-known and most important component of cognitive evoked potentials is the so-called P300 wave, which is not only of experimental but also of increasing clinical significance. Changes in its latency, amplitude and topography have been described in a wide range of diseases and in individuals with impulsive aggressive behaviour.

Basic hypothesis is stated that the group of impulsive aggressive delinquents (n=20) had a lesser P300 amplitude than the control group of non-delinquents (n=20), thiefs (n=20), non-impulsive aggressive delinquents (n=20).

Four groups of persons are compared in the study. In the first group the perpetrators of criminal actions that have been assessed to be impulsive, not planned, affectively motivated and affectively aggressive were included. The second group, the control one, included individuals who had not committed any criminal offence. The group of impulsive aggressive delinquents, included the delinquents behaving violently, impulsively and aggressively, whose behavior was assessed by the Police of the Czech Republic as being a criminal offence, e.g. murder, bodily injury, fight or attack on a public official. We discovered that there is statistical significant difference between the group of impulsive aggressive delinquents and the others in P 300 wave amplitude. We present results in 2s, 3s amplitude P 300. Both of them are lower in the group of impulsive aggressive subjects.

Our results confirm previous findings of which almost all show that the patients with the impulsive aggressiveness, in contrast not only to the norm, but to other criminal individuals as well, have a significant degree, decreased the amplitude of the P300 wave. P 300 wave in the group of impulsive aggressivenes could be a correlate of cognitive deficite.

**REFERENCES:**

1. Hruby T, Marsalek P: Event-Related Potentials – The P3 Wave. Acta Neurobiologiae Experimentalis 2003, 63, 55-63
2. Volavka J: Neurobiology of Violence. American Psychiatric Press, 1995

**NR6-112**

## CHILDHOOD TRAUMA IN ADULT PATIENTS WITH DEPRESSIVE AND ANXIETY DISORDERS: THE NESDA STUDY.

*Jacqueline G Hovens, M.D. Department of Psychiatry Leiden University Medical Center,PO Box 9600 2300 RC Leiden The Netherlands, LeidenNetherlands 2300 RC, Erik J. Giltay, M.D., Ph.D., Frans G. Zitman, M.D., Ph.D., Brenda Penninx, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to identify the differences of impact of childhood trauma on anxiety and depression.

**SUMMARY:**

Objective: As it is insufficiently known whether specific childhood trauma contributes differentially to the vulnerability of anxiety disorders, depressive disorders or comorbid anxiety and depressive disorders, we studied the effects of childhood emotional neglect and psychological, physical and sexual abuse.
Methods: In this cross-sectional analyses, 2981 patients, aged 18 through 65 years, were included as part of the longitudinal Netherlands Study of Depression and Anxiety (NESDA). Childhood trauma was assessed by the NEMESIS questionnaire to identify emotional neglect, psychological, physical and sexual abuse prior to age 16.
The CIDI based on *DSM-IV* criteria was used to diagnose depressive and anxiety disorders. Logistic regression analysis was used to calculate odds ratios for patient groups versus healthy controls.
Results: 1840 (62%) subjects were studied, with 245 patients diagnosed with a 'pure' current (6 months recency) anxiety disorder, 279 with a 'pure' current depressive disorder, 761 patients with a comorbid current anxiety and depressive disorder and 555 healthy controls. Childhood trauma rather than life events (e.g. parental loss, divorce or foster family; P values >0.05) was associated with psychopathology. Childhood trauma was increasingly prevalent in the anxiety, the depression and the comorbid group (P<0.001), especially for emotional neglect (odds ratio 8.60; 95% CI 5.95-12.42, psychological abuse (odds ratio 6.79; 95% CI: 4.19-11.01) and physical abuse (odds ratio 6.45; 95% CI: 3.48-11.95). The associations between sexual abuse and psychopathology were only found in women (odds ratio 3.41; 95% CI: 2.15-5.42), but not in men.
Conclusion: Childhood trauma rather than traumatic life events is related to anxiety and depressive disorders. As trauma is likely to contribute to the severity of psychopathology, the strongest associations were found in the co-morbid group.

**REFERENCES:**

1. Gibb BE, Chelminski I, Zimmerman M: Childhood emotion al, physical and sexual abuse, and diagnoses of depressive and anxiety disorders in adult psychiatric outpatients Depres sion and Anxiety 2007;24:256-263.
2. Edwards VJ, Holden GW, Felitti VJ, Anda RF: Relation ship between multiple forms of childhood maltreatment and adult mental health in community respondents: Results from the Adverse Childhood Experience Study. Am J Psychiatry 2003;160:1453-1460.

**NR6-114**

## TRANSPORTATION TRAUMA AND PSYCHOLOGICAL MORBIDITY IN HOSPITALIZED COLLISION SURVIVORS

*Quinn M Biggs, Ph.D. Center for the Study of Traumatic Stress Department of Psychiatry, Uniformed Services University of the Health Sciences, 4301 Jones Bridge Rd., Bethesda, MD 20814, Martha Bloodgood, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to; 1) Demonstrate an understanding of symptom rates of traumatic stress, depression, anxiety and acute stress in transportation collision survivors; 2) Recognize personal and injury characteristics associated with post-collision psychopathology: 3) Discuss implications of the findings including widespread screening, early intervention and training of health care providers to identify psychopathology

**SUMMARY:**

Introduction/Hypothesis
Transportation-related collisions are ubiquitous and associated with development of psychiatric disorders such as PTSD (Ursano et al., 1999) and other types of distress (Blanchard & Hickling, 2004). Early identification of the personal and injury characteristics associated with psychopathology is vital to development of early interventions. Symptom rates of acute stress, traumatic stress, depression and anxiety were hypothesized to be high and related to personal and injury characteristics.
Methods
Level I trauma center inpatients (N = 100), =16 years, =3 weeks post-injury voluntarily completed questionnaires which collected personal and injury information and symptom measures: 1) Davidson Trauma Scale (DTS) for traumatic stress, 2) Center for Epidemiologic Studies Depression Scale (CES-D) for depression, 3) Beck Anxiety Inventory (BAI) for anxiety and 4) novel DSM-IV (1994) diagnosis-related questions for acute stress disorder.
Results
The frequency of survivors meeting diagnostic symptom cutoff criteria included: traumatic stress, 27%; depression, 26%; anxiety, 20%; and acute stress disorder, 22%. Several variables were correlated to psychopathology including history of or treatment for psychological problems, alcohol/drug use, post-collision fear of dying, prior number of collisions in the last year, prior number of stressful events in the lifetime, greater perception of control of events that caused the collision, and collision-related guilt.
Conclusion/Discussion
Many collision survivors experience psychopathology, which may affect their ability to recover and return to a pre-collision lifestyle. This study has implications for widespread early screening of trauma survivors, evidence-based early interventions and training health care providers to identify psychopathology as well as the need for further study of acute phase psychological morbidity in transportation collision survivors.

**REFERENCES:**

1. Blanchard EB, Hickling EJ: After the crash: psychological as sessment and treatment of survivors of motor vehicle ac cidents. Washington, DC, American Psychological Associa tion, 2004
2. Ursano RJ, Fullerton CS, Epstein RS, Crowley B, Kao TC, Vance K, Craig KJ, Dougall AL, Baum A: Acute and chronic posttraumatic stress disorder in motor vehicle accident vic tims. Am J Psychiatry 1999; 156(4):589-95

**NR6-115**

## WHAT TYPES OF CHILDHOOD TRAUMA ARE MOST STRONGLY CORRELATED WITH ADULT

**PERSONALITY PATHOLOGY?**

*Simay N Gokbayrak, B.A. Beth Israel Medical Center Department of Psychiatry, 1st Avenue at 16th Street Karpas Building, 6th Floor, New York, NY 10003, N. Simay Gokbayrak, B.A., Jisha Philip M.D., Catherine Theo M.D., Igor Galynker M.D., Ph.D., Lisa J. Cohen, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the relative impact of sexual abuse on the development of adult personality pathology.

**SUMMARY:**

Objective: To compare the relationship between different forms of child abuse and adult personality pathology. Introduction: There is profound evidence in the literature about the impact of childhood abuse as a significant risk factor for the development of adult personality pathology. On the contrary, there is very little data comparing the relative impact of different forms of child maltreatment on adult axis II pathology. Methods: Twenty-eight participants between the ages 18-65 were recruited from psychiatric inpatient and outpatient units at a large urban hospital in New York City. Exclusionary criteria included significant Axis I psychotic disorders, current manic episode, dementia, substance dependence within the past 6 months (for all patients except substance abuse subgroup), mental retardation, organic impairment and autism. Measures of physical, emotional, and sexual child abuse along with child neglect (Childhood Trauma Questionnaire (CTQ), Bernstein et al., 1994; the Tactics in Conflict Questionnaire – Parent-Child Adult Recall Version, Strauss et al., 1999; The Multidimensional Neglect Scale (MNS), Straus et al., 2001), were correlated with the total score of a personality disorders instrument (Personality Diagnostic Questionnaire (PDQ-4), Hyler et al., 1995). Results: A regression analysis was conducted with total PDQ-4 scores as the dependent variable. Measures of child sexual, physical and emotional abuse as well as child neglect were entered as the predictor variables. The overall regression was significant (p= 0.023) but only sexual abuse significantly predicted personality pathology (p=0.30). Conclusion: Sexual abuse appears to be a particularly pernicious form of childhood trauma. Future studies need to further explore and classify personality disorders associated with early life sexual abuse.

**REFERENCES:**

1. Johnson, J.G., Cohen, P., Brown, J., Smailes, E. M. & Bernstein, D. P. (1999). Childhood maltreatment increases risk for personality disorders during early adulthood. Ar chives of General Psychiatry, 56, 600-606.
2. Mullen, E. C., Martin J. L., Anderson, J. C., Romans, S. E. (1996). The long-term impact of the physical, emotional and sexual abuse of children: a community study. Child Abuse & Neglect, 20, (1), 7-21

**NR6-116**

**PSYCHOPATHOLOGY OF KOREAN-TALIBAN HOSTAGES AFTER BEING RELEASED: 3 MONTHS FOLLOW-UP**

*Wootaek Jeon , M.D. Department of Medical Education / Psychiatry School of Medicine Yonsei University Sedamoon-Gu Shinchon-Dong 134 Seoul, South Korea 120-752, Wootaek JEON, M.D., Youngjoon LEE, B.A., Se Joo KIM, M.D., Su Young LEE, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand hostages' psychological symptoms to be "normal responses to abnormal trauma," and the difference of improvement among symptoms. Furthermore, it is also necessary to say that this particular knowledge can be applicable to treating hostages in general.

**SUMMARY:**

Background : On 19 July, 2007, 23 Korean Christian volunteers (16 women and 7 men) were captured and held hostage by the Taliban in Afghanistan. Two male captives were executed and the others were all released by 30 August.
Objective : The aim of this study was to observe the changes in mental health and posttraumatic responses of Korean-Taliban hostages after being released.
Method : The present study has been carried out by a one group longitudinal design with five repeated measures throughout a period of 3 months. All of the responders answered the questionnaires for our assessment five times, respectively: (T1) as soon as returned, (T2) a week later, (T3) 2 weeks later, (T4) 4 weeks later, and (T5) 12 weeks later. They completed Symptom Checklist 90-R(SCL 90-R) and Impact of Event Scale-Revised(IES-R).
Result : Symptoms related to mental health and posttraumatic responses were all diminished as time went by. In SCL 90-R, symptoms such as somatization, interpersonal sensitivity, anxiety, hostility, paranoid ideation, and psychoticism were significantly diminished between (T1) and (T2), so were obsession-compulsion and depression between (T2) and (T3), and phobic anxiety was also significantly diminished between (T1) and (T2), (T2) and (T3), and (T4) and (T5). In IES-R, subscale; namely, sleep and numbness was significantly diminished between (T1) and (T2). So was avoidance between (T3) and (T4). So were hyperarousal, intrusion, and IES-R total score between (T2) and (T3).
Conclusion : The first 4 weeks after their being released were the critical period for psychological intervention, and we need to be concerned with the difference of the improvement among psychological symptoms.

**REFERENCES:**

1. Hillman RG. The psychopathology of being held hostage. Am J Psychiatry. 1981;138(9):1193-7.
2. Vila G PL, Mouren-Simeoni MC An 18-Month Longitudinal study of posttraumatic Disorders in Children who were taken hostage in therir school. Psychosomatic medicine 1999;61:746-754.

**NR6-117**

**RELAPSE OF BIPOLAR AFFECTIVE DISORDER IN THE PERINATAL PERIOD: ROLE OF SLEEP**

*Anne Buist, M.D. Buidling 129AHeidelberg Repatriation Hospital, PO Box 5444, West HeidelbergAustralia 3081, J. Bilszta, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to have a better understanding of the possible role of altered sleep behaviour in relapse of bipolar affective disorder in the perinatal period.

**SUMMARY:**
Introduction: Sleep changes have been reported during the perinatal period and are related to alterations in circadian and reproductive hormones, and the physical discomfort of pregnancy (1). It is known during this time, women with a history of bipolar disorder/postpartum psychosis have a significant risk of relapse (2). Cessation of medication due to concerns of teratogenicity is one clear risk factor, as are hormonal changes that occur at delivery. However, these fail to explain all cases of psychosis, suggesting other mechanisms may be involved. Hypothesis: Given the perinatal period is a time of altered sleep behaviour, this may have an influence on relapse of a postpartum psychotic episode. Methodology: Women with a history of bipolar disorder/postpartum psychosis (n=21) and a healthy, control population (n=14) were compared. Mental health, psychosocial and sleep variables from each trimester of pregnancy and the 1st, 4th and 8th weeks postpartum were explored. Results: Five history women experienced a psychosis relapse within three months postpartum. No differences in age, weeks of pregnancy at enrolment and quality of the marital relationship/social supports were noted between the two groups. History women were more likely to have experienced medical problems during pregnancy, sexual abuse as a child and have fewer available social supports. There were no differences between history vs control, or relapse vs no relapse women, with respect to sleep behaviour. All women experienced significant differences between antenatal and postpartum sleep behaviour.
Conclusion: Results suggest bipolar disorder/postpartum psychosis relapse is not mediated by demographic, psychosocial or sleep variables. However, small numbers limit generalization. Any influence of medication is unable to be determined at this stage.
Funding: This project was funded by NARSAD: The National Mental Health Research Association. Travel expenses were provided by Astra Zeneca.
**REFERENCES:**
1. Ross LE, Murray BJ, Steiner M: Sleep and perinatal mood disorders: a critical review. J Psych Neurosci 2005; 30(4): 247-256.
2. Viguera AC, Nonacs R, Cohen LS, Tondo L, et al: Risk of Recurrence of Bipolar Disorder in Pregnant and Nonpregnant Women After Discontinuing Lithium Maintenance. Am J Psych 2000; 157: 179 - 184.

**NR6-118**

## POSTPARTUM DEPRESSION SCREENING IN DISADVANTAGED, INNER-CITY MOTHERS USING AN AUTOMATED TELEPHONE SYSTEM

*Helen Kim, M.D. Hennepin Women's Mental Health Program Hennepin County Medical Center, 900 South 8th Street --- S110 Clinic Minneapolis, MN 55405, , Diana B. Cutts, MD; Virginia R. Lupo,M.D.; Tu Quan, M.P.H.; Joni Geppert, M.P.H.; Yiscah Bracha, M.S.*
**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to: 1) recognize that interactive voice response (IVR) technology is a feasible means of reducing barriers to postpartum depression screening among disadvantaged mothers and 2) understand that further studies are needed to determine the validity of IVR results and the feasibility of using IVR to encourage at-risk mothers to seek treatment.
**SUMMARY:**
BACKGROUND: Postpartum depression (PPD) disproportionately affects low-income and minority mothers who often have limited access to standard screening and treatment models of care. Interactive voice response (IVR) is an automated phone system in which callers enter responses with a touch-tone phone. We hypothesized that IVR would be particularly appropriate for screening disadvantaged mothers by offering them privacy, eliminating the need for a clinic visit, and accommodating low literacy patients. The objective of this study is to test the feasibility of using IVR to administer a validated screen for PPD among disadvantaged women. METHODS: A convenience sample of English- and Spanish-speaking mothers was approached on postpartum day 1 or 2 at Hennepin County Medical Center. Subjects were asked to call an IVR system 14 to 21 days postpartum to complete the Edinburgh Postnatal Depression Scale (EPDS). Callers completed the EPDS and heard different closing narratives depending on their score. Callers scoring in the depressed range heard a message that they may be at risk for depression and could call the research staff for resources. Those acknowledging thoughts of self-harm were also given a suicide hotline number and called by the study psychiatrist. RESULTS: From Feb 2006 through August 2007, 699 subjects consented to participate in the study. Most participants were non-white (80%), unemployed (67%), and had < high school education (70%). Out of 699 participants, 269 (38%) called the IVR system. Rates of depression were 18% (n=48) using EPDS > 10 and 12% (n=32) using EPDS > 12, which were consistent with prevalence estimates in similar populations. CONCLUSION: Automated phone screening is a feasible system for accessing low-income and minority mothers suffering from PPD. Automated phone screening using IVR may be an alternative to standard paper-pencil screens that often are inaccessible to disadvantaged mothers.
**REFERENCES:**
1. Brodey BB, Rosen CS, Brodey IS, Sheetz B, Unutzer J: Reli ability and acceptability of automated telephone surveys among Spanish- and English-speaking mental health services recipients. Ment Health Serv Res 2005;7: 181–184.
2. Miranda J, Chung JY, Green BL, Krupnick J, Siddique J, Revicki DA, Belin T: Treating depression in predominantly low-income young minority women: a randomized controlled trial. JAMA 2003;290: 57–65.

**NR6-119**

## PREGNANCY AND PSYCHOTROPIC MEDICATIONS

*Meera Narasimhan, M.D. Department of Neuropsychiatry and BehavioralScience, 3555 Harden Street Extension,, Columbia,SC 29203, Kathleen S. Peindl, Ph.D., Paolo Mannelli, M.D., Ashwin Patkar, M.D., Prakash Masand, M.D., Meera Narasimhan, M.D.*
**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to assess the rates of psychotropic use in pregnant women with major psychiatric disorders and associated complications
**SUMMARY:**

BACKGROUND: Women with a major psychiatric illness will need treatment to remain stable during pregnancy (1, 2). Recently, an expert panel developed criteria for the management of bipolar disorder during pregnancy and another developed guidelines for management of schizophrenia during pregnancy as part of a risk to benefit treatment ratio. An accumulating body of knowledge also indicates that patients with psychiatric disorders are prescribed multiple medications because of the increased risk of comorbid medical illness such as diabetes, heart disease, chronic pain, HIV, and other infections. The Avon Longitudinal study examined 11,545 pregnant women in England. By self-report, 33% of the women were taking analgesics, anti-anaemic drugs, drugs for infections and antacids throughout pregnancy. There by suggesting that polypharmacy is high during pregnancy as evidenced by data from this cohort of women. Jablensky et al reported that pregnant women with psychiatric illnesses are at increased risk for adverse outcomes of pregnancy, which include miscarriage and premature delivery (<37 weeks gestation).

METHODOLOGY: Data from the South Carolina Medicaid database containing over 5,000 patients with a psychiatric diagnosis of bipolar and schizoaffective disorders or schizophrenia was obtained. The study was approved by the local IRB. The data included a 2-year period starting in December, 2002 and ending in November, 2004 that as de-identified. The database included all diagnoses by date, the date prescriptions were filled by a pharmacist, the types of medications prescribed as well as dose, quantity and daily supply. Further data included the number of outpatient visits, hospitalizations, and emergency room visits across the two-year period. Data by ICD-9 codes for women in prenatal care was extracted. The cohort contained 115 pregnant women of which 56 women had nine months worth of data and had a normal delivery, 10 (9%) women miscarried.

**REFERENCES:**


1. Headley J, Northstone K, Simmons H et al. Medication use during pregnancy: Data from the Avon Longitudinal Study of parents and children. Eur J Clin Pharmacol 2004; 60:355-61.
2. Jablensky AV, Morgan V, Zubrick SR et al. Pregnancy, deliv ery and neonatal complications in a population cohort of women with schizophrenia and major affective disorder. Am J Psychiatry 2005;162:79-91.


**NR6-120**

## THE PREVALENCE AND RISK FACTORS OF POST-NATAL DEPRESSIVE SYMPTOMS


*Nesrin Tomruk, Sakayikaraligi Sk. NO.4/4 Tesvikiye, Istanbul-Turkey 34365, Nesrin Karamustafalioglu, M.D., Nurcihan Aydemir, M.D., Bilge Askan-Akyuz, M.D., Nihat Alpay, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to learn that depressive symptoms are quite frequent in the postpartum period and various demographic and psychosocial risk factors such as marital dissatisfaction, unplanned pregnancy, unemployment of the partner and domestic violence may play an important role. Also medical problems both in mother and newborn and psychiatric history characteristics help to predict women predisposed to this illness.

**SUMMARY:**


Objective

The prevalence of postpartum depression (PPD) is estimated to be 12-13 %, but frequently goes undiagnosed and untreated. Psychosocial variables and psychiatric family/personal history have been reported as risk factors. PPD has negative consequences to the development of the infant. Early interventions are important since treatment can reduce adverse consequences. The objective of this research is to screen depressive symptoms in a non-clinical population.

Method

The study was conducted in Bakirköy Dr. Sadi Konuk Research and Training Hospital's well-baby unit with mothers in up to 9 months postpartum period. Depressive symptoms were screened with Edinburgh Postnatal Depression Scale (EPDS), =13 as cut-off point. A semi-structured form evaluating demographic and psychosocial variables, reproductive, pregnancy and delivery data was performed.

Results

183 mothers were recruited for the study. Mean age was 27.52±5.45, 55.2 % had primary education, % 80.3 were housewives. %68.3 had medium-low income. %37.7 had psychiatric family history and %13.7 had personal history of psychiatric illness.7.1% had history of trauma/abuse. 40.4% had arranged marriage.71% defined their marriage as satisfactory. Domestic violence was present in 7.1%. 13.7% of the partners were unemployed. 47.5% of the women reported PMS. 72.7% of the pregnancies were planned. 27.9 % of the mothers had hyperemesis; 8.2% had pre/eclampsia and 4.4% had gestational DM. 42.1% of the deliveries were at night. 7.1% of the newborns had health problems.The EPDS scores were=13 points in 30.6 % of the mothers.

High EPDS scores were significantly correlated with PMS, psychiatric illness , partner's unemployment, dissatisfaction in marriage, low level of care of partner, domestic violence, unplanned pregnancies, nocturnal delivery, health problems both in mother and fetus during pregnancy and not nursing.

Conclusion

Depressive symptoms in postpartum period are prevalent. In this resear


**REFERENCES:**


1. O'Hara MW, Swain AM: Rates and risk of postpartum de pression – a meta-analysis. International Review of Psychia try 1996; 8:37-54.
2. Chaudron LH, Szilagyi PG, Kitzman HJ, et al: Detection of postpartum depressive symptoms by screening at well-child visits. Pediatrics, 2004; 113: 551-558.


**NR6-121**

## DRUG USE AND PSYCHOSOCIAL CHARACTERISTICS IN A POPULATION OF BIRTH MOTHERS PARTICIPATING IN AN ADOPTION STUDY


*Suena W Huang, M.D. George Washington University Dept. of Psychiatry, 2150 Pennsylvania Avenue, NW, Washington, DC 20037, Suena W. Huang, M.D., Megan Dankovich, M.D., Daniel Lieberman, M.D., Sheela Kadekar, M.D., Melissa Lausin, B.A.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to (1) name ways in which pregnancy is a valuable opportunity to screen and treat substance abuse, (2) describe differences

in psychosocial characteristics in women who quit drugs during pregnancy compared with those who do not quit, (3) identify modifiable risk factors for continued substance abuse during pregnancy, (4) recognize that screening for depression and anxiety may better identify women who are less likely to achieve successful abstinence.

**SUMMARY:**
Introduction: The use of tobacco, alcohol and illicit drugs during pregnancy has been associated with significant morbidity for mothers and infants. As many women try to cut down, pregnancy is an invaluable opportunity to screen and treat substance use disorders. Understanding what facilitates and hinders quitting can improve therapeutic and screening interventions. Methods: Subjects were 120 self-identified polysubstance-abusing mothers who participated in the Early Growth and Development Study, a prospective adoption study of birth parents, adoptive parents, and adopted that was initiated in 2003. Psychosocial assessments were done approximately 3 months postpartum using computer assisted personal interviews. Substance use during the pregnancy was assessed using the Pregnancy History Calendar (Scaramella, 2003) and the Composite International Diagnostic Instrument- Short Form (Kessler, 1998). Depression and anxiety during pregnancy were assessed using the Beck Depression Inventory and the Beck Anxiety Inventory, respectively (**references**). Novelty-seeking was assessed using the Temperament and Character Inventory (Cloninger 1994). Global self worth was assessed using the Harter Adult Self-Perception Profile (Messner & Harter, 1986). Subjects were categorized according to substances quit during pregnancy. Mean scores on psychosocial measures were compared across these groups, using analysis of variance. Results: Depression, anxiety and novelty-seeking scores were progressively higher among 1) women who quit all three classes of harmful substances 2) women who quit two of the three, 3) women who quit one and 4) women who continued to use tobacco, alcohol, and illicit substances. Conclusion: Depression and anxiety may represent modifiable barriers to smoking cessation and quitting alcohol and drug use for pregnant women. Screening for these disorders may better identify women who are less likely to achieve abstinence.

This project was supported by grant 5-RO1-HD

**REFERENCES:**

1. Leve LD, Neiderhiser JM, Ge X, Scaramella LV, Conger RD, Reid JB, Shaw DS, Reiss D. The Early Growth and Develop ment Study: A prospective Adoption Design. Twin Research 2006; Jul 15.
2. Flick LH, Cook CA, Homan SM, McSweeney M, Campbell C, Parnell L. Persistent Tobacco Use During Pregnancy and the Likelihood of Psychiatric Disorders. American Journal of Public Health, 2006; 96:10:1799-1807.

**NR6-122**

## PERINATAL PSYCHIATRY IN THE NEONATAL INTENSIVE CARE UNIT (NICU)

*Susan J Hatters Friedman, M.D. Northcoast Behavioral Healthcare1756 Sagamore Road, PO Box 305, Northfield,OH 44067, Miriam Rosenthal, M.D., R. Ann Kessler, M.S.S.A., Amy Eliason, M.S.S.A, Harriet Friedman, MA, Maureen Hack, M.B., Richard Martin, M.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to: identify potential mental health needs of parents of critically ill newborns, identify barriers to receiving traditional mental health services for parents of critically ill hospitalized newborns, and recognize potential benefits of the presence of a psychiatrist in the NICU- to both parents and staff.

**SUMMARY:**
The birth of a critically ill newborn often constitutes a crisis for families. Mothers and fathers may experience acute anxiety or depressive symptoms in response. Their ability to bond with the infant may be affected. Additional stressors during the Neonatal Intensive Care Unit (NICU) hospitalization, including the competing demands of other children, relationships, and work (as well as travel and housing if they are not local) can further complicate the experience. Multiple barriers to obtaining psychiatric care exist. In order to attempt to meet the needs of this parent population, an innovative program exists at Rainbow Babies and Children's Hospital's level III Neonatal Intensive Care Unit (NICU). A part-time perinatal consultation-liaison psychiatrist has been grant-funded in the NICU since 2005. The psychiatrist's goals include the provision of psychiatric services for referred parents and group and individual sessions with NICU staff.
Of 90 consecutive referrals, parental symptoms frequently included anxious and depressive concerns. Many parents experienced decreased sleep and/or difficulty coping with their infant's medically ill status. Some who refused psychiatric services caused staff distress, and strategies for dealing with challenging parents were discussed with the treatment teams. Other parents with chronic serious mental illness diagnoses and substance use disorders were referred to appropriate alternative programs. After infant discharge or infant demise, referrals for further psychotherapy/ psychopharmacology visits were made when appropriate. Further data regarding prevalence of diagnoses and treatment courses will be presented, as well as unique issues in this population.
Potential benefits of a psychiatrist's presence in the NICU include, in addition to decreasing symptomatology, improving early parental functioning fostering a better parent-child relationship in this high-risk group, and improvement of the treatment team's morale.

**REFERENCES:**

1. Melnyk BM, Feinstein NF, Alpert-Gillis L, Fairbanks E, et al. Reducing premature infants' length of stay and improving parents' mental health outcomes with the Creating Opportuni ties for Parent Empowerment (COPE) neonatal intensive care unit program: a randomized controlled trial. Pediatrics. 2006; 118(5):e1414-27.
2. Singer LT, Salvator A, Guo S, Collin M, Lilien L, Baley J. Maternal psychological distress and parenting stress after the birth of a very low-birth-weight infant. JAMA 1999; 281(9):799-805.

**NR6-123**

## WHAT DO WOMEN PSYCHIATRISTS REALLY WANT?: THE FIRST TWENTY FIVE YEARS OF THE ASSOCIATION OF WOMEN PSYCHIATRISTS

*Tana A Grady-Weliky, M.D. University of Rochester Medical*

*Center, Department of Psychiatry, 300 Crittenden Blvd., Box PSYCH/Geri-Neuro, Rochester NY 14642, Eva Szigethy, M.D., PhD, Patricia Ordorica, M.D., Frances R. Bell, and Leah Dickstein, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to; 1)Identify the mission, goals and objectives of the Association of Women Psychiatrists (AWP); 2) Recognize key clinical practice issues that women psychiatrists believe are essential in today's health care climate; and 3) Differentiate role model and mentor and recognize the role that both categories have played for women psychiatrist leaders involved in AWP

**SUMMARY:**

The Association of Women Psychiatrists (AWP) was founded in 1983 by Dr. Alexandra ("Allie") Symonds with the goal of advancing women psychiatrists and promoting women's mental health. Women psychiatrists have played important roles within American psychiatry from community and private clinical practice to teaching, research and leadership in academic institutions. Of the total number of APA members, 35% are women. Plus, the APA Board of Trustees Executive Committee is currently comprised of all women. However, are women satisfied with where things are in their personal and professional lives and what do they see as important issues facing women psychiatrists today? A recent survey of women psychiatrists in our organization (AWP) found significant differences in career-related and family-related activities as well as career and relationship satisfaction between women psychiatrists with children and those without children. (Olarte, 2004)

AWP is completing an updated survey of its 2300 members that addresses not only their personal and professional satisfaction, but also their views about the role the organization has played in their career development and the influence that women psychiatrists have on women's mental health and wellness and the clinical practice of psychiatry. Research in this area is needed in order to improve our understanding of those issues of greatest importance to women psychiatrists.

This poster will address historical perspectives on women in psychiatry, in general, and our organization, in particular, over the past 25 years as well as include the results of our 2007-2008 survey of AWP members.

**REFERENCES:**

1. Olarte SW: Women Psychiatrists: Personal and Professional Choices--A Survey. Academic Psychiatry. 28: 321-324, 2004.
2. Dickstein, LJ: Dr. Alexandra Symonds' Legacy of Advancing Women Psychiatrists and Promoting Women's Mental Health. Am J Psychoanalysis. 60: 215-228, 2000.

**NR6-124**

## DOUBLE-BLIND PLACEBO-CONTROLLED RANDOMIZED CLINICAL TRIAL OF ETHYL-EICOSAPENTAENOIC ACID (EPA) MONOTHERAPY FOR MAJOR DEPRESSIVE DISORDER

*David Mischoulon, M.D. 50 Staniford Street, Suite 401, Boston, MA 02114, George Papakostas, M.D., Shamsah Sonawalla, M.D., Christina Dording, M.D., Monica Agoston, B.A., Juliana Smith, B.A., Jonathan Alpert, M.D., Ph.D., Andrew Nierenberg, M.D., Maurizio Fava, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand the efficacy of the omega-3 fatty acid eicosapentaenoic acid (EPA) for the treatment of depression.

**SUMMARY:**

Introduction: The omega-3 fatty acid eicosapentaenoic acid (EPA) has been studied for treatment of major depressive disorder (MDD), with encouraging results primarily as adjunctive therapy. We wished to examine EPA's efficacy as monotherapy for depression in a double blind, randomized placebo-controlled manner.

Hypothesis: Depressed subjects receiving Ethyl-EPA will display a greater response rate than those receiving placebo (PBO).

Methods: 57 subjects (65% female) with SCID-diagnosed MDD were randomized to either 1 gram/day of EPA or PBO and followed for 8 weeks. The main outcome measure was the 17-item Hamilton-D scale for depression (HAM-D-17).

Results: 35 subjects (63% female; 16 on EPA, 19 on PBO) were eligible for modified intent to treat (MITT) analysis. In the MITT sample, mean HAM-D-17 scores dropped from 21.56+/-2.73 to 13.19+/-18.54 for the EPA group ($p<0.05$), and from 20.47+/-3.61 to 15.00+/-8.24 for the PBO group ($p<0.05$). MITT response rates, based on 50% or greater decrease in HAM-D-17 score, were 50% (8/16) for the EPA group, and 37% (7/19) for the PBO group. Among the 13 completers (6 on EPA, 7 on PBO), mean HAM-D-17 scores dropped from 21.50+/-2.17 to 12.17+/-7.08 for the EPA group ($p<0.05$), and from 21.00+/-3.61 to 10.29+/-6.55 for the PBO group ($p<0.05$). Completer response rates were 50% (3/6) for the EPA group, and 43% (3/7) for the PBO group. Comparisons between EPA and PBO groups did not reach statistical significance ($p>0.05$).

Conclusions: There was a modest advantage for EPA over placebo that did not reach significance, likely because of the small sample size.

Discussion: EPA may be effective as monotherapy for depression. These results need to be replicated on a larger scale.

This work was supported by grant K23 AT001129 from the National Center for Complementary and Alternative Medicine (NCCAM). Ethyl-eicosapentaenoic acid and placebo were kindly provided by Amarin.

**REFERENCES:**

1. Peet M, Horrobin DF. A dose-ranging study of the effects of ethyleicosapentaenoate in patients with ongoing depression despite apparently adequate treatment with standard drugs. Arch Gen Psychiatry 2002;59:913-919.
2. Nemets B, Stahl Z, Belmaker RH. Addition of omega-3 fatty acid to maintenance medication treatment for recurrent unipo lar depressive disorder. Am J Psychiatry 2002;159:477-479

**NEW RESEARCH POSTER SESSION 7**

**WEDNESDAY, MAY 7, 2008, 3:00 P.M. – 5:00 P.M.**
**WEST LOBBY, LEVEL ONE, WASHINGTON CONVENTION CENTER**

**NR7-001**

## EVALUATION OF 18 MONTHS DIALECTICAL BEHAVIOUR THERAPY PROGRAM IN A GENERAL ADULT PSYCHIATRIC SETTING

*Cletus C Okonkwo, M.B.B.S St Ita's Hospital, Potrane,Co. Dublin, Rep. of Ireland, Paul Lyons, Kiernan Teresa, Martin Durkan, Healy Cathy, Declan Murray, Scott Linda, Alfaye Maha*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to learn patients adherence to DBT program in general adult psychiatric team after 12 months of therapy.

**SUMMARY:**
Eighteen months data presentation of Dialectical Behavioural therapy program which the 1st 6 months data was presented in San Diego meeting (Okonkwo,C., et al 2007).
A Dialectical Behavioral Therapy(DBT) program has been set up as part of general adult psychiatric service in North County Dublin. North County Dublin has a population of 120,000 and has 2 sectors each with general adult psychiatry teams. DBT program has been provided for patients with repeated deliberate self harm for 18 months. Seven staff working in the service were initially trained in standard DBT(2 intensive weeks separated by 10 months on weekly learning and program development meeting) additional staff is currently undergoing training. The program commenced in September 2006 with 8 patients and grew to 10 patients in January 2007. The program is standard DBT(Linehan 1993) the only modification being some individual therapists do telephone consultation for less than 24hours daily(but available 7 days a week). Data collected includes demographic data, Clinical Outcomes in Routine Evaluation (CORE) outcome measure(evans et al,2002), dose of traquilizers(in diazepam equivalents),number of self harm incidents,number of visits to emergency room,number of psychiatric admissions per month,number of in-patient days per month,number of school or work days missed for psychological reasons and number of days homeless. Baseline data and data for 18 months in therapy will be presented and discussed.

**REFERENCES:**
1. Linehan,M.M.(1993)Cognitive Behavioral Treatment for borderline personality disorder New York: Guildford press.
2. Okonkwo,C et al (2007) Evaluation of Dialectical Behav ioural Therapy in general adult psychiatry setting San Diego CA: APA Abstracts.

**NR7-002**

## EFFECTS OF DONEPEZIL ON BEHAVIOR IN SEVERE ALZHEIMER'S DISEASE PATIENTS WITH MULTI-DOMAIN RESPONSES

*Joan M Mackell, Ph.D. Pfizer Inc, New York, NY, 10017-55755, Jeffrey L. Cummings, M.D., Anita Murthy, Pharm.D., Richard Zhang, Ph.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to understand more about the importance of individual components of behavioral measures for severe AD patients; how an overall negative score might be concealing positive findings which could be particularly relevant to quality of life for an individual patient or caregiver.

**SUMMARY:**
Objective: To examine behavioral benefits in donepezil-treated patients whose cognition and global function/activities of daily living (ADL)/behavior stabilized or improved. Methods: Data were pooled from two 6-month randomized, placebo-controlled studies of donepezil in severe AD (MMSE =12, FAST 5-7d). Cognition was assessed by the Severe Impairment Battery (SIB), global function by the Clinician's Interview-Based Impression of Change-Plus caregiver input or the Clinical Global Impression of Improvement, ADL by the AD Cooperative Study ADL-severe, and behavior by the 12-item Neuropsychiatric Inventory (NPI). At month 6, changes in total NPI and individual NPI items were analyzed for ITT-LOCF donepezil patients. Donepezil-treated patients were subgrouped according to response: Response subgroup A: stabilized/improved cognition and improved global function or ADL or behaviour; B: stabilized/improved cognition and global function and ADL; and C: improved cognition (=4 SIB points) and stabilized/improved global function and ADL. Results: Neither study showed significant between-group differences in total NPI for the overall donepezil-treated and placebo groups; all groups showed improvement from baseline. Significant improvements vs. a pooled placebo group were seen for total NPI (Subgroup A: P=0.0032; B: P=0.0057; C: P=0.0014), apathy/indifference (A: P=0.0131; B: P=0.0355; C: P=0.0054), anxiety (A: P=0.0172; B: P=0.0154), and agitation (A: P=0.0311). Borderline significance vs. pooled placebo was seen for agitation (B: P=0.0678; C: P=0.0690), anxiety (C: P=0.0553), eating disorders (B: P=0.0894; C: P=0.0516) and aberrant motor behavior (C: P=0.0795). Conclusion: Patients with severe AD who show positive multiple-domain responses to donepezil may demonstrate distinct patterns of improvement in individual behavioral symptoms, despite varying and/or inconclusive total NPI results for the overall donepezil-treated population.
Study funded by Pfizer Inc and Eisai Inc.

**REFERENCES:**
1. Winblad B, Kilander L, Eriksson S, Minthon L, Båtsman S, Wetterholm AL, Jansson-Blixt C, Haglund A, Severe Alzheimer's Disease Study Group: Donepezil in patients with severe Alzheimer's disease: double-blind, parallel-group, placebo-controlled study. Lancet 2006; 367: 1057-1065.
2. Black SE, Doody R, Li H, McRae T, Jambor KM, Xu Y, Sun Y, Perdomo CA, Richardson S: Donepezil preserves cognition and global function in patients with severe Alzheimer disease. Neurology 2007; 69: 459-469.

**NR7-003**

## LONG TERM MAINTENANCE OF WEIGHT LOSS IN PATIENTS WITH SERIOUS MENTAL ILLNESS (SMI) THROUGH A BEHAVIOURAL PROGRAMME IN UK. RESULTS AT 7 YEARS OF FOLLOW UP.

*John Pendlebury, Cromwell House, Salford, Manchester United*

*Kingdom MN, Holt R, M.B .B.S*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, participants should be able to be recognize that self-referral to weight management programmes is successful in achieving weight loss in SMI patients. Although 95.5% achieved weight loss/maintenance at final visit the challenge remains to retain subject's long term (> 3 years). For some SMI patients weight gain need not be inevitable.

**SUMMARY:**

Studies have suggested that weight gain is common in SMI patients. Prevention and reduction of weight gain are thus critical. Lifestyle intervention programs may be effective for weight management in SMI patients to engage patient's long term. Self-referral may be motivational.

A weight management clinic started 7 years ago and accepted self-referred patients only. The clinic was staffed by a community mental health nurse and an occupational therapist. The programme runs an 8-week rotational topic cycle with weekly 1-hour group sessions. Since May 2000, 110 patients (89 schizophrenia , 21 major affective disorders) have enrolled providing total of 127 patient episodes with mean baseline weight 90.1 kg+-1.7 kg ((BMI 32.1 ± 0.5 kg/m2). 80% patients attended continuously > 8 weeks, 27% > 2 years and 19% > 3 years. There was a progressive statistically significant reduction in mean weight and BMI throughout the duration of the audit with no suggestion of a plateau. Weight loss occurred in 91% of patients, weight maintenance 4.5%, and weight increase 4.5% at final visit. Mean weight change at final visit was a loss 7.2 ± 0.6 kg. Weight loss was correlated only with number of sessions attended ($r=0.46$, $p<0.0001$). Patients attending > 1 year (n=62) 61.3% had lost >7% body weight (BW) and > 3 years (n=23) 82.6%. Numbers of subjects (n=127) BMI >30 decreased at final visit from 63% to 40%.

The sole significant predictor of weight loss was number of sessions attended. Patients continuing to attend a weight clinic over 7 years lose weight incrementally with clinically significant shifts in BMI. Interpretation is limited to naturalistic data from a well-motivated cohort.

**REFERENCES:**


1. Smith S, Yeomans D, Bushe CJ, et al. A well-being pro gramme in severe mental illness. Reducing risk for physical ill-health: A post-programme service evaluation at 2years. Eur Psychiatry. 2007 Oct;22(7):413-8. Epub 2007 Aug 31
2. Bushe C, Haddad P, Peveler R, Pendlebury J. The role of lifestyle interventions and weight management in schizophre nia.J Psychopharmacol. 2005 Nov; 19(6 Suppl):28-35.


**NR7-004**

## MOTIVATIONAL INTERVIEWING PLUS IMAGINAL DESENSITIZATION IN THE TREATMENT OF PATHOLOGICAL GAMBLING


*Jon E Grant, M.D. Department of Psychiatry, University of Minnesota, 450 Riverside Avenue,, Minneapolis, MN 55454, Christopher B. Donahue, Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to; 1) recognize how to use motivational interviewing techniques when treating pathological gambling; 2) be familiar with imaginal desensitization and how it can be used to treat pathological gambling; and 3) be aware of the possible benefits of brief therapies in treating pathological gambling.

**SUMMARY:**


Background: Pathological gambling (PG), a significant public health problem, is characterized by persistent and recurrent maladaptive patterns of gambling. PG is associated with impaired functioning, reduced quality of life, bankruptcy, divorce and suicide. Although cognitive behavioral therapies have shown promise for PG, they are often time consuming, have high rates of treatment discontinuation, and are not effective for everyone.

Methods: This study evaluated the efficacy of 5-sessions of individual therapy comprised of motivational interviewing plus a cognitive-behavioral treatment package with a focus on cognitive corrections of erroneous perceptions of gambling, imaginal desensitization, and relapse prevention. Forty-four subjects with DSM-IV PG were randomly assigned to treatment or referral to Gamblers Anonymous. Subjects were assessed at 5 weeks on measures of gambling severity (e.g., time spent per week gambling, amount of money lost gambling per week, and the Yale Brown Obsessive Compulsive Scale Modified for Pathological Gambling to examine urges, thoughts and gambling behavior) and at monthly intervals for an additional 6 months of follow-up.

Results: Post-treatment results indicated significant benefits of treatment compared to Gamblers Anonymous with 77.3% of the treatment group, compared to only 27.3% of the Gamblers Anonymous group, able to maintain abstinence for one month (Fisher's exact = .002). Those assigned to treatment were significantly more likely to be responders (i.e. 50% in PG-YBOCS scores compared to study entry) by the end of 5 weeks (Fisher's exact =.002), and 94% of those who responded to treatment within the first 5 weeks maintained their response for 6 months.

Discussion: Motivational interviewing with imaginal desensitization appears to be an effective treatment for PG and its benefits are maintained up to 6 months following treatment. This study supports the finding that PG is treatable with cognitive behavioral therapies a


**REFERENCES:**


1. Petry, N. M., Ammerman, Y., Bohl, J., Doersch, A., Gay, H., Kadden, R., Molina, C., & Steinberg, K. (2006). Cogni tive-behavioral therapy for pathological gamblers. Journal of Consulting and Clinical Psychology, 74(3), 555-567.
2. Hodgins, D. C., & Holub, A. (2007). Treatment of problem gambling. In Smith, G., Hodgins, D. C., & Williams, R. J., (Eds.). Research and measurement issues in gambling studies, 371-397. Burlington, MA: Elsevier.


**NR7-005**

## SAFETY AND TOLERABILITY OF RIVASTIGMINE PLUS MEMANTINE IN PATIENTS WITH PROBABLE ALZHEIMER'S DISEASE


*Stephen Brannan, M.D. Novartis Pharmaceuticals One Health Plaza Building 701, 6th floor, East Hanover, NJ 07936, Gary Figiel, M.D., Marty Farlow, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able

to identify the rationale behind the study, the methodology employed, and consider the potential benefits over conventional rivastigmine monotherapy.

**SUMMARY:**
Introduction: Alzheimer's disease (AD) is associated with changes in brain neurotransmitters resulting in memory loss and cognitive dysfunction. Currently, two approved classes of drugs address this. Rivastigmine, a brain-selective, dual cholinesterase inhibitor of acetylcholinesterase and butyrylcholinesterase and memantine, an N-methyl-D-aspartate receptor antagonist.
Hypothesis: Combination treatment of memantine and rivastigmine may improve tolerability and efficacy outcomes for AD patients above rivastigmine alone.
Methods: A 26-week open label safety/tolerability study of 3–12mg/day oral rivastigmine with concomitant 5–20mg/day oral memantine in patients with moderate probable AD. Patients were =55 years with an MMSE of 10–20, inclusive. Primary outcomes were gastrointestinal adverse events (AE) for nausea and vomiting. Exploratory efficacy included MMSE, ADCS-CGIC and ADCS–ADL scales.
Results: 116 patients were enrolled/74 completed. AE withdrawal was the primary reason for discontinuation (16%), followed by withdrawal/consent (10%). Mean age was 78, with 73% females, and 85% Caucasians. Incidences of nausea and vomiting reported was 27% and 10%, respectively, compared to 47% and 31% (package insert patient data of rivastigmine monotherapy). Incidences of other AEs were low; dizziness (11.2%), fall (9.5%), agitation, anxiety, depression and decreased weight (each 7.8%). There was one SAE each of nausea and vomiting (0.9%). At 26 weeks, the mean global change from baseline ADCS-CGIC was 4.0 (O.C.). The change in MMSE from baseline at 26 weeks was 0.7, with 59% of subjects showing no decline or improvement (both O.C and LOCF).
Conclusion: Tolerability benefits of rivastigmine–memantine combination therapy over rivastigmine monotherapy is suggested by the decreased incidence of nausea and vomiting reported (~43% and 68% less incidence respectively). Efficacy results are consistent with historical data.

**REFERENCES:**

1. Dantoine T, et al: Rivastigmine monotherapy and combina tion therapy with memantine in patients with moderately severe Alzheimer's disease who failed to benefit from previ ous cholinesterase inhibitor treatment. Int J Clin Pract 2005; 60:110-118
2. Enz A, et al: Co-administration of memantine has no effect on the in vitro or ex vivo determined acetylcholinesterase inhibi tion of rivastigmine in the rat brain Neuropharmacology 2004; 47:408-413

**NR7-006**

## PATHOLOGICAL GAMBLING, TREATMENT OPTIONS

*Abid Malik, M.D. Area Mental Health Center, 1111 East Spruce St, Garden City, KS 67846,*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to: 1) list effects of pathological gambling; and 2) recognize different treatment options for pathological gambling.

**SUMMARY:**
The incidence of pathological gambling may be as high as 3 % in general population and its consequences can be devastating. In comparison to substance dependence, where physiological aspect limit the use of substance after certain amount, there is often no end to pathological gambling, resulting in the use of credit card and money form all available resource and in some case things other than money were also lost in gambling. PubMed was searched in Nov 2007 with the key words of "Pathological gambling" and "Pathological gambling treatment". Abstract of all the articles in English language about the treatment of pathological gambling were reviewed and relevant articles were also reviewed. This review is an effort to summarize the treatment of this devastating disorder. Further research avenues are also discussed.

**REFERENCES:**

1. Dannon PN, Lowengrub K, Musin E, Gonopolsky Y, Kotler M. 12-month follow-up study of drug treatment in pathologi cal gamblers: a primary outcome study. J Clin Psychopharma col. 2007 Dec;27(6):620-4.
2. Newman SC, Thompson AH. The association between patho logical gambling and attempted suicide: findings from a na tional survey in Canada. Can J Psychiatry. 2007 Sep;52(9):605-12.

**NR7-007**

## QUALITY OF LIFE AND SUBJECTIVE EXPERIENCE OF THE TREATMENT OF DEPRESSION IN ONCOLOGIC PATIENTS: A QUALITATIVE ANALYSIS

*Beatriz Rodríguez Vega, Ph.D. Hospital La Paz. Pº de la Castellana 261. 28035 Madrid. Psiquiatría, Madrid, Spain 28035, Pablo Orgaz Barnier, Guillermo Benito Ruiz, Guadalupe Torres Sancho, Ángela Palao Terrero, Mari Fe Bravo Ortiz, Ph.D., Carmen Bayón Pérez, Ph.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should have an overview of the differences on the results of two kinds of treatments for depression in oncology.

**SUMMARY:**
The prevalence of depression in oncologic patients is four times higher than in general population. Depression affects a 30% of the patients during the course of their disease. Treatment of psychiatric symptoms is strongly recommended to improve cancer therapy evolution, being combined treatments (psychological plus pharmacological) the most effective and less relapse producing. Qualitative analysis of focal groups provide an important amount of data which complement the diagnostic process. Quality of life has become a main outcome variable in both oncologic and psychiatric research, and it can be assessed too using qualitative methodology. This study is part of the FIS 07/90348 and 07/90452 Investigation Projects. Objectives Obtain main dimensions of patients subjective experience of oncologic disease and its treatment that affects their quality of life. Method: Qualitative analysis of focal discussion groups. Sample: 25 depressed subjects with a breast, lung or colon tumour, in I or II stage, without metastases or relapse. All of them underwent a treatment for their depression. One group received a combined treatment while the other received a pharmacologic treatment. The experience of illness

and treatment was analyzed by a group of researchers. Atlas-Ti software was used in the analisys of the transcriptions. The speech was reduced to its meaning units, and then analyzed following grounded theory methodology. Results:
Three different main categories emerged from our groups of patients. Suffering experience, meanings and support elements that affects positive or negatively their quality of life.

**REFERENCES:**


1. Remission in major depressive disorder; A comparison of pharmacotherapy, psy...Nicola Casacalenda; J Christopher Perry; Karl Looper. The American Journal of Psychiatry; Aug 2002; 159, 8. pg. 1354
2. Someone who cares: a qualitative investigation of cancer patient's experience of psychotherapy.Terry Maccormack, Jo Simonian, Jacqueline Lim, Louise Remond, Deonette, Roets, Stewart Dunn and Phyllis Butow. Psycho-Oncology 10: 52–65 (2001).


**NR7-008**

**IS MORE EFFECTIVE COMBINED PSYCHOTHERAPY VERSUS PHARMACOLOGICAL TREATMENT IN THE DEPRESSION OF ONCOLOGIC PATIENTS?**


*Carmen Bayón-Pérez, Ph.D. Pº de la Castellana 261. Hospital General. Psiquiatría, Madrid, Spain 280035, Angela Palao, Guadalupe Torres, Ana Hospital, Isabel Mirapeix, Mº Fe Bravo, B Rodríguez-Vega*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to distinct the effects of two different interventions (combined and pharmacological) for the depression in oncologic patients.

**SUMMARY:**


Oncologic patients show a high prevalence of affective disorders, having a negative influence on the patient health and deteriorating quality of life and, all it contributes to a worst evolution of the illness. We would like to present the preliminary results of the project FIS PI number 050737 and number 05/2062, in which we propose the comparison between the effectiveness of a combined treatment (psychotherapeutic and pharmacologic) and just a pharmacologic treatment, against oncologic patients on depression and quality of life. 768 patients with colon, breast and lung cancer not metastasized and diagnosed of a depressive disorder *(DSM-IV* criteria) were selected. All participants completed the HADS questionnaire, confirming the diagnosis by obtaining a score over 7 using the Semi-structured Clinical Interview for *DSM-IV* (SCID). 115 of the subjects included scored 8 or over at the HADS depression subscale. 14.19% (109 patients) confirmed the diagnosis of depression. At the moment, there are 34 patients in the combined therapy group (21 already finished and are under monitoring).28 are under monotherapy treatment (7 already finished and 11 quitted). Both groups show a overall improvement on quality of life (SF-36 Questionnaire) and some differences in coping (reducing hopelessness and increasing fighting spirit assesed with Cancer Coping Questionnaire. Both groups reduce their depression scores.


**REFERENCES:**


1. Combined pharmacotherapy and psychotherapy as main tenance treatment for latelife depression. Eric J. Lenze; Mary Amanda Dew; Sati Mazumdar; Amy E Begley; et al The American Journal of Psychiatry; Mar 2002; 159, 3.pg. 466
2. Adding Psychotherapy to Pharmacotherapy: Data, Benefits, and Guidelines for I...Ira D. Glick, American Journal of Psy chotherapy; 2004; 58, 2. pg. 186


**NR7-009**

**DR GOOGLE, MD: WHAT PSYCHIATRIC PATIENTS SEARCH FOR ON THE INTERNET.**


*John K Lam-Po-Tang, M.B.B.S The Paddington Practice 326 South Dowling St, Paddington, Australia 2021, Diana R McKay, M.B.B.S (Hons) FRANZCP*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should understand the prevalence of internet usage by psychiatric outpatients to access information about mental health, specific information searched for by patients, and the frequency with which patients disclose their use of the internet with their psychiatrists.

**SUMMARY:**


There is a very large amount of mental-health related information on the internet (Christensen & Griffiths, 2000). However, there is very limited information about the use of the internet by patients to find mental health-related information (Powell & Clarke, 2006). Little is known about the type of information searched for by patients and how it is used by them. A cross-sectional survey of adult outpatients attending two group psychiatric practices in Sydney, Australia, was undertaken in 2007. The survey covered internet usage, type of information located, whether this was discussed with the treating psychiatrist, and whether this influenced health decision-making. This is the first survey of its kind conducted in Australia.

A total of 194 survey questionnaires were completed by patients. The vast majority, 96% of the sample, had internet access, and 78% of the sample reported using the internet to look up mental health-related information. Less than half of these (30% of the sample) reported discussing this with their psychiatrist, yet a similar proportion (31% of the sample) reported that it influenced their medical decision-making. The most common types of information searched for by patients included information about symptoms, treatment and medication side effects, with 62% of the sample reporting searching for information on each of these areas. Fifty seven percent of the sample reported searching for information about diagnosis. Psychiatrists should be aware that patients commonly search for mental health-related information on the internet, but are not likely to discuss it in consultation, despite patients reporting that it influences decision making about their health.


**REFERENCES:**


1. Christensen H, Griffiths K: The Internet and mental health literacy. Aust NZ J Psychiatry 2000; 34:975-97
2. Powell J, Clarke A: Internet information-seeking in mental health. Br J Psychiatry 2006; 189:273-277


**NR7-010**

**FROM CLINICAL PRACTICE TO NEW RESEARCH IN DISSOCIATIVE DISORDERS**

*Cristian Damsa, M.D. Rue Micheli-du-Crest 24, Geneva, Switzerland 1211, Coralie Lazignac, M.D., Adrian Coman, M.D., Eric Adam, M.Sc., Hanna Hyams, Nick Miller, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) recognize the interest to search functional links between clinical practices and research in dissociative disorders; 2) identify how therapeutic approaches should change according to the clinical type of dissociation and especially following the frequently associated comorbidities which must be addressed and treated; and 3) be aware of the most used psychotherapeutic techniques for dissociative disorders.

**SUMMARY:**

Objective: The aim of this paper is to debate two seemingly contradictory epistemological approaches to dissociative disorders. How can we increase the quality of care by combining clinical practice with scientific research with the same aim to “heal or help”? Methods: In order to answer that question we perform an extensive Medline database search between 1949 and 2007. Using only the key words “dissociative disorders” we identified 2604 papers on December 6th 2007. Results: Clinicians often find a conflict between psychotherapeutic skills and evidence based on clinical examination and diagnosis. In the field of neuroscience, the notions of trauma and dissociation have been subject to a long debate since Freud and Janet. This debate has continued for more than a century on clinical, nosological and therapeutic issues, and since twenty years also on the neurobiological level. The clinical heterogeneity of the dissociative disorders stimulates the neurobiological research targeted on each type of dissociative disorder. Neurobiological lesion-models are proposed more frequently for depersonalisation, than for amnesia, dissociative fugue and multiple personalities. Conclusion: The integration of anatomical and functional neuroimaging data with endocrinological and biological studies (triglycerine, cholesterol, lipoproteins) might open new approaches to the nosologic debate on dissociative disorders. The therapeutic approach varies according to the clinical type of dissociation and especially according to the frequently associated comorbidities which must be addressed and treated. The most used psychotherapeutic techniques are psychodynamics, hypnosis or more recently cognitive-behavioral and group therapy.

**REFERENCES:**

1. Van der Hart O, Nijenhuis E, Steele K, et al. Trauma-related dissociation: conceptual clarity lost and found. Aust N Z J Psychiatry 2004; 38: 906-14.
2. Sierra M, Berrios GE. Depersonalization: neurobiological perspectives. Biol Psychiatry. 1998;44:898-908.

**NR7-011**

## QUALITY OF CARE IN EMERGENCY PSYCHIATRY: DEVELOPING AN INTERNATIONAL NETWORK

*Cristian Damsa, M.D. Rue Micheli-du-Crest 24, Geneva, Switzerland 1211, Eric Adam, M.Sc., Coralie Lazignac, M.D., Daniele Zullino, M.D., Antonio Andreoli, M.D., Adriana Mihai, M.D., Susanne Maris, M.Sc., Lionel Cailhol, M.D., François Sarasin, M.D., Michael H. Allen, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) recognize the interest for guidelines on the management of psychiatric emergencies: agitation, suicidal behavior and addictions; 2) measure and ameliorate the quality of care in Emergency Psychiatry; 3) provide a structured educational program for residents and students; and 4) be aware that clinical studies in emergency could improve the quality of care by the Observer Effect.

**SUMMARY:**

Developing an international network in Emergency Psychiatry, by connecting several countries could ameliorate the quality of care in emergency. Conduct multicenter international studies and develop clinical guidelines for the assessment and the management of agitation, suicidal behavior and addictions in emergency should be considered as a crucial point for further researches in this field. Between 2000 and 2007, a growing interest for guidelines on the management of psychiatric emergencies can be observed in Europe, as well as in the United States. Nevertheless, clinicians tend to be skeptical regarding evidence-based guidelines and standardized measuring scales, often venting regarding the practical application of such tools or guidelines (reference 1). This contributes to the relative imbalance between abundant expert opinions regarding the management of agitation and suicidal behavior and the small amount of empirically validated data in the emergency settings (**references** 1, 2). Based on those observations, we try to develop an international network in Emergency Psychiatry, by connecting several European countries (Switzerland, France, Belgium, Romania) and United States. The aims of our collaboration are: a) measure and ameliorate the quality of care in Emergency Psychiatry; b) develop clinical guidelines for the assessment and management of agitation, suicidal behavior and addictions in Emergency Psychiatry; c) provide a structured educational program for residents and students; and d) conduct multicenter international studies that focus on Emergency Psychiatry. Since the start of our international research collaboration in 2003, our group published 51 papers (30 original papers), cumulating 50 points of Impact factor. Interestingly, the development of this international collaboration and the use of clinical standardized scales for the psychiatric assessment in emergency appear to be an original way to improve the quality of care in emergency psychiatry.

**REFERENCES:**

1. Damsa C, Ikelheimer D, Adam E, Maris S, Andreoli A, Lazig nac C, Allen MH. Heisenberg in the ER: observation appears to reduce involuntary intramuscular injections in a psychiatric emergency service. Gen Hosp Psychiatry 2006; 28:431-33.
2. Damsa C, Adam E, Lazignac C, Mihai A, De Gregorio F, Lejeune J, Maris S, Clivaz E, Allen MH. A naturalistic study of consecutive agitated emergency department patients treated with intramuscular olanzapine prior to consent. Am J Psychia try in press 2007 (paper accepted on October 19th 2007).

**NR7-012**

## STRESS CARDIOMYOPATHY, TAKOTSUBO SYNDROME: HYPOTHESIS OF CARDIAC RISK IN PANIC DISORDER. IS PANIC DISORDER ACTUALLY SAFE?

*Gastão Luiz Soares-Filho, M.D. HOSPITAL PRÓ-CARDÍA-*

*CORua General Polidoro, 192. Botafogo Rio de Janeiro - Brazil Laboratory of Panic & Respiration, Institute of Psychiatry, Federal University of Rio de Janeiro., Rio de Janeiro, Brazil 22280-000, Rafael C. Freire, M.D., Aline Sardinha, Psy. Res., Valfrido de-Melo-Neto, M.D., Antonio E. Nardi, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize Takotsubo cardiomyopathy, considering it as a differential diagnosis of chest pain triggered by stressfull event, especially in postmenopausal women. It has important implications, because its clinical presentation mimics an acute coronary syndrome. Increased awareness regarding chest pain presentation of panic attack, will likely result in Takotsubo being diagnosed more frequently.

**SUMMARY:**

Objectives: To develop some hypothesis about the relationship between Takotsubo Syndrome and panic disorder, especially panic attack, when rates of norepinephrine spillover are present. Takotsubo or Stress Cardiomyopathy mimics acute coronary syndrome without obstructive coronary disease. Symptoms are chest pain and dyspnea, with ST-segment elevation. There is a postmenopausal female predominance and frequently is triggered by emotional or physical stress, inspiring the name Broken Heart Syndrome. Method: Case report. Result: A 66-year-old caucasian female, without coronary arterial disease (CAD), came to emergency room (ER) with chest pain, palpitations and electrocardiogram of acute myocardial infarction. She reported recent emotional stress and pain started during exercise. Coronary angiography was normal and ventriculography showed apical ballooning, resembling a "takotsubo" (Japanese octopus trap). SPECT using 123I-MIBG indicated cardiac sympathetic hyperactivity. In the fifth day the patient was discharged from hospital with complete recovery. Discussion: The exact pathogenesis of takotsubo cardio¬myopathy remains unclear. It was suggested myocardial injury due to microvascular spasm and stunned myocardium as seen during the catecholamine-induced cardiomyopathy in pheochromocytoma. Indeed, enhanced sympathetic activ¬ity and excessive levels of catecholamines appears to play an important role in this syndrome. Panic attacks seem to occur with sympathetic bursts and cardiac norepinephrine overflow. The sympathetic nerve co-transmitter, neuropeptide Y (NPY), is released from the cardiac sympathetics during panic attacks, suggesting that NPY can cause coronary artery spasm. Conclusion: Takotsubo is a transient myocardial dysfunction after emotional stress with unknown etiology. Catecholamine overflow on myocardial muscle may elucidate mechanisms responsible for this entity and the possible relationship with panic disorder. Supported by CNPq, Grant 554411/2005-9.

**REFERENCES:**

1. Pilgrim TM, Wyss TR:Takotsubo cardiomyopathy or transient left ventricular apical ballooning syndrome: A systematic review. Int J Cardiol 2007.
2. Esler M, Alvarenga M et al: Cardiac sympathetic nerve biol ogy and brain monoamine turnover in panic disorder. Ann N Y Acad Sci 2004;1018: 505-514.

**NR7-013**

**ANXIETY AND DEPRESSIVE SYMPTOMS MEASURED BY THE HOSPITAL ANXIETY AND DEPRESSION SCALE (HADS) IN A CARDIAC EMERGENCY ROOM**

*Gastão Luiz Soares-Filho, M.D. HOSPITAL PRÓ-CARDÍACORua General Polidoro, 192 Botafogo, Rio de Janeiro - Brazil Laboratory of Panic & Respiration, Institute of Psychiatry, Federal University of Rio de Janeiro., Rio de JaneiroBrazil 22280-000, Rafael C. Freire, M.D.; Aline Sardinha Psy. Res.; Valfrido de-Melo-Neto, M.D.; Antonio E. Nardi, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to diagnose co-morbid anxiety and depression disorders in patients with chest pain in Emergency Rooms (ER). It would make possible an early treatment, reducing complications of patients with coronary artery disease (CAD). In the absence of CAD, it could reduce the frequency these patients seek ER attendance. It was shown that the "Hospital Anxiety and Depression Scale" (HADS) may be a useful instrument for this purpose.

**SUMMARY:**

Introduction: Patients at emergency room (ER) with chest pain may show co-morbid psychiatric disorders. Depression or anxiety disorders not diagnosed tend to a chronic prognosis, with repeated seek for medical care. Objectives: To measure the applicability of the "Hospital Anxiety and Depression Scale" (HADS) in an emergency room by nonpsychiatric staff and the prevalence of probable anxiety and depression in this setting. Methodology: The HADS was applied from May 2006 to August 2007 to all patients with chest pain who agreed and had clinical conditions to participate in our trial. It was considered "probable anxiety or depression", patients with 8 or more points. The statistical software used was SPSS for Windows, version 13.0. Results: The scale was considered an easy tool by the nurse and medical staff. Among the 130 patients studied, 58.4% were men. The average age was 61.2 (12.0 SD) years. The types of chest pain more frequently were "probably not anginous", 49.2% and "probably anginous" in 38.5%. Scores of anxiety and depression found by HADS were mean of 7.33 (SD: 4.36) and 4.78 (SD: 3.92), respectively. Of the total, 45.4% had chest pain with a known cause (PKC) and 54.6% chest pain of unknown cause (PUC). In PKC group, the mean scores of anxiety was 6.29 (SD: 3.96) and depression 4.86 (SD: 4.07). In all, 33.9% were probable cases of anxiety and 30.5% of depression. In PUC group, the mean scores of anxiety was 8.20 (SD: 4.50) and of depression 4.70 (SD: 3.82). In all, 53.5% were probable cases of anxiety and 25.3% of depression. The proportion of anxiety cases was higher in the PUC group (?2= 5021, df= 1, p = 0.025). The prevalence of depression was similar between the two groups (?2 = 0428, df=1, p = 0.513). Conclusion: Our study confirms the high incidence of anxiety and depression not diagnosed in the ER and showed that the HADS may be a simple and useful instrument to viable an early treatment. Supported by CNPq, Grant 554411/2005-9

**REFERENCES:**

1. Lynch P and Galbraith KM: Panic in the emergency room. Can J Psychiatry 2003; 48(6): 361-366
2. Bambauer KZ, Locke SE et al: Using the Hospital Anxiety and Depression Scale to screen for depression in cardiac patients. Gen Hosp Psychiatry 2005; 27(4): 275-284

**NR7-014**

## PREDICTORS OF QUALITY OF LIFE IN PATIENTS WITH ACUTE CORONARY ARTERY SYNDROME

*Jin-Sang Yoon, M.D. Clinical Trial Center, Chonnam National University Hospital, 5 Hak-Dong, Dong-Gu, GwangjuSouth Korea 501-746, Jeong-Gon Kim, M.D., Joon-An Yoo, M.D., Sang-Wook Park, M.D., Joon-Young Cho, M.D., Sung-Jin Kim, M.D., Sung-Wan Kim, M.D., Woong-Jang Kim, M.D., Jae-Min Kim, M.D., Kyoung-Yeol Bae, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand the factors related with quality of life in patients with acute coronary artery syndrome

**SUMMARY:**

Objective: Improvement of quality of life became an important target of treatment of acute coronary artery syndrome. This study was to investigate clinical factors affecting to quality of life in patients with acute coronary artery syndrome.

Methods: The subjects for the present study were 82 acute coronary artery syndrome patients who were evaluated when two weeks passed and three months passed after coronary angiography. World Health Organization Quality of Life-Brief form (below WHOQOL-BREF) was used to assess quality of life. Depression severity, coronary artery syndrome severity and sociodemographic characteristics were obtained to investigate association of quality of life. Hamilton Depression Rating Scale(below HAMD) was used to assess depression severity and coronary artery diameter stenosis was used to assess coronary artery syndrome severity. Sociodemographic characteristics include age, gender, education, marital state, religion, current occupation, monthly income.

Results: The QoL showed relevant correlation with depression when two weeks passed after coronary artery syndrome. The QoL showed relevant correlation with depression, education, religion, current occupation when three months passed after coronary artery syndrome.

Conclusion: Active treatment for depression is important to improvement of quality of life in patients with acute coronary artery syndrome.

**REFERENCES:**

1. Cohen M, Mansoor D, Langut H, et al. : Quality of life, de pressed mood, and self-esteem in adolescents with heart disease. Psychosom Med 2007;69:313-8.
2. Okonkwo OC, Sui X, Ahmed A : Disease-specific depression and outcomes in chronic heart failure: a propensity score analysis. Compr Ther 2007;33:65-70.

**NR7-015**

## ONE WEEK OF DELIRIUM IN A PALLIATIVE CARE UNIT

*Maeve M Leonard, M.D. St Anne's Day Hospital,Limerick,Irelan d, Limerick Ireland , David J. Meagher M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognise that attention and comprehension appear relatively stable in delirium whilst other symptoms are more fluctuating.

**SUMMARY:**

Introduction

Delirium is a highly fluctuating multifactorial syndrome with marked heterogeneity in its clinical course over time. There is insufficient research of the phenomenology of delirium. Considerable difficulties describing delirium phenomenology exists. Most studies are cross-sectional with a paucity of serial work and the majority of those studies focus on total scores. MethodsThis is an observational, serial assessment study that involves the examination of delirium symptoms and cognitive performance in a cohort (approximately n=100) of palliative care patients with DSM-IV delirium.

All patients are screened on admission with the Confusion Assessment Method (CAM). If confirmed to have DSM-IV delirium by the treating medical team they are referred for assessment with the Delirium Rating Scale Revised 1998 (DRS-R'98), the Cognitive Test for Delirium (CTD), and the Memorial Delirium Assessment Schedule (MDAS). Patients are assessed twice weekly until they recover, die or ask to discontinue. To date we have 47 patients with 3 or more assessments.ResultsCorrelation of DRS10 (attention) > 0.4 at days 1/4, 4/7, and 1/7 concluded it was the only item in the DRS-R98 that was significant ( $p<0.01$).Correlations between cognitive items on DRS-R98 were more significant than non-cognitive items.

Correlations of CTD items attention, comprehension and vigilance at days 1/4, 4/7, and 1/7 were more significant than orientation and memory.

When analyses were repeated for 15 patients with 5 assessments over two weeks, attention and comprehension were the items that showed greatest stability. ConclusionAlthough delirium is a unitary syndrome our study suggests all symptoms do not follow the same longitudinal pattern. Attention and Comprehension appear relatively stable; other symptoms are more fluctuating. DiscussionThese findings have important implications forhow we define and detect delirium and for understa

**REFERENCES:**

1. Journal Article Meagher DJ, Moran, Raju B, Gibbons D, Donnelly S, Saunders J, Trzepacz PT (2007): Phenomenology of 100 consecutive adult cases of delirium. British Journal of Psychiatry, 190: 135-42
2. Journal Article Trzepacz P.T., Mittel D., Torres R., et al (2001) Delirium phenomenology using the Delirium Rating Scale Revised 1998 (DRS-R-'98). Journal of Neuropsychiatry and Clinical Neurosciences, 13, 154

**NR7-016**

## PSYCHOSOCIAL PROFILE AND PSYCHIATRIC MORBIDITY IN PATIENTS WITH ACROMEGALY: A STUDY FROM NORTH INDIA.

*Nitin Gupta, M.D. Consultant Psychiatrist-South Staffordshire and Shropshire Healthcare NHS Trust, Margaret Stanhope Centre, Belvedere Road,, Burton Upon Trent, England DE13 0RB, Surendra Kumar Mattoo, M.D., Anil Kumar Bhansali, D.M., Nitin Gupta, M.D., Sandeep Grover, M.D., Ramma Malhotra, M.A., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to [1] demonstrate the need of cross-cultural research in psychological/psychiatric issues related to endocrinological disorders, and [2] highlight the importance of identifying

and managing psychiatric and psychosocial morbidity in acromegaly, thereby helping clinicians to access appropriate and humane care for the psychological needs of patients with Acromegaly.

**SUMMARY:**
Objective: To study the psychosocial profile and morbidity in patients with a diagnosis of Acromegaly
Methods: A prospective cross-sectional study of patients with acromegaly (N= 17) attending the endocrinology services at a multi-specialty teaching hospital in North India was taken up. Seventeen demographically matched healthy participants (free from psychological morbidity) acted as controls. The patients were administered socio-demographic and clinical profile sheets, Presumptive Stressful Life Events Scale, Social Support Questionnaire, Coping Strategies Checklist, Dysfunction Analysis Questionnaire, WHO Quality of Life (QOL) Scale-Bref, General Health Questionnaire-12 (GHQ-12). Those with a GHQ-12 score of >2 were further assessed with Comprehensive Psychopathological Rating Scale and presence of psychiatric diagnoses as per the International Classification of Diseases-10th Revision (ICD-10) was determined. The GHQ >2 (GHQ-Positive) and GHQ <2 (GHQ-Negative) subgroups were compared as regards their psychosocial profile.
Results: The acromegaly group had predominance of urban married males (64.7 %) with mean age at onset of 33.05±16.02 (range=14-60) years, and mean duration of illness of 36.05±42.5 (range=4-240) months. Six subjects (i.e. GHQ positive group) scored positive on the GHQ-12 giving a psychiatric morbidity rate of 33.33 %, with five having an ICD-10 diagnosis. Compared to the GHQ negative group, the GHQ positive group had more number of life events in the entire lifetime, used significantly more number of emotional coping strategies, had more dysfunction, and poorer QOL (in domains of physical health, social relationship and general well being).
Conclusions: Psychiatric morbidity occurs in a significant percentage of patients with acromegaly. Presence of psychiatric morbidity is associated with dysfunction and poorer QOL.
Funding: This study was carried out as part of the Institute (PGIMER) Research Scheme and was supported by funding provided by the Institute-Postgraduate Institute of Medical Education and Research (PGIMER), Chandigarh, India.

**REFERENCES:**

1. Furman K, Ezzat K: Psychological features of acromegaly. Psychother Psychosom 1998; 67:147-153.
2. Woodhouse LJ, Mukherjee A, Shalet SM, Ezzat S. The Influence of Growth Hormone Status on Physical Impair ments, Functional Limitations, and Health-Related Quality of Life in Adults. Endocr Rev 2006; 27:287–317

**NR7-017**

## PSYCHOSOCIAL PROFILE AND PSYCHIATRIC MORBIDITY IN PATIENTS WITH CUSHING'S DISEASE: A STUDY FROM NORTH INDIA.

*Nitin Gupta, M.D. Consultant Psychiatrist-South Staffordshire and Shropshire Healthcare NHS Trust, Margaret Stanhope Centre, Belvedere Road, Burton Upon Trent, DE13 0RB England , Surendra Kumar Mattoo, M.D., Anil Kumar Bhansali, D.M., Sandeep Grover, M.D., Rama Malhotra, M.A., Ph.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to [1] demonstrate the need of cross-cultural research in psychological/psychiatric issues related to endocrinological disorders, and [2] highlight the importance of identifying and managing psychiatric and psychosocial morbidity in Cushing's Disease, thereby helping clinicians to access appropriate and humane care for the psychological needs of these patients.

**SUMMARY:**
Objective: To study the psychosocial profile and morbidity in patients with a diagnosis of Cushing's Disease.
Methods: A prospective cross-sectional study was carried out. A purposive sample of patients with Cushing's Disease (N= 18) attending the endocrinology out- or in-patient services at a multi-specialty teaching hospital in North India was taken up. The Cushing's Disease patients were group- matched for age, sex, education, locality and marital status with Healthy Controls who scored <2 on GHQ-12 (N= 22). The patients were administered socio-demographic and clinical profile sheets, Presumptive Stressful Life Events Scale, Social Support Questionnaire, Coping Strategies Check List, Dysfunction Analysis Questionnaire, WHO Quality of Life (QOL) Scale-Bref, General Health Questionnaire-12 (GHQ-12). Those with a GHQ-12 score of >2 were further assessed with Comprehensive Psychopathological Rating Scale and presence of psychiatric diagnoses as per the International Classification of Diseases-10th Revision (ICD-10) was determined. The GHQ >2 (GHQ-Positive) and GHQ <2 (GHQ-Negative) subgroups were compared as regards their psychosocial profile.
Results: The Cushing's disease group had predominance of females (71.5 %) with mean age at onset of 20.38 (range: 8-38) years, and mean duration of illness of 65.33 (range: 4-260) months. Six subjects (i.e. GHQ positive group) scored positive on the General Health Questionnaire-12 giving a psychiatric morbidity rate of 33.33 %, with one having an ICD-10 diagnosis. There was no difference between GHQ positive and GHQ negative group, on number of life events, social support, quality of life and dysfunction. However, GHQ positive group used significantly more of internalizing coping strategies.
Conclusions: Psychiatric morbidity occurs in a significant percentage of patients with Cushing's disease. Presence of psychiatric morbidity is associated with internalizing coping strategies.
Funding: This study was carried out as part

**REFERENCES:**

1. Sonino N, Fava GA: Psychosomatic aspects of Cushing's Disease. Psychother Psychosom 1998; 67:140-146
2. Sonino N, Fava GA: Psychiatric disorders associated with Cushing's Syndrome: Epidemiology, pathophysiology, and treatment. CNS Drugs 2001; 15 (5): 361-373.

**NR7-018**

## CORRELATION BETWEEN MMSE AND A FORMAL CAPACITY ASSESSMENT

*Premraj Muthuvelu, M.B.B.S Ty Llywyleyn Unit, Llanfairfechan N Wales Bangor, LL57 2PW, United Kingdom Tayyeb Tahir, M.R.C.Psych, Jonathan Bisson, M.R.C.Psych.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to; know more about the use of MMSE (Mini Mental State

Examination) as a capacity assessment tool

**SUMMARY:**

Objective
To determine if there is a correlation between MMSE (Mini Mental State Examination) and a formal capacity assessment.
MethodsThis study was carried out as part of a randomized clinical trial of Quetiapine vs. Placebo in the treatment of psychiatric symptoms of patients with delirium from Oct 2003 to June 2005 at the University Hospital of Wales, Cardiff. A total of 323 patients were screened and a total of 42 patients were recruited. The inclusion criteria included age over 55 years, a diagnosis of delirium using DSM IV, being an inpatient and consent from either the participant or assent from the next of kin.
Assessments were conducted on days one, two, three, four, seven, ten and thirty. They were undertaken using several scales that included MMSE. An Assessment of 'Decision making Capacity to take part in the trial' was conducted on Day one, two, three and four. Capacity Assessment was undertaken formally using a semi-structured questionnaire that involved the categories of capacity tests including understanding, retention, believing, reasoning, and communication. Decision making capacity was deemed to be positive if all the five sub categories could be successfully completed. ResultsFrom the 42 subjects a total of 134 complete measurements were available. From those who were screened but not recruited 147 complete measurements were available for analyses.
Analyses of all the 281 complete measurements showed that the Predictive value of MMSE < 18 to predict 'no capacity' was 95.08%.
ConclusionsMMSE can be used as a useful adjunct in the assessment of capacity. This result is comparable to outcomes in other studies (1), (2). However more studies in other settings would be useful.
Disclaimer: The Randomised Control Trial was part funded by Astra Zeneca

**REFERENCES:**

1. Scott Y. H. Kim, M.D., Ph.D. and Eric D. Caine, M.D. Utility and Limits of the Mini Mental State Examination in Evaluat ing Consent Capacity in Alzheimer's Disease, Psychiatr Serv 53:1322-1324, October 2002
2. L. B. Dunn, M. A. Nowrangi, B. W. Palmer, D. V. Jeste, and E. R. Saks Assessing Decisional Capacity for Clinical Re search or Treatment: A Review of Instruments Am J Psychia try, August 1, 2006; 163(8): 1323 - 1334.

**NR7-019**

## A PILOT STUDY OF THE EFFICACY AND TOLERABILITY OF BUPROPION EXTENDED RELEASE FOR MAJOR DEPRESSIVE DISORDER IN WOMEN WITH BREAST CANCER

*Rajnish Mago, M.D. 833 S Chestnut St East, Suite 210 E, Philadelphia, PA 19107, Shannon Duffany, B.A., Constantine Daskalakis, Sc.D., Kathryn Kash, Ph.D., Elisabeth Kunkel, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand: 1)The high prevalence of MDD in women with breast cancer, the serious consequences of this co-morbidity, and the paucity of antidepressant clinical trials for this; 2) Preliminary evidence of the efficacy of bupropion for the treatment of Major Depressive Disorder and associated anxiety in them; and 3) Concerns about side effects in them, and a need to explore potential differences in side effects between antidepressants

**SUMMARY:**

Introduction: Major Depressive Disorder (MDD) occurs in 10–30 % breast cancer patients, for whom this is the first clinical trial of bupropion. Weight gain, fatigue, and sexual dysfunction, commonly induced by SSRIs, are especially distressing to this group, and bupropion may be preferred.
Methods:13 women with breast cancer (mean age 52 y), MDD, and Montgomery-Asberg Depression Rating Scale (MADRS) score 20 or more received bupropion extended release 150-300 mg/day (open-label, flexible dose) for 8 weeks after a 1 week placebo run-in.
Results:Mixed effects regression models estimated that MADRS scores decreased from a mean of 28.9, by 2.1 points/week over 8 weeks ($p = 0.001$), and patient-rated Hospital Anxiety and Depression Scale–Depression/Anxiety subscales from means of 12.2 and 11.5 by 0.6 and 0.4 per week respectively ($p=.001$). Of 12 patients treated beyond 2 weeks, 9 were Responders based on 50% reduction in MADRS scores, all 12 based on 25% reduction in MADRS scores, and 10 based on a Clinical Global Impression-Improvement score of 1 or 2.
The number of patients whose scores improved, stayed the same, or worsened were: Fatigue Symptom Inventory–Average fatigue (N=11): 6, 3, and 2; Arizona Sexual Experience Scale (N=11): 7, 2, and 2; Brief Pain Inventory–Average pain (N=10): 5, 4, and 1. Weight was stable in 5 of 12 patients, and decreased/increased by 2 lbs in 4 and 3 respectively. Responders based on depression severity did not include a higher proportion of patients with improved sexual functioning or fatigue than the total sample.
Conclusions:Bupropion extended release significantly reduced depression and associated anxiety in women with breast cancer. This pilot study suggests that research is warranted to assess whether bupropion is less likely to cause sexual dysfunction, fatigue, and weight gain, and may improve these for many patients independent of improvement in depression.
Supported by a CRT grant from GlaxoSmithKline

**REFERENCES:**

1. Goodwin JS, Zhang DD, Ostir GV: Effect of depression on diagnosis, treatment, and survival of older women with breast cancer. Journal of the American Geriatrics Society 2004;52(1):106-11
2. Cullum JL, Wojciechowski AE, Pelletier G, Simpson JS: Bupropion sustained release treatment reduces fatigue in cancer patients. Can J Psychiatry 2004;49(2):139-44

**NR7-020**

## THE WRITE STUFF: RELATIONSHIPS BETWEEN NARRATIVE CONTENT AND MEDICAL/PSYCHIATRIC ILLNESS

*Robin J Freyberg, Ph.D. 245 Lexington Ave. New York, NY 10016, Zachary Freyberg, M.D., Ph.D., John Barnhill, M.D., Stephen Ferrando, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able

to recognize that the content of patients' sentences contains important information about psychological and mental health, understand the analysis of writing content through qualitative and quantitative methods, and consider how writing could be incorporated through specific innovative therapies.

**SUMMARY:**
Clinicians often wonder if the sentence written as part of the Folstein Mini-Mental Status Exam (MMSE) reflects the patient's psychological state. Previous research demonstrated that the writing process benefits psychological adjustment. However, few studies have investigated whether writing content reveals information about mental health. Further, it is unclear whether medical co-morbidity affects narrative content. The current study is the first to apply both quantitative and qualitative methods to the analysis of a sentence and to control for medical illness. 459 hospitalized medically-ill patients with psychiatric co-morbidity and MMSE > 21 generated sentences during a standard MMSE. These sentences were then analyzed for word usage and thematic content including power, achievement, and affiliation themes. Charlson Co-morbidity Index (CCI) scores were also generated for all patients. Sentence content was correlated with measures of cognitive function and psychiatric diagnosis. Psychotic patients wrote more but included fewer pronouns than other patients ($p < .005$), suggesting less personal and interpersonal awareness. In contrast, depressed patients wrote less but used more positive emotion words than other patients ($p < .005$), perhaps compensatory to their mood state. Using thematic analysis, we demonstrated that medically-ill psychiatric patients used more power themes (generally disempowerment) than what would be expected by chance ($p < .01$). In addition, patients who incorporated achievement themes had higher MMSE and clock drawing scores, wrote more, and used fewer pronouns than patients who used other themes ($p< .05$). Importantly, there were no differences in CCI scores by diagnosis nor did CCI relate to narrative content. Our findings suggest that a single written sentence provides useful information about patients' mental but not physical health. Implications for creating therapies to target differences in writing content will be considered.

**REFERENCES:**

1. Pennebaker, J.W., Mehl, M.R., & Niederhoffer, K.G. (2003). Psychological aspects of natural language use: Our words, our selves. Annual Review of Psychology, 54, 547-577.
2. Schultheiss O, and Brunstein J. (2001). Assessment of implicit motives with a research version of the TAT: Picture profiles, gender differences, and relations to other personality measures. Journal of Personality Assessment, 77, 71-86.

**NR7-021**

## THE QUALITY OF LIFE IN PATIENTS WITH DIABETES MELLITUS AND MAJOR DEPRESSION

*Tugba Guven, M.D. Sisli Etfal egitim ve Arastirma hastanesi 19 mayis mah. Sisli, Istanbul, Turkey 34340, K. Oguz Karamustafalioglu (presenting)*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to investigate the low quality of life, depression and depressive symptoms which are caused by almost all chronic dieases and underestimated in patients with Diabetes Mellitus (DM).

**SUMMARY:**
OBJECTIVE: The aim of this study is to investigate the low quality of life, depression and depressive symptoms which are caused by almost all chronic dieases and underestimated in patients with Diabetes Mellitus (DM).
METHOD: The participants in the current study were 134 of patients who administred to Sisli Etfal Research and Teaching Hospital Diabetes and Endocrinology Outpatient Unit. Of these, 32 were type I DM, 52 were type II DM on oral antidiabetic medication (non-insulin dependent diabetes mellitus; NIDDM), and 50 were type II DM on insuline. Participants were given a sociodemographic form, Short Form 36-Item Health Survey, Beck Depression Inventory and evaluated by Structured Clinical Interview for DSM-IV (SCID-I). Means, standart deviations, and frequencies were calculated and compared with student's t test and Fisher's exact test. Statistical significance were defined as $p<0.05$.
RESULTS There was a significant difference between type I DM and type II insulin-treated participant groups in terms of Physical Functioning ($p=0.003$) and Mental Health ($p=0.041$). There was alsoa significant difference between Type I and Type II (NIDDM) participant groups in terms of General Health ($p=0.019$), Vitality ($p= 0.015$), Mental Health ( $p<0.001$). Type I and Type II (NIDDM) participant groups were also significantly different in terms of Beck Depression Inventory total scores ($p=0.035$).
DISCUSSION: In this study the most effected subscales of the SF 36 were Physical Functioning and General Health. These findings are consistent with results of previous studies.
CONCLUSION: Duration of diabetes, complications of diabetes, insulin treatment were found to be associated with low quality of life, increased depressive symptoms, and increased tendency for major depression. Likewise depressive symptoms and major depression were found to be associated with disregulation of diabetes, poor adherence, and decreased ability to cope with the consequences of diabetes.

**REFERENCES:**

1. Lustman PJ, Freedland KE, Carney RM. Similarity of depression in diabetic and psychiatric patients. Pyschosomatic Medicine, 1992;54: 602-11
2. Rubin RR, Peyrot M (1999) Quality of Life and diabetes. Diabetes Metab Res Rev, 15:205-218

**NR7-022**

## RELOCATED KATRINA SURVIVORS' EMOTIONAL & BIOLOGICAL STRESS RESPONSES

*Phebe M Tucker, M.D. Department of Psychiatry, University of Oklahoma Health Sciences Center, WP 3440, P.O. Box 26901,, Oklahoma City, OK 73190, Betty Pfefferbaum, M.D., J.D., Qaiser Khan, M.P.H., M. Jan Young, M.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session; 1) participants will recognize major psychiatric diagnoses and symptom levels of PTSD and depression in adult survivors of Katrina relocated to Oklahoma; 2) learners will be able to discuss survivors' differences in cortisol levels compared to matched Oklahoma controls, using low-dose Dexamethasone suppression test; and 3) learners will understand survivors' patterns of autonomic reactivity to hurricane reminders.

**SUMMARY:**
Introduction: Over 100,000 Hurricane Katrina survivors have relocated since 2005. Adult survivors (n=22) in Oklahoma were compared to demographically matched local controls (n=20) 17.3 months post-Katrina. We predicted that persons highly exposed to Katrina would have more Axis I diagnoses, more symptoms of PTSD and depression, greater physiologic reactivity, and lower cortisols than controls, with suppressed cortisol on dexamethasone suppression test (DST).
Methods: SCID, CAPS-I and BDI assessed Axis I conditions, PTSD and depression symptoms. We measured autonomic reactivity with both groups' increases in blood pressure and heart rate in a trauma interview. All received low-dose (0.5 mg) DST, with cortisols measured at 8am and post-dex at 8am and 4 pm on day 2. T-tests (sig. $p<0.05$) compared group means for symptom levels, autonomic reactivity and cortisols.
Results: Survivors were mostly African American, mean age 33.5 years. Most were deprived of basic needs and saw dead bodies in Katrina. Hurricane-related PTSD was diagnosed in 10 of 22 (45.5%) survivors. Survivor's symptom levels of PTSD and depression were in moderate illness range and significantly higher than controls'. Survivors' baseline autonomic measures were significantly higher than controls', with significantly raised heart rate and blood pressures during the interview. Survivors had significantly lower baseline AM salivary cortisol than controls ($p=0.04$) and a trend toward lowered post-dex AM cortisol ($p=0.06$).
Conclusion: Results showed that displaced Katrina survivors had unmet long-term mental health needs, with high rates of PTSD and clinically elevated symptoms of PTSD and depression. Emotional distress was mirrored by biological stress measures in young adult survivors, who had higher resting blood pressure and heart rates than controls and reactivity in all autonomic measures. Survivors showed HPA axis dysregulation.
Support: Oklahoma Center for Advancement of Science and Technology.
**REFERENCES:**
1. Kessler RC, Galea S, Jones RT, Parker HA: Mental illness and suicidality after Hurricane Katrina. Bull World Health Org 2006; 84(12):930-939.
2. Tucker P, Pfefferbaum B, North CS, Kent A, Burgin C, Parker DE, Hossain A, Jeon-Slaughter H, Trautman RP: Physiologic reactivity despite emotional resilience several years after direct exposure to terrorism. Am J Psychiatry 2007; 164(2):230-235

**NR7-023**

## A PILOT STUDY TO EXAMINE POTENTIAL DIFFERENCES IN ANTIDEPRESSANT MEDICATION SIDE EFFECT PROFILES IN THE UNIVERSITY STUDENT POPULATION

*Doris M Iarovici, M.D. Box 90955 Duke University, DurhamNC 27708, Sarah C. Parker, M.D., M.P.H., Hollister Rogers, M.D., Ayesha Chaudhary, M.D.*
**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to: 1) recognize the ways in which age, gender and ethnicity might contribute to differering antidepressant side effect profiles in university students; and 2) recognize how sociocultural factors might affect antidepressant treatment outcomes in this population.
**SUMMARY:**
Introduction: There's been increased recognition that age, gender and perhaps ethnicity might affect the tolerability of antidepressant medications. In 2007 the FDA extended the antidepressant "Black Box" warning for increased suicide risk to include young adults, ages 18-24. This study examines side effects of antidepressant medications in a university student population to assess whether significant differences exist due to age, ethnicity, or gender. Method: 64 undergraduate and graduate students seen through a university counseling service and started on antidepressants completed the Severity of Symptoms Scale (SOSS) questionnaire and demographic data at 0, 2, and 6 weeks. The participants' clinicians tracked medication dosages at 0, 2 and 6 weeks. Results: Participants over age 25 reported more episodes of drowsiness, poor sleep, or unsteadiness after initiation of an antidepressant than did participants under 25 ($p=.05$). Men reported sexual side effects more frequently than did women ($p=.05$). Caucasians reported sexual side effects while non-Caucasians did not (22% vs. 0%, $p<.05$). Non-Caucasians reported more dizziness as a new side effect than did Caucasians ($p<0.05$). Conclusions/Discussion: Although these results indicate some age, ethnicity and gender-related differences in reported antidepressant side effects, sample sizes were small, especially with regard to ethnic groups. Larger studies of demographically diverse populations might clarify both physiological differences and possible socio-cultural variability in side effect reporting. The study did not specifically address suicidality; differences in tolerability between older and younger students support some stratification based on age but suggest younger students have fewer side effects. Medication recommendations could be better tailored to individuals if further evidence confirms that side effect profiles differ based on age, race and/or gender.
**REFERENCES:**
1. Zetin, M, Hoepner, C, and Bjornson, L. Rational Antidepres sant Selection: Applying Evidence-Based Medicine to Com plex Real-World Patients. Psychopharmacology Bulletin. 2006; 39 (1): 38-104.
2. Chen, Jian-Ping et al. Prescribing Medications for Asians with Major Depression. Western J of Med. 2002; 176 (4): 271-275.

**NR7-024**

## CONFIRMATORY FACTOR ANALYSIS OF PROFILE OF MOOD STATES SHORT FORM IN A SAMPLE OF AFRICAN AMERICAN FEMALES WITH BREAST CANCER

*Lisa H Bryant, M.D. 15 Medical Park, Suite 300, ColumbiaSC 29203, Sue P. Heiney, Ph.D., Alicia V. Hall, Ph.D.*
**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to Describe the psychometrics of the Profile of Mood State Short Form when used in a Sample of African American Females with Breast Cancer
**SUMMARY:**
Introduction Psychometrics of the Profile of Mood States

- Short Form (POMS-SF) for African American women with breast cancer (AAWBC) has not been established. In this IRB approved study, we conducted confirmatory factor analyses of the POMS-SF for Total Mood Disturbance (TMD) and six factors: Tension-Anxiety (TA), Depression-Dejection (DD), Anger-Hostility (AH), Vigor-Activity (VA), Fatigue-Inertia (FI), and Confusion-Bewilderment (CB). An exploratory de novo factor analysis was conducted in a further effort to assess model structure. Results Mean age of participants (n= 78) was 53.6 (sd 10.1); 25.6% were married; and 55.6% had incomes < $30,000. The mean of TMD was 11.05 (2.03). For TA, DD, AH, VA, FI, and CB means were 3.67 (0.39), 2.86 (0.43), 2.71 (0.33), 9.58 (0.58), 7.04 (0.59), and 4.36 (0.40), respectively. Cronbach's alpha coefficients for these factors were: 0.83 (TA), 0.87 (DD), 0.75 (AH) 0.88 (VA), 0.91 (FI), and 0.75 (CB). The mean absolute difference between the observed and estimated factor correlations was 0.095; all factor loadings were significant but three items (DD, CB, AH) were low with standardized loadings < 0.60; the Bentler comparative fit index was 0.80; the average standardized residual was 0.96 and <8% exceeded 2. Tests on Lagrange multipliers indicated possible item-factor associations not in the model. Modest lack of fit was demonstrated indicating that some variables might be linked to other factors. The current item-factor structures are reasonably well supported for FI, VA and TA but not so clearly for CB, DD and AH. Conclusion Given lack of support for subscales, clinicians should explore emotions in AAWBC using culturally sensitive words. The POMS-SF has acceptable psychometrics for AAWBC, but the subscales of DD, AH and CB should be interpreted cautiously due to potential cultural influences on scores. Supported by National Cancer Institute, 5R01CA107305-3, Teleconference Group: Breast Cancer In African Americans

**REFERENCES:**

1. Beauboeuf-Lafontant T: You have to show strength: An exploration of gender, race, and depression. Gender & Soci ety 2007; 21(1):28-51
2. McNair DM, Lorr M, Droppleman LF: Edits manual for the Profile of Mood States, San Diego, CA, Educational and Industrial Testing Services, 1992

**NR7-025**

## BRAIN FAG SYNDROME: THE EXTINCTION OF A CULTURE-BOUND SYNDROME?

*Oyedeji A Ayonrinde, M.D. Bethlem Royal Hospital, South London & Maudsley NHS Trust, BeckenhamEngland BR3 3BX, Obuaya Chi-Chi, M.B.B.S,B.Sc., Adeyemi Olusola, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to explore the current nosological and clinical validity of "Brain Fag Syndrome." Participants will be encouraged to reflect on the current relevance of this diagnosis, its aetiology and treatment as well as recognize the potential decay of a culture bound syndrome over time.

**SUMMARY:**

Background: Nearly half a century ago "Brain Fag Syndrome" (BFS) was described in Nigeria (1). It has since been regarded in psychiatric literature including DSM IV (2) as a culture bound syndrome. This study explores its relevance and validity as a contemporary diagnostic and clinical construct in the country of its description by carrying out a national survey of psychiatrists in Nigeria. Method: Psychiatrists in all states of Nigeria were sent a semi-structured questionnaire with a vignette describing classical symptoms of BFS. Questions focussed on case recognition, diagnosis, aetiology and treatment. Results: 75% of psychiatrists in Nigeria responded to the questionnaire. 95% were familiar with the vignette scenario. However, only 22% diagnosed BFS in their daily clinical practice. 49% classified symptoms as an anxiety disorder, 37% as "BFS" and 36% as a depressive disorder. A somatisation disorder was diagnosed in 30% while a psychotic illness was also considered. There was notable diagnostic overlap in responses. Regarding aetiology 31% associated symptoms with educational concerns and 29% with stress. Other factors proffered were predominantly psychological, socio-economic and genetic. There were inconsistencies in suggested therapeutic interventions with 53% advocating the use of psychotherapy; 47% antidepressants and 46% anxiolytics with some overlap. Conclusion: Symptoms of "BFS" present commonly to Nigerian psychiatrists. However major discrepancies exist in the interpretation of psychopathology, diagnosis and treatment. Findings highlight a range of opinions about this "culture bound syndrome" among psychiatrists indigenous to the culture. Diagnostic validity is questioned as is nosological stability. It is unclear whether this is an African hybrid of anxiety, depressive and somatisation disorders or a unique entity. Further research is needed into the relevance of BFS in contemporary psychiatric practice and the DSM V evidence base.

**REFERENCES:**

1. Prince R. The "brain fag" syndrome in Nigerian students. Journal Mental Science 1960 April; 106: 559-70.
2. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders (*DSM-IV*-TR). Washington D.C. 2000

**NR7-026**

## PSYCHOGENIC NON-EPILEPTIC SEIZURES: ARE THERE DIFFERENCES BETWEEN CAUCASIANS AND HISPANIC POPULATIONS?

*Angela M Velez, M.D. 407 Wild Olive Trail , San AntonioTX 78256, Karin McCoy, Ph.D., Shailesh Jain, M.D., Charles A. Szabo, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant would understand the impact of minority status on PNES.

**SUMMARY:**

Rationale: Psychogenic Non-Epileptic Seizures (PNES) are classified by the DSM-IV as a conversion disorder. Patients with PNES account for 24% of referrals to clinics for intractable epilepsy. [1] Somatic symptoms might start in childhood and have been associated with lower parental education, or lower socioeconomic status [2,3] which often occur more frequently in minorities. In this study we looked for differences between two ethnic groups to assess if cultural differences have an impact on the presentation of PNES. Methods: This retrospective cohort analysis included 73 patients evaluated for intractable epilepsy at the South Texas Comprehensive Epilepsy Center (STCEC). All underwent continuous video EEG monitoring (EMU) and were diagnoses with PNES. Age, gender, marital status, living

situation, insurance, age at onset and diagnosis of PNES, psychiatric co-morbidities, clinical presentation, and Psychiatric follow-up were assessed. Results: Caucasians (n=42) and Hispanics (n=31) were not different across age, gender, marital status, or living situation. Mean age (yr) for Caucasians = 41.40, Hispanics = 38.13. There were no significant differences in age of onset, diagnosis, or clinical presentation. The mean age of PNES diagnosis was 40.85 for the Caucasians and 39.44 for the Hispanics. Over half (58.9%) had a co-morbid psychiatric diagnosis. Depression was the most common diagnosis, occurring in 37% of the patients. Significant differences were found in type of insurance [Caucasians had private (31%), while Hispanics had Medicare/Medicaid (54.8%)] and Psychiatry follow-up at discharge (52.4% Caucasians referred, 29% Hispanics). Conclusions: Similarities in PNES presentation across ethnic groups may be impacted by degree of acculturation. Differences in insurance might influence referral patterns to psychiatrists after diagnosis. Further studies of health disparities in different latino groups are necessary.

**REFERENCES:**


1. Sigurdardottir KR, Olafsson E. Incidence of psychogenic seizures in adults: a population based study in Iceland. Epi lepsy 1998; 39:749-52.
2. Guberman A. Psychogenic pseudoseizures in non-epileptic patients. Can J Psychiatry 1982; 27:401-404.


**NR7-027**

## DISSOCIATIVE EXPERIENCES IN PATIENTS WITH TREATMENT-RESISTANT OBSESSIVE-COMPULSIVE DISORDER: ASSOCIATIONS WITH CHILDHOOD TRAUMA AND OBSESSIVE COMPULSIVE SYMPTOMS


*Mesut Cetin, M.D. Department of Psychiatry,Gulhane Medical Academy, Haydarpasa Training Hospital, IstanbulTurkey 34074, Umit B. Semiz,M.D., Alpay Ates, M.D., Cengiz Basoglu, M.D., Servet Ebrinc M.D.,*


**EDUCATIONAL OBJECTIVE:**

A link between predisposition to adult dissociation and self-reports of childhood traumatic events (CTE) has been documented in several psychiatric disorders. This study aimed to examine the severity of dissociative experiences (DE) and the relationship between trauma and dissociation in patients with treatment-resistant obsessive-compulsive disorder (OCD).

**SUMMARY:**


This study aimed to examine the severity of dissociative experiences (DE) and the relationship between trauma and dissociation in patients with treatment-resistant obsessive-compulsive disorder (OCD).

Twenty treatment-resistant outpatients with a diagnosis of *DSM-IV* OCD were evaluated with an assessment battery using a semi-structured interview for OCD, Yale-Brown Obsessive-Compulsive Scale, Dissociative Experiences Scale (DES), and Childhood Trauma Questionnaire.

Our patients reported substantial rates of CTE and relatively high levels of DE (mean DES score: 29.6). Thirty-six per cent of them were defined as high dissociators. DE was significantly associated with childhood emotional abuse. Younger age at onset of OCD symptoms was related to both more severe CTE and higher levels of dissociation. The dimensions 'checking' and 'symmetry and ordering' were significantly related to DE. Emotional abuse was found to contribute to the level of dissociation independent of potential chronic residual effects resulting from early onset of OCD symptoms as well as its chronicity, severity, and treatment resistant features.

This study demonstrates an association between CTE and DE in patients with OCD. Severe dissociative symptoms may be present in a considerable proportion of OCD patients. High dissociators may also be differentiated from low dissociators on some clinical features.


**REFERENCES:**


1. Lochner C, Seedat S, Hemmings SM et al. Dissociative expe riences in obsessive-compulsive disorder and trichotillomania: clinical and genetic findings. Compr Psychiatry 2004;45:384-391
2. Fontenelle LF, Domingues AM, Souza WF et al..History of trauma and dissociative symptoms among patients with obsessive-compulsive disorder and social anxiety disorder. Psychiatr Q 2007;78:241-250


**NR7-028**

## VALIDITY AND RELIABILITY OF THE 13-CARD SCALES AND STANDARD FIGURAL STIMULI TO ASSESS THE BODY-IMAGE IN COLOMBIANS STUDENT ADOLESCENTS


*German E Rueda-Jaimes, M.D. calle 157 No 19 - 55 cañaveral Parque, Bucaramanga; Colombia,1642, Paul A. Camacho, Msc; Silvia M. Flórez, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to know the psychometrics characteristics of the two "silhouuette scales" most useful in the world to determined Body-Image Dissatisfaction.

**SUMMARY:**


Background. Body-Image Dissatisfaction is a known risk and prognostic factor for eating disorder. The "silhouuette scales" are the most useful tools to assess this concept, although in Latin-America there not validity tools. Objective. To determine the validity and reliability of the 13-card scales and Standard Figural Stimuli to evaluate the Body. Methods. A validity study with a probabilistic sample in 189 Colombians student adolescents was design. The students fill out the 13-card scales and Standard figural stimuli and after two weeks they fill out these scales again, as well as, the SCOFF questionnaire, the Rosenberg Self-Esteem Scale. The fat body percentage, weight and size were evaluated. Convergent validity with the body mass index, weight and fat body percentage was determined through the Spearman coefficient. The discrepancy between the perceived and ideal size was the measure of the Body-Image Dissatisfaction and it was correlated with SCOFF questionnaire and Rosenberg Self-Esteem Scale through Spearman coefficient. The test-retest reliability was evaluated through Lin's coefficient. Results. Mean age was 14.1±1.3 years; 67.2% were female. The correlation of the perceived size assess through the Standard figural stimuli with body mass index, weight and fat body percentage was 0.71, 0.55 and 0.46 respectively; and with the 13-Card scales was 0.60, 0.50, and 0.40 respectively. The Body-Image Dissatisfaction assessed with Standard figural Stimuli was correlated with the SCOFF questionnaire (0.43)

and Rosenberg Self-Esteem Scale (- 0.26) and assessed with the 13-Card scales the correlation was 0.50 and -0.22, respectively. The test-retest reliability of the perceived and ideal size with the Standard Figural Stimuli was 0.85 and 0.78; with the 13-Card scales was 0.93 and 0.9 respectively. Conclusion. Convergent validity is good for both scales. The reliability of the Standard figural stimuli is good; the reliability of the 13-Card scales...

**REFERENCES:**


1. Gardner RM, Stark K, Jackson NA, Friedman BN. Development and validation of two new scales for assessment of body-image. Percept Mot Skills. 1999; 89:981-93.
2. Bulik CM, Wade TD, Heath AC, Martin NG, Stunkard AJ, Eaves LJ. Relating body mass index to figural stimuli: population-based normative data for Caucasians. Int J Obes Relat Metab Disord. 2001; 25: 1517-24.


**NR7-029**

## VALIDITY AND INTERNAL CONSISTENCY OF THE BULIMIC INVESTIGATORY TEST, EDINBURGH AND DEVELOPMENT OF A BRIEF VERSION FOR SCREENING OF THE BULIMIA NERVOSA


*German E Rueda-Jaimes, M.D. calle 157 No 19 - 55 cañaveral Parque, Bucaramanga; Colombia, BucaramangaColombia 1642, Paul A. Camacho, M. Sc; Andrés M. Rangel-Martínez-Villalba, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to know the psychometrics properties of the Bulimic Investigatory Test, Edinburgh's symptoms scale and brief version in a non-clinical population of Colombians university students for screening the Bulimic Nervosa and Bulimic-Like.

**SUMMARY:**


Background. Prevalence of the Bulimia Nervosa (BN) and eating disorder bulimic-like have increased in the last years. It has created the necessity of tools for early detection on high risk populations. Objective. Validity and internal consistency of the Bulimic Investigatory Test, Edinburgh's symptoms scale and brief version in a non-clinical population of Colombians university students. Method. A validation study with a cross-sectional sampling was designed. 261 students were evaluated with Bulimic Investigatory Test, Edinburgh's symptoms scale and the Composite International Diagnostic Interview independently and blindly. The fifteen items in the original scale with the higher correlation with total score were selected. Internal consistency, area under the curve ROC, construct and criterion validity were computed for both versions. Results. Internal consistency of original and brief version was of 0.86 and 0.84, respectively. The original version there was two factors that explained 29.8% of the variance and brief version three factors that explained 49.2% of the variance. Significant difference among the area under the curve ROC between the original version (0.9736) and the brief version (0.9608) was not observed. The sensibility was 94.6 and 91.9% and specificity was 91.5% and 82.6% with best cutoff point for the original and brief version, respectively. Conclusion. The Bulimic Investigatory Test, Edinburgh's symptoms scale and brief version shows excellent psychometrics properties, allowing the use like screening tools in university students.


**REFERENCES:**


1. Henderson M., Freeman C.P. A self-rating scale for bulimia. The 'BITE'. Br. J. Psychiatry 1987; 150:18-24.
2. Orlandi E, Mannucci E, Cuzzolaro M, SISDCA-Study Group on Psychometrics. Bulimic investigatory test, Edin burgh (BITE). A validation study of the Italian Version. Eat Weight Disord 2005; 10:14-20.


**NR7-030**

## REFERENCED-EEG GUIDED MEDICATION PREDICTIONS IN TREATMENT REFRACTORY EATING DISORDER PATIENTS


*James M Greenblatt, M.D. 20 Hope Avenue, Suite 107, Waltham-MA 02453, Gyulnara Kasumova, Craig Sussman, FNP*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand how Referenced-EEG may help predict more successful psychotropic medications for patients with Anorexia Nervosa, Bulimia Nervosa, and Eating Disorder Not Otherwise Specified (ED NOS).

**SUMMARY:**


Objective: Referenced EEG (rEEG) is a technology that uses quantitative EEG (QEEG) findings as the independent variable to predict medication response. rEEG provides a neurophysiological basis for the identification of psychiatric medications for patients with non-psychotic psychiatric disorders. This uncontrolled case study assessed the efficacy of rEEG predictions for patients with Eating Disorders. Method: Eight female patients with multiple in-patient or partial hospitalizations (7 inpatient, 1 partial) meeting DSM-IV Criteria for an Eating Disorder consented to baseline unmedicated QEEGs. The rEEG data were used to guide psychopharmacological treatment for 6-months. Clinical outcomes were assessed by the treating Psychiatrist using the 21-Item Hamilton Depression Rating Scale (HDRS) and the Clinical Global Improvement (CGI) Scale. Both 8-week and 6-month follow ups were recorded. Results: All patients had between 2 to 10 prior unsuccessful medication trials and failed outpatient treatments requiring inpatient or partial hospitalization. For these patients, rEEG predicted potential efficacy for medications from the following classes: anticonvulsants, antidepressants and stimulants. HDRS scores averaged 38.8 (range 24-47) at baseline and decreased to an average of 16.5 (range 7-25) at 8 weeks and 13.5 (range 5-27) at 6 months. CGI scores improved to an average of 2.0 at 8 weeks reflecting a 'much improved' change; followed by another improvement at 6 months resulting in an average CGI of 1.38, representing a CGI category between 'very much improved' (score of 1) and 'much improved' (score of 2). Conclusion: This trial demonstrated an improvement in Eating Disorder symptoms by using medications selected through the use of rEEG predictions. Improvements in both HDRS and CGI scores were evident at 8-weeks and 6-months. Referenced-EEG may provide a critical adjunct to treating patients with Eating Disorders.


**REFERENCES:**


1. Suffin SC, Emory WH. Neurometric subgroups in attentional and affective disorders and their association with pharmaco therapeutic outcome. Clin EEG Neurosci 1995; 26: 76-83.
2. Suffin SC, Emory WH, Guitierrez N, et. Al., A QEEG Method

for Predicting Pharmacotherapeutic Outcome in Refractory Major Depressive Disorder, J of Physicians and Surgeons, In Press.

**NR7-031**

## EATING ATTITUDES AMONG SCHOOLCHILDREN FROM MATO GROSSO DO SUL, BRAZIL

*José C Souza, M.D. Rua Theotônio Rosa Pires, 88 CEP 79004-340 - Campo Grande, MS - Brazil, Neomar Souza, M.Sc, Luiz Alberto Magna, M.Sc, Natália Segaglio Magna, B.Sc, Domingos Sávio da Costa, B.Sc, Cristiane Vinholi, M.Sc, Carlos Eduardo Gaudioso, M.Sc.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to learn that sex, body-image and history or not of depression are the most important independent variables that determine the total scores of the dieting, bulimia and oral control subscales.

**SUMMARY:**

Introduction: Both anorexia and bulimia nervosa (BN) occur with greatest frequency among adolescents and young women.
Objective: To assess the eating attitudes of secondary school students at three private schools in the state of Mato Grosso do Sul, Brazil.
Methods: 2,076 students responded to the EAT-26 questionnaire.
Results: There were significant differences in the mean total score for the dieting: scores were higher among females (17.06%); sedentary students (15.20%); and individuals who had had depression in the past (18.45%). Regarding body image, individuals who replied very fat (27.31%) had the highest score, followed by those who replied fat and very underweight, and those who replied average and underweight had the lowest scores. Dieting showed a significant negative correlation with the weekly frequency of physical activities, but did not correlate with age or BMI. The mean total BN score was higher among females (13.10%), sedentary students (12.21%), and those who had had or did not know if they had had depression, when these two figures were compared with those who had not had depression. In the analysis of body image, the highest mean score was observed among those who felt very fat (14.87%) and fat (13.20%). The total BN score was correlated negatively with the number of times physical activity was performed per week and positively with BMI, but did not correlate with age. The mean total oral control score was higher among females (7.72%); higher among individuals who had had depression (8.39%) and lower among those who had not (6.00%). Regarding body image, individuals who replied very fat (11.88%) and fat (8.29%) had the highest mean score. There was a significant positive correlation with BMI and no correlation with age or the frequency of physical activities.
Conclusions: The most important independent variables that determine the total scores of the dieting, BN and oral control subscales are sex, body image and history or not of depression.

**REFERENCES:**

1. Koff E, Sangani P: Effects of coping style and negative body image on eating disturbance. Int J Eat Disord 1997; 22:51-56
2. Neumark-Sztainer D, Story M: Adolescents engaging in unhealthy weight control behaviors: are they at risk for other health-compromising behaviors? Am J Public Health 1998; 88(6):952-955

**NR7-032**

## DISTURBED EATING ATTITUDES AND BEHAVIORS IN SOUTH KOREAN BOYS AND GIRLS: A SCHOOL-BASED CROSS-SECTIONAL STUDY

*Su-Jin Yang, M.D. Department of PsychiatryChonnam National University Hospital8 Hak-dong, Dong-ku, GwangjuSouth Korea, GwangjuSouth Korea 501-757, Jae-Min Kim, M.D., Ph.D., Sang-wook Park, M.D., Sung-Jin Kim, M.D., Jun-Young Cho, M.D., Jin-Sang Yoon, M.D., Ph.D*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to; identify the disturbed eating attitudes and behaviors were associated with fear of being overweight, passive coping strategies, and problematic behavior in Asian children.

**SUMMARY:**

Background
Current academic literature about eating disorders primarily involves white females. This study was designed to assess the prevalence and correlates of disturbed eating attitudes and behaviors in South Korean students.
Methods
In a cross-sectional survey, 2226 fourth and seventh grade students filled out questionnaires on disturbed eating attitudes and behaviors (Eating Attitude Test –26), depression, anxiety, body satisfaction, coping strategies, self-esteem and behavioral problems. We conducted two separate analyses to investigate the prevalence and correlates of disturbed attitudes about eating. We used chi-square tests to compare the prevalence between primary and secondary school students. For the correlates analyses, we treated EAT-26 scores as dependent variables. We tested any factors potentially associated with the dependent variable in univariate analyses (p-value<0.05) were than entered into a logistic regression model to assess independence.
Results
Disturbed eating attitudes and behaviors were found in 7 percent of students. In the multivariate analyses, disturbed eating attitudes and behaviors were associated with the fourth grade, high socioeconomic status, fear of being overweight, passive coping strategies, and total behavioral difficulties. Differences in the associations were found between boys and girls. There were significant associations between desired underweight Body Mass Index, low socioeconomic status, and passive coping strategies in boys; and between the fourth grade, high and low socioeconomic status, fear of being overweight, passive coping strategies, and behavioral problems in girls.
Conclusions
In South Korean children, disturbed eating attitudes and behaviors were related toassociated with various psychological and sociocultural factors; some gender-related differences are also evident.

**REFERENCES:**

1. Neumark-Sztainer D, Croll J, Story M, Hannan PJ, French SA, Perry C: Ethnic/racial differences in weight-related con cerns and behaviors among adolescent girls and boys. Find ings from Project EAT. J Psychosom Res 2002, 53: 963-974.
2. Muris P, Meesters C, van de Blom W, Mayer B: Biologi cal, psychological, and sociocultural correlates of body

change strategies and eating problems in adolescent boys and girls. Eat Behav 2005, 6: 11-22.

**NR7-033**

## NEEDS OF CHILD ABUSE EDUCATION IN KOREAN MEDICAL SCHOOL CURRICULA

*Su-Jin Yang, M.D., Ph.D. Department of Psychiatry, Chonnam National University Hospital, 8 Hak-dong, Dong-ku, Gwangju, South Korea Sun-Young Kim, M.D., Sang-Wook Park, M.D., Jun-Young Cho, M.D., Sung-Jin Kim, M.D. , Jin-Sang Yoon, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the needs of child abused education in Korean medical school curricula to encourage medical personnel in mandatory reporting for abused child.

**SUMMARY:**

Purpose: Child abuse and Child sexual abuse results in serious physical and psychological problems to abused child and their family. However, there are a few cases of abused child reporting by medical services in Korea. This study aimed to examine education experiences, knowledge, intention to report, and educational needs of child abuse and child sexual abuse in Korean medical interns and associated medical professionals.
Methods: A descriptive cross-sectional study was conducted in 2005 and 2007. The study sample consisted of 309 medical interns who serve their internships at the same general hospital in Korea. They filled up 11 self-administered questionnaire related to child abuse. Descriptive statistics, frequency, t-test, and chi-square test were used for data analysis.
Results: In spite of the strong will to resolve the children's problems, about 90% of responders had reluctance and no educational experiences of child abuse. Ignorance was a major reason for their reluctance to report abused child. The preferred reporting agency for child abuse was Korea National Child Protection Agency for female responders (47.9%) and police stations for male responders (48.3%). The preferred reporting agency for child sexual abuse was police stations (49.2% in male, 37.0% in female). Medical school curricula were elected to the most proper time for child abuse education (54.5% of responders).
Conclusion: This study found that Korean medical graduates had limited experiences and knowledge related child abuse. To encourage medical personnel in mandatory reporting for abused child, child abuse related issues must be educated in Korea medical schools. The Korean medical school curricula for child abuse are needed to be developed, implemented, and evaluated.

**REFERENCES:**

1. King, G., Reece, R., Bendel, R., & Patel, V. (1998). The ef fects of sociodemographic variables, training, and attitudes on the lifetime reporting practices of mandated reporters. Child Maltreat, 30, 276-283.
2. Alpert, E.J., Tonkin, A.E., Seeherman, A.M., & Holtz, H.A. (1998). Family violence curricula in US medical schools. Am J Prev Med, 14, 272-282.

**NR7-034**

## NEUROPSYCHOLOGICAL IMPAIRMENTS ACROSS UNMEDICATED ACUTELY-ILL AND MEDICATED REMITTED PHASES OF BIPOLAR I DISORDER

*Ghada R Taha, Alamal Complex for Mental Health, Dammam, PO 5054, Saudi Arabia 31422, Doaa A. Khalifa, M.D., Mona M. El-Sheikh,M.D., Nivert M. Zaki, M.D., Doaa H. Hewedi,M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to identify neuropsychological dysfunctions in patients with bipolar disorder patients, and recognize the importance of these dysfunctions for the ourcome of the disorder.

**SUMMARY:**

Background: Previous research has demonstrated neuropsychological impairments in bipolar disorder. Only few studies compared cognitive functions across different clinical states of bipolar disorder. Objectives: To investigate and verify the patterns of cognitive dysfunction in the different phases of bipolar disorder and to find out the relationship between clinical features and cognitive impairments. Methods: Four groups; 28 manic, 21 depressed, 25 euthymic patients and 20 healthy control were administered a brief battery of neuropsychological tests for assessment of attention, executive function, visual and verbal memory. Results: All bipolar groups showed poorer neuropsychological performance in all tests compared to the control group. The 3 bipolar groups showed some distinct pattern in types and severity of cognitive impairments. Patients with longer duration of illness, early onset, greater number of episodes and with history of psychotic features were found to show poorer performance. Conclusion: Cognitive impairments are present across all phases of bipolar disorder. Although they seem to be genuine in nature, they are influenced by chronicity of illness, frequency of episodes and psychiatric symptoms.

**REFERENCES:**

1. Reitan RM: Validity of the Trail Making Test as an indication of organic brain damage. Percept Mot Skills 1958; 271-276.
2. Rubinsztein JS, Michael A, Paykel ES, Sahakian BJ: Cog nitive impairment in remission in bipolar affective disorder. Psychol Med 2000; 30, 1025-1036.

**NR7-035**

## DURATION OF UNTREATED ILLNESS IN MOOD AND ANXIETY DISORDERS

*A. Carlo Altamura, M.D. Fondazione IRCCS Ospedale Maggiore Policlinico, Mangiagalli e Regina Elena Department of Psychiatry, University of Milan, Milano, Italy 20122, Bernardo Dell'Osso, M.D., Alessandra Albano, M.D., Massimiliano Buoli, M.D., Marta Serati, M.D., Mariateresa Ciabatti, M.D., Emanuela Mundo, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to estimate the different duration of untreated illness, defined as the time elapsing between the onset of the disorder and the administration of the first pharmacological treatment, in anxiety and mood disorders.

**SUMMARY:**

Objective: A prolonged duration of untreated illness (DUI)

has been indicated as potential negative predictive factor of clinical outcome in psychiatric disorders as Schizophrenia, Mood Disorders, and Anxiety Disorders (1,2). The present study was aimed to investigate the DUI in some mood and anxiety disorders. Methods: Study sample included 729 patients with mood and anxiety disorders: 181 with Major Depressive Disorder (MDD), 115 with Bipolar I Disorder (BPI), 186 with Bipolar II Disorder (BPII), 100 with Generalized Anxiety Disorder (GAD), 96 with Panic Disorder (PD) and 51 with Obsessive-Compulsive Disorder (OCD) according to *DSM-IV-TR* criteria. Patients were selected, interviewed through the SCID and their clinical charts reviewed. The main demographic (age, gender) and clinical (age at onset, age at first treatment, DUI) variables were compared between the diagnostic groups using oneway ANOVA or chi-squared tests. The DUI was defined as the interval, in months, between the onset of the disorder and the administration of the first effective pharmacological treatment (i.e.: antidepressants or mood stabilizers). Results: Statistically significant differences between diagnostic groups in terms of age at onset ($F= 19.350$; $p< 0.0001$), age at the first treatment ($F= 25.159$; $p< 0.0001$) and DUI ($F= 12.680$; $p< 0.0001$) were found. Of note, patients with MDD showed the shortest DUI (39.08, sd=97.63) whereas patient with BDII showed the longest DUI (97.2, sd=72.07) (Bonferroni: $p< 0.0001$) in comparison with the other groups. Conclusion: Present findings would indicate that patients with mood/anxiety disorders may show significant differences in the DUI and other clinical features. It is of clinical interest to assess the extent to which delays until beginning an appropriate treatment influence the clinical course, morbidity and mortality of mood/anxiety disorders.

**REFERENCES:**


1. Altamura AC, Bassetti R, Sassella F, Salvatori D, Mundo E.: Duration of untreated psychosis as a predictor of outcome in first-episode schizophrenia: a retrospective study. Schizophr Res 2001; 52(1-2):29-36.
2. Altamura AC, Dell'Osso B, Mundo E, Dell'Osso L.: Duration of untreated illness in major depressive disorder: a naturalistic study. Int J Clin Pract 2007; 61(10): 1697-700.


**NR7-036**

## PREVALENCE OF MAYOR PSYCHIATRIC DISORDERS AMONG COLLEGE STUDENTS ATTENDING THE UNIVERSIDAD INDUSTRIAL DE SANTANDER – BUCARAMANGA, COLOMBIA


*Carlos A Barrera-Gonzalez, M.D. Carrera 29 47-108 Oficina 19, Bucaramanga Colombia 10011, Pinzon Alexander, MD, Rosas Liliana MD.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the prevalence of mayor psychiatric disorders among college students attending a public University in the northeast of Colombia.

**SUMMARY:**


Objective: To determine the prevalence of mayor depression, dysthymic disorder, obsessive-compulsive disorder, substance abuse and suicide among college students attending the Universidad Industrial de Santander, Bucaramanga-Colombia. Methods: An analytical cross-sectional study was conducted using college students attending the Universidad Industrial de Santander. Probabilistic stratified sampling was used. The DSM-IV semi-structured interview was applied to all participants to determine the presence of disease.
Results: 162 subjects (53,7% male, mean age 21, 3 (SEM 2,7)) participated in the study. Life prevalence of mayor depression was 23% (SEM 3,2%), dysthymic disorder 1,9% (SEM 1,1%), social phobia 13,6% (SEM 2,6%) and obsessive-compulsive disorder 7,3% (SEM 2,1%). The life prevalence of mayor depression was higher among women, while other disorders had a higher prevalence in men. 10,5% of all subjects reported structured suicidal ideation at least once in their lifetime and 1,2% had attempted suicide. The mean 12-month prevalence of drug abuse or drug dependence was 4,3% (SEM 1,6%), being more frequent among men participating in the study.
Conclusions: Mayor psychiatric disorders are prevalent among college students attending the Universidad Industrial de Santander in Bucaramanga, Colombia. Institutional interventions ought to be implemented to diagnose and treat students at early stages to decrease the burden of psychiatric disease among our students.


The authors do not have any conflict of interest.

**REFERENCES:**


1. Posada-Villa JA, Aguilar-Gaxiola S, Magaña C, Gómez LC. Prevalencia de trastornos mentales y uso de servicios: Resul tados preliminares del estudio de salud mental. Colombia, 2003. Revista Colombiana de Psiquiatría 2004; 33: 241- 262
2. Sánchez R, Cáceres H, Gómez D. Ideación suicida en adoles centes universitarios: prevalencia y factores asociados. Bio médica 2002; 22: 407-416.


**NR7-037**

## INCIDENCE OF POSITIVE SCREENS FOR SYMPTOMS OF PTSD AT TWO FREE MEDICAL CLINICS 6,12 AND 22 MONTHS AFTER HURRICANE KATRINA


*Catheirne S May, M.D. 2000 P St NW, Washington,DC 20036, Eleanore Maletta, B.A., Lorna Mayo, M.D., Julia Frank, M.D., Paul Brounstein, M.A., Ph.D., Robert Titzler, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to; 1) recognize the incidence of symptoms of PTSD in patients presenting with medical complaints following Hurricane Katrina 2) understand the comorbidity of psychiatric and medical symptoms in a post disaster setting; and 3) recognize the need for integrated psychiatic and primary care for disaster survivors.

**SUMMARY:**


Introduction:
The need for medical care on the Gulf Coast following Hurricane Katrina was often met by faith-based clinics. We present data on the incidence of symptoms of PTSD over 22 months, gathered while providing general medical care at Camp Coast Care in Pass Christian, MS and Bethel Lutheran Medical Clinic in Biloxi, MS.
Objectives: To clarify the yield of screening for PTSD in a medical clinic population following a disaster and the need to integrate psychiatric and primary care in this population.
Methods: The American Academy of Family Practice self-report screen for PTSD (1) was administered to all patients at

two medical clinics on the Gulf Coast. Patients were screened for previous psychiatric symptoms or history of trauma. The MINI Patient Health Survey was administered to the patients at the Biloxi site. The incidence of positive screens for PTSD was evaluated at 6, 12, and 22 months post Katrina.Results: 540 respondents were screened in Biloxi. Participation rates approached 100% during each 3-5 day screening period. At 6 months 43.64% of patients with a medical chief complaint screened positive for symptoms of PTSD. At 12 and 22 months the incidences were 39.31% and 42.47%. Correcting for a history of trauma or psychiatric symptoms, the incidence of positive screens was 34.55% (6 mo), 30.35% (12mo), and 30.14% (22mo).
329 respondents were screened in Pass Christian in 12/05 and 01/07. In December 52.5% and in January 35.6% of patients with medical complaints had symptoms of PTSD. Conclusions: The incidence of symptoms of PTSD in patients with medical chief complaints was consistently high across a 22 month period. This suggests that the routine use of screening tools is useful to detect often unrecognized psychiatric symptoms in primary care settings. This finding argues for the integration of psychiatric and primary care in post disaster settings, as is also recommended for survivors of combat. (2)

**REFERENCES:**


1. National Center for PTSD: Screening for PTSD in a Primary Care Setting. Why Should Primary Health Care Providers by Knowledgeable about Traumatic Stress? http://www.ncptsd.va.gov/ncmain/ncdocs/fact shts/fs screen disaster.html. Re trieved Dec. 5, 2007
2. Wilson,JF: Posttraumatic Stress Disorder Needs to Be Rec ognized in Primary Care. Annals of Internal Medicine 2007; 146(8):617-620


**NR7-038**

## IMPACT OF THE CHI-CHI EARTHQUAKE ON PTSD SYMPTOMS IN EARTHQUAKE SURVIVORS – A FOLLOW UP STUDY


*Chia-Ming Chang, M.D. 5, Fu-Shing Rd, Kwei-San, Taoyuan, 333, Taiwan, Taoyuan Taiwan 333, Li-Ching Lee, Ph.D., Te-Jen Lai, M.D., Ph.D., Kathy M. Connor, M.D., Jonathan R.T. Davidson, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the chronicity and severity of PTSD and general psychiatric morbidity due to a sudden traumatic event.

**SUMMARY:**


Introduction: We conducted a longitudinal follow up study by recruiting adult survivors from two villages destroyed by the Chi-Chi earthquake (EQ) in 1999. We previously reported significant cross-sectional associations between exposure to the EQ and psychiatric morbidity and PTSD. The present study followed up with the cohort from the previous investigation to assess the impact of the EQ on general psychiatric morbidity (GPM) and PTSD symptoms.
Methods: A group of 199 adult survivors from the Chi-Chi EQ were evaluated 10 months and 22 months after the traumatic event. GPM was measured by the Chinese Health Questionnaire and PTSD symptoms were assessed by the Davidson Trauma Scale. Both GPM and PTSD symptoms were evaluated at both time points. EQ exposure was only measured 10-months after the EQ. The exposure variable comprises items such as injury and death of family members, loss of property, and loss of job due to the EQ.
Results: As expected, symptom severity decreased 22 months post-event whereas it did not 10 months post-event. Although EQ exposure significantly predicted GPM and PTSD symptoms at both time points, its predictive power was stronger for PTSD symptoms ($p<.0001$ at 10-months, $p<.01$ at 22-months) than for GPM ($p<.001$ at 10-months, $p<.05$ at 22-months).
Conclusion: The impact of exposure to the earthquake on general psychiatric morbidity and PTSD remains significant two years after the traumatic event. Although the exposure effect is higher on PTSD symptoms than on general psychiatric morbidity, the effect is significant on both (GPM and PTSD). Our findings suggest a treatment program targeting people who experience a sudden traumatic event should include both PTSD and general psychiatric morbidity.


**REFERENCES:**


1. Lai TJ, Chang CM, Connor KM, Lee LC, Davidson JRT: Effects of an earthquake on a rural community of Taiwan. J Psychiatr Res 2004; 38:313-322
2. Chang CM, Lai TJ, Davidson JRT, Lee LC, Connor KM: Predictors of post-traumatic outcomes 10 months after Tai wan earthquake. J Nerv Ment Dis 2005; 193:40-46


**NR7-039**

## REGIONAL TRENDS IN FREQUENT MENTAL DISTRESS IN THE U.S., 1993-2006


*Daniel P Chapman, Ph.D. Centers for Disease Control and Prevention, 4770 Buford Highway. NE*
*Mailstop K-67, AtlantaGA 30341, James B. Holt, Ph.D., David G. Moriarty, Matthew M. Zack, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to describe regional trends in the prevalence of frequent mental distress between 1993-2001 and 2003-2006 throughout the U.S.

**SUMMARY:**


Introduction:Frequent mental distress (FMD) is a construct enumerating diverse psychiatric symptomatology.Despite the utility of this measure as a barometer of psychopathology, little is known about spatial-temporal trends in the prevalence of FMD in the U.S.FMD is defined as 14 or more self-reported mentally unhealthy days out of the past 30 days.To assess geographically-based time trends in FMD throughout the U.S., we compared the percentage of adults reporting FMD in 1993-2001 with 2003-2006. Methods:Data were obtained from the Behavioral Risk Factor Surveillance System, an ongoing,state-based,random-digit-dialed phone survey of the noninstitutionalized U.S. population aged 18 years and older. Responses to the FMD question were aggregated by states and counties,weighted to account for complex sampling methodology, and analyzed in a geographic information system. Results: The mean state prevalence of FMD for 1993-2001 was 8.5%, while the mean prevalence for 2003-2006 was 9.9%. During 2003-2006,20 states remained within a percentage point of their 1993-2001 FMD prevalence,while the prevalence in the remaining states and DC increased by one or more percentage points.In AZ,OK,MS,AL,and WV,FMD increased

by 3 or more percentage points.Prominent geographic patterns were evident within and across state borders,such as low prevalence of FMD in the upper Midwest and high prevalence in CA,NV,Appalachia,and the Mississippi River Valley (MRV). Temporal changes in FMD varied within states and geographic patterns of change were identified across state borders, such as decreased prevalence in the upper Midwest and increased prevalence in Appalachia,OK,and the MRV.Conclusion: Comparisons of geographic patterns across two time periods highlight areas of consistently high and low FMD, as well as changes in state and sub-state prevalence.Continued surveillance of FMD will be useful in identifying regions hampered by unmet needs and disparities and targeting and monitoring interventions.

**REFERENCES:**


1. Strine TW, Balluz LS, Chapman DP, Moriarty DG, Owens M, Mokdad A. Risk behaviors and healthcare coverage among adults by frequent mental distress status, 2001. Am J Prev Med 2004;26:213-226.
2. Brewer CA. Basic mapping principles for visualizing cancer data using geographic information systems (GIS). Am J Prev Med 2006;30:S25-S36.


**NR7-040**

## DEPRESSION AND DISABILITY IN PATIENTS WITH EARLY SEROPOSITIVE RHEUMATOID ARTHRITIS.


*Farhan Aslam, M.B.B.S Shifa International Hospital, sector F11, Islamabad, Pakistan (west) 46000, Dr Attiya Haque M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to estimate the prevalence of depressed mood and its relationship to functional disability in patients with early seropositive rheumatoid arthritis (RA).

**SUMMARY:**


Introduction:
To estimate the prevalence of depressed mood and its relationship to functional disability in patients with early seropositive rheumatoid arthritis (RA).
Methods:236 patients with early seropositive RA (less than 15 month disease duration, positive rheumatoid factor and greater than 6 swollen and tender joints) participated in a longitudinal cohort study and completed a self reported mailed questionnaire every 6 months for a period of 5 years. As a part of questionnaire, the center for Epidemiological Studies Depression (CES-D) scale was completed. A score =16 on CES-D was used to indicate depressed mood. Pain and fatigue were measured using a visual analog scale (VAS, 0-100mm). Functional disability was measured by the health assessment questionnaire score (HAQ).Results: 40% of RA patients reported depressed mood on the CES-D at study entry. This is in contrast to the point prevalence of depression in the general population of 5-9% in females and 2-3 % of males as reported in DSM-IV. Depressed mood patients had a higher CES-D score compared to non depressed patients (26.4±9.0 vs. 7.8±4.4, $p<0.01$), were younger than non depressed (48±13.5 years vs. 54±12.3 years, $p<0.01$), reported more fatigue (VAS 64.8±26.6 vs. 56.3±27.7, $p=0.05$) and higher HAQ score (1.4±0.7 vs. 1.0±0.7, $p<0.01$). There was no difference in swollen joint count, tender joint count and acute phase reactants between the 2 groups.Conclusion:Depressed mood was highly prevalent in our cohort of patients with early RA. Patients with depressed mood reported more fatigue and pain than non-depressed patients and had moderate functional disability. Since the swollen and tender joint count and acute phase reactants were similar among the 2 groups the association between depressed mood, pain, fatigue and disability appears to be unrelated to the severity of RA. It would be helpful to study if anti-depressants reduce fatigue, pain and disability in patients with early RA who me


**REFERENCES:**

See Text

**NR7-041**

## PREVALENCE OF PAINFUL PHYSICAL SYMPTOMS IN GAD WITH OR WITHOUT CO-MORBID MDD: ASSOCIATION WITH FUNCTIONAL AND HEALTH STATUS IMPAIRMENT


*Helena Delgado-Cohen, B.S.C. Lilly SpainAvda de la Industria 31 Madrid, Spain 28810, Romera Irene, M.D., Fernandez Sabela, Montejo Angel Luis, M.D., Caballero Fernando, M.D., Caballero Luis, M.D., Arbesu Jose, M.D., Delgado-Cohen Helena, MSc., Polavieja Pepa, Gilaberte Inmaculada, Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the association beetween Painful Physical Symptoms (PPS) and psychological functioning and health status impairment in patients with Generalized Anxiety Disorder in the PC setting.

**SUMMARY:**


Objective: To assess the prevalence of Painful Physical Symptoms (PPS) in patients with Generalized Anxiety Disorder (GAD) vs patients with GAD and co-morbid Major Depressive Disorder (MDD) and a control group (no GAD no MDD).
Methods: This is a cross-sectional multi-center epidemiological study in Primary Care (PC). Patients attending GP for any reason were screened for GAD by the Hospital Anxiety and Depression Scale. GAD diagnosis was confirmed by the Mini International Psychiatric Interview. Patients were considered to have PPS if the VAS overall score for pain was >30. Psychosocial functioning was assessed by the Sheehan Disability Scale (SDS) and health status by EUROQoL-5D. The relationship between PPS, functioning and health status was analised by ANCOVA models. Results were adjusted for confounding factors (age, gender, diagnosis).
Results: Out of 7152 patients, 1583 (22.1%) screened positive: 981 (13.7%) had a confirmed GAD diagnosis of whom 559 (7.8%) had GAD with co-morbid MDD and 422 (5.9%) had GAD only. Out of the remaining 5569 patients, 336 (4.7%) were confirmed as controls. PPS in patients with GAD were twice as prevalent as in the control group: 59.0% vs 28.3%; $p<.0001$ (CI 95%; 0.54-0.64 vs 0.23-0.33). The presence of co-morbid MDD was associated with a significantly higher prevalence of PPS: 78.0% vs 59.0%; $p<.0001$ (IC 95%; 0.74-0.81 vs 0.54-0.64). PPS were significantly associated with functional impairment (+7.3 in SDS score; $p<.0001$). The magnitude of this association was similar to the presence of both GAD and MDD (+8.1 in SDS score; $p<.0001$).The presence of PPS was significantly associated with health status impairment in a similar fashion to

having co-morbid MDD. Conclusions: We have found a higher prevalence of PPS in patients with GAD than in patients without GAD nor MDD that it is not explained by MDD or studied confounding factors. PPS are independently associated with functional and health status impairment. Study funded by Lilly.

**REFERENCES:**

Not applicable.

**NR7-042**

## ANALYSIS OF POTENTIAL DRUG-DRUG INTERACTION PAIRS ASSOCIATED WITH ANTIPSYCHOTICS AMONG MEDICAID PATIENTS WITH SCHIZOPHRENIA OR BIPOLAR DISORDER

*Jeff J. Guo, Ph.D. 3223 Eden Avenue, CincinnatiOH 45267, Yonghua Jing, Ph.D. Candidate, Nick C. Patel, Pharm.D., Ph.D., Jasmanda Wu, Ph.D., Christina ML. Kelton, Ph.D., Huihao Fan, Ph.D. Candidate, Paul E. Keck5, Jr., M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to describe the risk factors of receiving potential drug-drug interaction pairs associated with commonly used antipsychotics among Medicaid adult patients with schizophrenia, schizoaffective disorder, or bipolar disorder. The potential drug-drug interactions should be considered when prescribing some antipsychotics. Patients with key psychiatric and medical comorbidities had a higher risk of receiving potential DDI pairs.

**SUMMARY:**

Introduction: Since many antipsychotics are metabolized by cytochrome P450 (CYP450) isoenzymes (1A2, 2D6, and 3A4), we proposed to assess the risk of receiving potential drug-drug interaction (DDI) pairs associated with the inhibition or induction of CYP450 isoenzymes. Methods: Using the Ohio Medicaid claims database from 1/1/2001 to 12/31/2003, a total of 44,511 patients (18=age=65) with a schizophrenia or bipolar disorder diagnosis and receiving at least one study antipsychotic were selected for this study. Any clinically significant (moderate or severe) DDI pair was defined to have concomitant exposure if any of the days supply for an antipsychotic prescription overlapped with the days supply of an interacting medication by at least one day. Patients with schizophrenia and bipolar disorder were analyzed separately. Multivariable logistic regression analysis was used to assess risk factors associated with the receipt of a potential DDI pair. Results: Of the 44,511 study patients, potential DDI pairs were received by 12.1% (11.9% in schizophrenia, 12.9% in schizoaffective, and 11.8% in bipolar sub-cohorts) as same-day prescriptions dispensed and by 24.5% (24.7% in schizophrenia, 26.5% in schizoaffective, and 24.5% in bipolar sub-cohorts) as prescriptions with at least a one-day overlap. The most frequent DDI pairs were observed with olanzapine (45.0%), risperidone (23.5%), and quetiapine (13.4%). A higher risk of receiving a potential DDI pair was associated with being white (odds ratio [OR]=1.27, 95% confidence interval [CI]: 1.21-1.34), treatment duration over 12 months (OR=1.13, 95% CI: 1.07-1.19), depression (OR=1.20, 95% CI: 1.14-1.27), impulse control disorder (OR=1.53, 95% CI: 1.30-1.79), diabetes mellitus (OR=1.12, 95% CI: 1.05-1.20), cerebrovascular disease (OR=1.34, 95% CI: 1.13-1.59). Conclusion: The potential drug-drug interactions should be considered when treating patients with some antipsychotics and long-term maintenance use.

**REFERENCES:**

1. Sandson NB, Armstrong SC, Cozza KL. Med-psych drug-drug interactions update: an overview of psychotripic drug-drug interactions. Psychosomatics 2005;46(5):464-494.
2. Sharif ZA. Pharmacokinetics, metabolism, and drug-drug interactions of atypical antipsychotics in special populations. Primary Care Companion J Clin Psychiatry 2003;5(suppl 6)22-25.

**NR7-043**

## CONSEQUENCES ASSOCIATED WITH POTENTIAL DRUG-DRUG INTERACTIONS BETWEEN ANTIPSYCHOTICS AND CONCOMITANT MEDICATIONS IN PATIENTS WITH SCHIZOPHRENIA

*Jeff J. Guo, Ph.D. 3223 Eden Avenue, Cincinnati, OH 45267, Christina M.L. Kelton,, Ph.D., Nick C. Patel, Ph.D., Jasmanda H. Wu, Ph.D., Yonghua Jing, M.S., Huihao Fan, M.S., Paul E. Keck Jr., M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, participants will be able to describe healthcare utilization and costs associated with potential drug-drug interactions (DDIs) between antipsychotics and concomitant medications among Medicaid adult patients with schizophrenia or schizoaffective disorder. Efforts to avoid potential DDIs associated with some antipsychotics are critical for clinical practitioners in order to prevent costly clinical and economic consequences.

**SUMMARY:**

Introduction: Inhibiting or inducing antipsychotic metabolism via hepatic cytochrome P450 (CYP450) may have clinical and economic consequences. This study examined whether drug-drug interactions (DDIs) between oral antipsychotics and non-antipsychotics that are inhibitors or inducers of CYP450 isoenzymes are associated with increased healthcare utilization and costs in schizophrenics or schizoaffective-disorder patients. Methods: Ohio State Medicaid data contributed patients (18 = age < 65) who had schizophrenia or schizoaffective disorder and received an antipsychotic from 2000 to 2003 (N=31,716). Clinically significant DDI pairings (Facts & Comparisons 4.0) were examined, with exposure for an antipsychotic prescription overlapping with an interacting medication. Three adverse events (AEs) (extrapyramidal symptoms, increased seizure risk and QT-prolongation or arrhythmias) associated with DDIs were studied. Utilization and costs for inpatient and ambulatory care during a 90-day follow-up were examined. Regression analyses were used to adjust for confounding factors between patient groups. Results: Most patients had no DDI (26,546); 7060 had DDI (no AE) and 110 experienced a DDI +AE. Length of stay and emergency room visits (mean±SD) were highest for the latter (25 days±17.8; 3.4±4.1) and lower for DDI (11 days±9.9; 1.5±1.0) and non-DDI (3.6 days±15.6; 0.5±2.8) groups. Healthcare costs were higher with DDI+AE ($9699) or DDI ($2962) compared to no DDI ($2201). Regression analysis indicated that patients with DDI+AE or DDI had significantly higher healthcare utilization and costs than patients without DDI (P<0.001). Step-wise regression showed that patients with a DDI or DDI+AE associated with olanzapine, risperidone and quetiapine had higher total costs than patients without DDI.

Conclusion: These data suggest that antipsychotic DDIs are related to higher healthcare utilization and costs. Sponsored by Ortho-McNeil Janssen Scientific Affairs, L.L.C.

**REFERENCES:**


1. Davies SJC, Eayrs S, Pratt P, et al: Potential for drug inter actions involving cytochromes P450 2D6 and 3A4 on general adult psychiatric and functional elderly psychiatric wards. Br J Clin Pharmacol 2004; 57:464–472
2. Howe AM, Kozma C, Russo P, et al: The prevalence of poten tial antipsychotic drug-drug interactions in a large US na tional managed care database. [unpublished poster presenta tion] The 19th Annual US Psychiatric & Mental Health Con gress. November 16–19, 2006.


**NR7-044**

## THE PREVALENCE OF DEPRESSION AMONG YOUNG ADULTS AND OFFICE WORKERS IN JAPAN USING THE PATIENT HEALTH QUESTIONNAIRE (PHQ)-9


*Kumiko Muramatsu, M.D. 589-32, Nishiohata, Chuoku, Niigata-Japan 9518104, Yoshiyuki Muramatsu,M.D.,Hitoshi Miyaoka,M.D.,Ph.D.,Kunitoshi Kamijima,M.D.,Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to; recognize the prevalence of depression in Japan.

**SUMMARY:**


OBJECTIVE: To determine the prevalence of depressive disorder in young Japanese adults and office workers using the Patient Health Questionnaire (PHQ)-9.

METHOD:

A total of 1800 young adults (mean age±SD: 18.7±2.6) and 715office workers (mean age±SD: 22.9±21.2) completed the PHQ after receiving written informed consent.

RESULTS: 12.2% of the young adults were diagnosed with mood disorders (5.6%young adults: major depression, 7.4%young adults: other depressive disorders). 18.4% of the office workers were diagnosed with mood disorders (8.2%office workers: major depression, 10.2 % office workers: other depressive disorders).

There was no gender difference in young adults and office workers. The score for any mood disorders on the PHQ-9question about difficulty was significantly higher than the score without mood disorders. CONCLUSION: The young adults and office workers with any mood disorders had impaired social and occupational functioning. It is important to be needed appropriate treatment for them with mood disorders.


**REFERENCES:**


1. Spitzer RL et al. Validation and utility of a self-report version of PRIME-MD: the PHQ primary care study. JAMA 1999; 282: 1737-1744
2. Kurt Kroenke et al. The PHQ-9 validity of a Brief Depression Severity Measure. J Gen Intern Med 2001; 16:606-613


**NR7-045**

## AWARENESS OF BIPOLAR DISORDER IN AN URBAN COMMUNITY OF SOUTH KOREA


*Soohyun J Joe, M.D. Department of Psychiatry Bugok National Hospital 70 Bugok-ri Bugok-myun Changnyung-kun Kyungsang-nam-do, South Korea, Kyooseob Ha,M.D.,Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize low awarenes of bipolar disorder in community samples

**SUMMARY:**


Objective

There is a substantial delay in diagnosis and proper management of bipolar disorder compared to other diseases. One of barriers to earlier recognition is the lack of awareness of bipolar disorder. The purpose of this study is to compare awareness of bipolar disorder to that of other prevalent disorders.

Methods We developed a questionnaire to evaluate knowledge, perception and attitude of bipolar disorder, depressive disorder, schizophrenia and diabetes mellitus. A total 776 subjects from urban population in South Korea completed survey with the questionnaire.Results The rate of correct answer of questions about knowledge was 34.2% for bipolar disorder, 38.3% for depressive disorder, 44.2% for schizophrenia and 59.2% for diabetes mellitus. About 12% (88/776) respondents have never heard of bipolar disorder while less than 5% of respondents have never heard of each of other diseases. About 13% (104/776) of respondents did not think bipolar disorder is an illness while less than 10% of respondent did not think each of other diseases is an illness. About 16% (124/776) of respondents answered that they would avoid telling other people about ill relatives with bipolar disorder if they had them. Possible avoidance to tell others about ill relatives was reported 16.4% when the relatives have depressive disorder. It was 34.8% when they have schizophrenia and 6.8% when they have diabetes mellitus.ConclusionThere is low awareness of bipolar disorder compared to that of depressive disorder, schizophrenia and diabetes mellitus. People with bipolar disorder are stigmatized more than people with medical illness. This study highlights the significance of public education for bipolar disorder.


**REFERENCES:**


1. Pallanti S, Quercioli L, Pazzagli A, Rossi A, Dell'Osso L, Pini S, et al: Awareness of illness and subjective experience of cognitive complaints in patients with bipolar I and bipolar II disorder. Am J Psychiatry 1999; 156:1094-1096
2. Kleindienst N, Greil W: Are illness concepts a powerful predictor of adherence to prophylactic treatment in bipolar disorder?. J Clin Psychiatry 2004; 65:966-974


**NR7-046**

## RESEARCH ETHICS IN CLINICAL POPULATIONS


*Aarti E Sharma, University of Illinois at Chicago College of Medicine, ChicagoIL 60612, Cherise Rosen, Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to know and discuss the issues of research ethics in clinical populations.

**SUMMARY:**


Objective:As a result of the focus on decisional capacity in persons with mental illnesses, clinical research has received criticism and social stigmatization. It is within this context that ethicists, researchers and clinicians are discussing the appropriateness of research with persons with mental illness. Few studies exist that assess the subjective experience of

these participants. The objective of this study is to evaluate the subjective experience of psychiatric research participants. Method: We studied 313 psychiatric patients admitted to an inpatient research unit. At the time of discharge, each participant was administered the Patient Satisfaction Questionnaire, a structured self-report questionnaire designed to assess research participation and clinical care.Results: The results indicated a significant association ($p<.03$) between satisfaction with the quality of care they received and their completion of the research protocol in which they participated. Patients responded to each of two specific questions of interest, whether they had completed the research protocol, and whether they felt that participation in research had been beneficial to their clinical treatment. The results indicated a significant association ($p<.001$) between research participation and the efficacy of clinical treatment.

Conclusions: This study emphasizes the importance of understanding the opinions of persons with mental illness who participate in research. Their perspectives can enhance understanding of the ethical issues as well as the perceived risks and benefits of research participation. Overall the data suggest that persons with mental illness find psychiatric research to be beneficial.

**REFERENCES:**


1. Hirschfield R, Winslade W, Krause T: Protecting subjects and fostering research: Striking the proper balance. Archives of General Psychiatry 1997;54:121-123.
2. Appelbaum P, Grisso T: The MacArthur treatment compe tence study I, II, III. Law and Human Behavior 1995;19:105-174.


**NR7-047**

## BIOETHICS AND PSYCHOLOGICAL IMPLICATIONS OFF SKIN AND FACE TRANSPLANT


*Gabriel Gauer, M.D. Av Cel Lucas de Oliveira 576 apto 501Porto Alegre RSBrazil, Porto Alegre Brazil 90440010, Ramiro Ronchetti, MD., Rafaela B. Jarros, Leonardo B. Lima, Clarissa Trevisan, Pedro Marini, Ruth Gauer Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to to recognize the main bioethical issues and psychological conflicts related to skin and face transplant in a Brazilian sample.

**SUMMARY:**


Hipothesis: The present study intends to check the opinions of a sample of individuals regarding the possible implications about skin and face transplant in different situations. This research has a wide and recent implications: the bioethics issues about the procedure, the donor and the individual that receives the transplant point of view. Methods: It's a transversal study with a sample selected by convenience from the general population, representing different social groups. We used as instrument an open and semi-structured interview created by the research team, based in a wide article review. Results: The sample had 54 individuals, mainly students (61,7%) on university, with average age of 26 years old. We observed that the majority would prefer to receive skin transplant from a alived donor (78,4%), as well as most of the interviewed don't agree with any kind of reward for the donor or his/her family (81,5%). We also found out that only a minority (XX%) of the sample wouldn't donor a relative's skin in case of his/her dead. On the face transplant we were able to check that the majority wouldn't donate his or her face, or a relative's one, in case of dead (53,7%); however most of them would agree to be submitted to a face transplant in case of an accident (77,8%). Discussion: We noticed that individuals would prefer to receive transplant from an alived donor, because they consider the skin as a communication and perception organ. Most of our sample deny the possibility of a reward to a donor, or his/her relatives, showing that for them donate, must be a volunteering act and not a kind of trade, commerce. Regarding the face transplant demonstrate, however, that most individuals wouldn't donate this part of his/her body; we presume that this is justified because it's a relatively new kind of transplant. On the other hand, when facing an accident situation, most individuals demonstrate worry to rebuild his appearance, accepting this kind of procedure.


**REFERENCES:**


1. Powell T: Face transplant: real and imagined ethical chal lenges. J Law Med Ethics. 2006 Spring;34(1):111-5, 4.
2. Ahronhein, JC: Ethics in Clinical Practice. Gaithersburg: ASPEN Publication, 2ª ed., 2000.


**NR7-048**

## CLINICAL AND ETHICAL CONSIDERATIONS IN PSYCHOPHARMACOGENETIC TESTING: VIEWS OF EARLY ADOPTERS


*Jinger G Hoop, M.D. Department of Psychiatry and Behavioral Medicine, Medical College of Wisconsin, 8701 Watertown Plank Road, Milwaukee WI 53226, Maria I. Lapid, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand when and how psychiatrists who are "early adopters" of pharmacogenetic testing use these tests. The participant should also learn how early adopters assess the psychosocial risks of such testing and the need for patient safeguards such as informed consent, confidentiality, and pre- and post-test counseling.

**SUMMARY:**


Introduction: Pharmacogenetic testing (PGT) for polymorphisms affecting drug response and metabolism is now available, and its use in psychiatry is expected to quickly become more widespread. Currently, there are no clinical and ethical standards for the use of these new laboratory tests, which may carry some of the psychosocial risks of other types of genotyping. As a step toward building professional consensus about PGT, we assessed the attitudes and practices of psychiatrists at 3 academic departments where PGT is routinely available. We hypothesized that PGT would be used primarily in the case of treatment- resistant illness, and that clinicians would feel that such tests carried little risk. Methods: Physicians at 3 academic departments of psychiatry considered to be "early adopters" of PGT were invited to complete an internet-based 60-item survey including short-answer, yes/no, and 4-point Likert scale items regarding their clinical practices and opinions about PGT, including perceptions of its utility, risks and benefits, necessary safeguards. Results: Of 75 respondents, there was a similar proportion of men and women, and faculty and trainees.

Respondents had ordered PGT a mean of 20.86 times in the previous 12 months. Most had ordered CYP450 genotyping (76% 2D6, 68% 2C19), and fewer had ordered serotonin (31% 5-HTT, 16% 5-HTR) genotyping. PGT was believed more useful in clinical cases of treatment-resistant depression and medication intolerance than in new onset illness, cognitive impairment, or chronic schizophrenia, though PGT was judged useful in all situations. Women were more likely than men to believe that PGT carries psychosocial risks. Respondents endorsed the use of several safeguards for PGT testing, including confidentiality, pre- and post-test counseling, and informed consent. Conclusion: Physicians at "early adopting" departments of psychiatry strongly endorsed the clinical utility of pharmacogenetic testing and the need for patient safeguards.

**REFERENCES:**


1. De Leon J, Armstrong SC, Cozza KL. Clinical guidelines for psychiatrists for the use of pharmacogenetic testing for CYP450 2D6 and CYP450 2C19. Psychosomatics 2006; 47: 75-85.
2. Serretti A, Artioli P. Ethical problems in pharmacogenetic studies of psychiatric disorders.Pharmacogenomics J. 2006 Sep-Oct;6(5):289-95. Epub 2006 Mar 21.


**NR7-049**

**ANALYSIS OF THE MOST FREQUENTS BIOETHICS CONFLICTS AND PSYCHIATRIC CONSULTATIONS REQUESTED TO A BIOETHICS COMITEE IN A BRAZILIAN HOSPITAL.**


*Ramiro Ronchetti, M.D. R. Felipe Camarão, 510/403Bom FimZip Code 90035-140 Porto Alegre Brazil 90035140, Gabriel J. C. Gauer,MD. Ph.D., Renata Gastal, Charline Pereira, Rachel Rubin, Gustavo Borges, Jussara Loch M.D., Ph.D*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to to recognize the main bioethical conflicts presented in a hospital and the most frequent Psychiatric problems in this situation.

**SUMMARY:**


Introduction: The present study intends to identify the main bioethical conflicts on the requests made to a bioethics comitee, in a brazilian hospital, during a period of eight years. Methods: It's a transversal and retrospective study, based on the data base files of the requests made, by differents areas of the hospital, to the bioethics comitee. Results: We analyzed 67 requests, and the most relevant results are following presented: institutional requests totalyzed 23,9%, this represents a question of how the hospital, or institution, should guide it's conduct in different cases. Approximately 12 % of the requests involved deny of treatment because of religious issues and 7,5% also involved deny of treatment motivatedby familiar conflicts. We also found out that 10,4 % of the requests were related to the probable need of confidentiality exceptions. Approximately 15 % involved treatment limitation motivated by a technical decision. 6% of the consultations came from the hospital Psychiatric service. Discussion: These results shows that there are many doubts in the hospitals as well as in the institution and institutional, on how proceed in face of a bioethical conflict, specially those involving life and treatment limitation by technical decision. Beyond that, our data point that there are lots of divergences of how to better behave in deny of treatment motivated by religious issues, specially involving Jehovah's witnesses.


**REFERENCES:**


1. Ahronhein, JC: Ethics in Clinical Practice. Gaithersburg: ASPEN Publication, 2ª ed., 2000.
2. Gracia, D. Ética y Vida – Estudios de Bioética. v2. Bioética Clínica. Santa Fé de Bogotá, DC: Editorial El Búho, 1998.


**NR7-050**

**PRISON EMPLOYEES' AND YOUNG PEOPLES' ATTITUDES TOWARD SEXUAL OFFENDERS**


*Ellen Kjelsberg, M.D. Centre for Research and Education in Forensic Psychiatry,Ullevaal University Hospital, Building 7 Gaustad, N-0320 Oslo, Norway,*


**EDUCATIONAL OBJECTIVE:**

The presentation will increase the individual's knowledge about attitudes held by prison officers towards sexual offenders and the various factors that may or may not be associated with more positive or negative attitudes. It will provide insight into the influence of educational programs on attitudes. The reader will also gain knowledge about attitudes towards sexual offenders in young people. The presentation should ideally inspire the viewer to reflect upon his or her own attitudes.

**SUMMARY:**


Introduction: Positive attitudes are essential for the rehabilitation of sexual offenders (SO) (2). The aim of the present study was to monitor prison employees' attitudes toward SO before and one year after an educational program on SO. We also wanted to compare the prison employees' attitudes towards SO with young college students' attitudes. Material and methods: In a high security prison in Norway 105 prison employees completed the Attitudes toward Sexual Offenders scale (ATS) (1) before, and 90 again one year after, the completion of the educational program. In addition, 412 college students completed the ATS. Results: The prison employees held significantly more positive attitudes toward SO than college students. Among prison employees, prison officers held more negative attitudes than the rest of the employees. Increasing age correlated positively with more positive attitudes. Neither gender nor the duration of the employment in the correctional services correlated with ATS. The educational program did not have an effect on the prison employees' attitudes one year later, as measured by the ATS. Conclusion: In this study prison employees' attitudes towards SO were not influenced by an educational program on SO. College students held more negative views on SO than prison employees.


**REFERENCES:**


1. Hogue TE: Attitudes towards prisoners and sexual offenders in DCLP Occasional Papers: Sexual Offenders Edited by Clark NC, Stephenson G. Leicester, British Psychological Society, 1993.
2. Lea S, Auburn T, Kibblewhite K: Working with sex offenders: the perceptions and experiences of professionals and para professionals. International Journal of Offender Therapy and Comparative Criminology 1999; 43:103-119.


**NR7-051**

**CIVIL COMMITMENT IN WESTERN QUEBEC:**

**TEMPORAL TRENDS IN PREVALENCE, 1991-2007**

*Sophie Poliquin, B.S.N. 402-2201 Riverside Dr. Ottawa, (ON)K1H 8K9, Canada Javad Moamai, MD, MSc.*
*University of Ottawa at Pierre Janet Hospital, Gatineau, Quebec, Canada*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to; 1) Distinguish some of the clinical factors that may correlate with civil commitment status; and 2) Comprehend that the concepts of 'dangerousness' and 'mentally ill' are not useful predictors of admission status.

**SUMMARY:**

Background: The forensic psychiatric act that exerts the most influence in the lives of mentally ill patients is the civil commitment (CC) since it forces an otherwise free individual into being interned into an institution to get care. The government of Quebec instituted new legislation in 1998 to try to decrease the use of CC, but its effect seems to have been paradoxical in increasing its use. Aims: To describe trends in the prevalence of CC among psychiatric patients admitted in the Western Quebec region between 1991 and 2007. Method: Data was taken from discharge summaries of all 6684 adult admissions to the regional psychiatric hospital. Analysis for linear trends in proportions was performed to estimate gender- and age-adjusted temporal trends. Results: CC rates increased from 11.5% in 1991-92 to 27.6% in 2006-07, a 2.4 fold increase ($p<0.001$). Although CC rates were found to be not related to gender or personality disorders, they were found to be considerably related to younger age, substance abuse and schizophrenia ($p<0.001$). Conclusions: CC was more common in 2007 than in 1991. This shows that, in Quebec like in other western countries, even in the presence of a shift to community care in psychiatry, there was no decrease in rates of CC with the newer legislation and narrower definition of commitment criteria. This finding raises several therapeutic, ethical and legal issues and makes it necessary to consider the social aspects of CC.

**REFERENCES:**

1. Canadian Legal Information Institute: Quebec Mental Pa tients Protection Act, R.S.Q. P: 41: http://www.canlii.org/qc/laws/sta/p-41/20030530/whole.html
2. Hotopf M, Wall S, Buchanan A, Wessely S and Churchill R: Changing patterns in use of mental health act 1983 in Eng land, 1984-1996. Br J Psychiatry 2000; 176: 479-484

**NR7-052**

**GENDER DIFFERENCESIN AGE AT ONSET OF FIRST ADMITTED PATIENTS WITH PARANOID SCHIZOPHRENIA**

*Chul Eung Kim, M.D. 7-206,3-Ga,Shinheung-Dong, Jung-Gu,Incheon,400-711, Korea, Soon Tae Hong, M.D., Myong Jee Lee, M.D., Min Hee Kang, M.D., Jeong Seop Lee, M.D., Jae Nam Bae, M.D., Chul Eung Kim, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to explain the reason why female patients with schizophrenia developed later than male.

**SUMMARY:**

Purpose: The aim of this study was to examine the gender difference in age at onset of the first admitted patients with paranoid schizophrenia. Method: The study sample comprised the first admitted patients with paranoid schizophrenia in University Hospital from January 1997 to December 2004. The patients were met the diagnostic criteria for paranoid schizophrenia by DSM-IV. 151 patients (including 72 male patients and 79 female patients) were selected and the demographic and clinical characteristics were compared by gender. Results: There were gender differences in age of onset, marital status. Although male patients were admitted earlier than female patients ($p=.033$),but gender-specific age difference at first admission was absent in single patients. Conclusions: The gender differences in the age of onset of paranoid schizophrenia was influenced by marital status. So, further study is needed to reveal the psychosocial effects, such as marital status, on the onset of schizophrenia.

**REFERENCES:**

1. Singh SP, Cooper JE, Fisher HL, Tarrant CJ, Lloyd T, Banjo J. et al. Determining the chronology and components of psy chosis onset : The Nottingham Onset Schedule(NOS). Schizophr Res 2005; 80: 117-130.
2. Hafner H, Riecher-Rossler A, Heiden W, Maurer K, Fatken heuer B, Joffler W. Generating and testing a causal explana tion of the gender difference in age at first onset of schizo phrenia. Psychol Med 1993; 23 : 925-940.

**NR7-053**

**ELDERLY VERSUS MATCHED YOUNGER SUBJECTS WITH POST TRAUMATIC STRESS DISORDER**

*Hilary M Livingston, M.D. Department of Old Age Psychiatry-Royal Alexandra Hospital*
*Corsebar Rd, PaisleyUnited Kingdom PA2 9PN, Judith Livingston BSc. (Hons), Daniel Gillis, BSc.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be aware of the outcome for older people who develop PTSD after trauma,the similarities with younger trauma victims who develop PTSD, and that older people who develop PTSD are less likely to receive effective treatment than their younger counterparts.

**SUMMARY:**

Introduction: Few studies report on the outcome of older people following trauma, whether in a civil or military context. We recently reported on a sample of 112 older people matched with younger people, assessed for the purposes of their personal injury claim (1). These subjects form our primary database. Methods: We now report on a sub-sample of this population, those who developed PTSD following their trauma, again comparing the older with younger subjects. This population consisted of 27 subjects over 65 years of age (mean 70.1, SD=4.4) and 22 under 65 (mean 40.1, SD=12.7). We compared the male/female distribution, the type of trauma triggering PTSD, the type of physical injuries sustained, the treatments received, and the presence or absence of additional psychiatric disorders in both groups. Results: The majority of the subjects were victims of road traffic accidents. Others had experienced work related accidents, civil disasters such as factory explosions, and injuries sustained as a result of military conflict.

There was a trend towards more elderly people failing to obtain treatment (66.7 v 45.5%). No elderly subjects developed alcohol abuse (0 v 13.6%). Both elderly and younger PTSD victims had as their most common co-morbid diagnosis depression (22 v 18.2%), either major depression or dysthymia (DSM IV). None of these differences reached statistical significance. Conclusions: In line with previous work (2), the results of this study show that older and younger PTSD victims are similar clinically and it is of concern that 66% of the older subjects do not receive treatment.

**REFERENCES:**


1. Livingston HM, Gillis DZ, Livingston MG: A case control study of elderly versus younger trauma victims. European Psychiatry 2007; 23 (suppl.1) 280.
2. Weintraub D, Ruskin PE: Post traumatic stress disorder in the elderly: a review. Harv Rev Psychiatry 1999; 7,3 :144-152.


**NR7-054**

## AN ATYPICAL PRESENTATION OF DEMENTIA WITH LEWY BODIES: A CASE REPORT


*Irena F Ginsburg, Ph.D. On Lok Lifeways, Inc.San Francisco, CA, 94596, Megan Lisska, M.D. (presenting)*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should acquire a better awareness of atypical presentations of Dementia with Lewy Bodies, a disorder that has a broad range of presentations and can easily be misdiagnosed as a depressive or psychotic process in the elderly. Awareness of atypical presentations of this disease can result in appropriate medication management which significantly improves patients' functional abilities and quality of life.

**SUMMARY:**


CASE: A 71 year old woman was enrolled in a PACE program after one year of mental status changes of unclear etiology. Her history included memory loss and increasing confusion over several months before abrupt onset of behavioral aggression and delusions requiring frequent emergency room visits and hospitalization. She was diagnosed with major depressive disorder with psychotic features, and dementia of the Alzheimer's type. A regimen of multiple antidepressants and atypical antipsychotic medications was prescribed. Her behavior and delusional thinking improved; however her PCP noted new onset of Parkinsonian symptoms including slowed gait, difficulty initiating movement, masked faces, and muscle rigidity. Antiparkinsonian agents had little effect. Her cognitive abilities continued to decline. The patient's family reported significant functional impairment. She did not suffer from visual hallucinations.

Upon enrollment in the PACE program, patient's antipsychotic and antiparkinsonian medications were tapered and discontinued over the next several months, and a cholinesterase inhibitor was added. The patient showed dramatic improvement of functional and mental status during that time.

DISCUSSION: This case illustrates the difficulty of accurately diagnosing Lewy Body Dementia, a common but frequently underdiagnosed cause of cognitive decline in the elderly. It can present with behavioral changes in the absence of the classic symptom of visual hallucinations, which can easily be misdiagnosed and treated with antipsychotic medications that might worsen the patient's symptoms. In addition, extrapyramidal symptoms can be mistaken for adverse effects of psychotropic medications or for Parkinson's Disease itself, leading to prescription of dopaminergic agents and further clinical decline. Discontinuation of antiparkinsonian agents, judicious use of antipsychotics at minimal doses, and use of cholinesterase inhibitors appear to be the most effective treatment at present.


**REFERENCES:**


1. Ferman TJ, Boeve BF: Dementia with Lewy bodies. Neurol Clin 2007; 25(3):741-760.
2. Weintraub D, Hurtig HI: Presentation and management of psychosis in Parkinson's disease and dementia with Lewy bodies. Am J Psychiatry 2007; 164(10):1491-1498.


**NR7-055**

## THE OLD MAN'S CRACK CLUB: CHARACTERISTICS OF OLDER CRACK COCAINE USERS


*James G Bouknight, M.D. Palmetto Health Baptist, Department of Psychiatry, Taylor Street at Marion Street, Columbia, SC 29201, Diana L. Thorne, MD, Kimberley B. Rudd, MD, Shelby L. Rials, NP*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to describe the demographics and co-morbidities of older crack cocaine users in a sample of veterans.

**SUMMARY:**


OBJECTIVE: To determine demographics and co-morbidities of older crack cocaine users in a sample of veterans treated at the Dorn VA Medical Center in Columbia, SC.

METHODS:The electronic medical records were reviewed for 116 patients who were over 50 years old and currently treated for crack cocaine use. The demographic characteristics of this group were identified in addition to major medical, psychiatric and substance abuse diagnoses.

RESULTS:The avarage age of the patients was 56 years old. At the time of their last use of crack cocaine the avarage age was 55. All of the patients were male. 28% were currently married. 80% were African American and 20% Caucasian. There were no other racial or ethnic groups represented in the sample. We found that the most common substance related co-morbidities were alcohol dependence/abuse (95%), cannabis dependence/abuse (62%), and other substance dependence/abuse (22%). The most common psychiatric co-morbidities were PTSD (43%), mood disorders (18%) and schizophrenia (8%). The most common medical illnesses in this group were back pain (43%), hypertension (43%) and hepatitis C (18%). The most interesting finding was that 14% of the patients first used crack cocaine after they were age 50.

CONCLUSIONS: We concluded that crack cocaine abusers were likely to have significant medical co-morbidities that are at least in part related to crack cocaine use (i.e. Hepatitis and hypertension). They also have conditions that caused physical pain which may lead to substance use. We also noted that a signifincant portion of crack cocaine use in theis group represents new users rather than continuing use.


**REFERENCES:**


1. Aurora T, Gunnerson K, Urrunaga J, Baltarowich L,Muzzin A, Rivers E: Prevalence Study of Cocaine Use in the Elderly.

Academic Emergency Medicine 2000; 7(5):499
2. Patterson T, Jeste D: The Potential Impact of the Baby-Boom Generation on Substance Abuse Among Elderly Persons. Psychiatric Services 1999; 50:1184-88

**NR7-056**

## RESTRICTION OF INSTRUMENTAL ACTIVITIES OF DAILY LIVING IN MILD COGNITIVE IMPAIRMENT

*Jihyea Hong, M.D. Soonchunhyang Bucheon Hospital Dept. of NeuropsychiatryJung-dong Wonmi-gu Bucheon-si Kyeonggi-do S.Korea, Bucheon Korea 420-767, Han Yong Jung M.D., Ph.D., Yang Rae Kim M.D., So Young Lee M.D., Ph.D., Yu jin Lee M.D, Joon Ho Park Ph.D., Tae Youn Jun M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize of concept of mild cognitive impairment and restriction difference of instrumental activities of daily living in MCI subtype.

**SUMMARY:**

Introduction

Mild cognitive impairment (MCI) is separated from mild dementia by an absence of global intellectual deterioration and the preservation of activities of daily living (ADL). But, recent study report some MCI patients have impaired instrumental activities of daily living (IADL).

The purpose of this study is to examine whether patients with amnestic and non-amnestic MCI (aMCI and naMCI) have impaired IADL as compared to healthy controls, and which items of IADL are particularly involved. MethodsThe sample consisted of 69 community-dwelling older adults in a welfare center of theaged, which was divided into three diagnostic categories: cognitively normal (N=31), aMCI (N=19, memory domains below -1.5 SD) and naMCI (N=19, other cognitive domains below -1.5 SD, except memory domains). The 3 groups were compared on IADL and measures of cognitive function including Seoul Verbal Learning test (SVLT), Rey Complex Figure Test (RCFT), Korean-Boston Naming Test (K-BNT), Stroop test and Korean-Mini Mental Status Examination (K-MMSE).Results There were significant differences in four items of 15 areas on IADL and IADL total score between aMCI and cognitively normal, but not naMCI. Items of shopping[$F(2,50)= 4.20$, $p=0.020$], transportation[$F(2,50)=4.481$, $p=0.016$], medicine[$F(2,50)= 3.99$, $p =0.025$], keeping track of current events[$F(2,50)= 4.96$, $p=0.011$] and IADL total score[$F(2,50)= 4.251$, $p=0.020$] in aMCI were higher than cognitively normal. ConclusionaMCI may be restricted on IADL compared to heathly control group. IADL of naMCI was not significantly differed from aMCI and cognitively normal. It was suggested that naMCI would be distinguished from a MCI in characteristics and prognosis.

**REFERENCES:**

1. Petersen, R. C. (2004). Mild cognitive impairment as a diag nostic entity. J intern Med, 256(3), 183-194.
2. Graham, J. E., Rockwood, K., Beattie, B. L. et al. (1997). Prevalence and severity of cognitive impairment with and without dementia in an elderly population. Lancet,3491793-6.

**NR7-057**

## THE FACTORS THAT AFFECT ON ADL AMONG PSYCHIATRIC DISORDERS IN ELDERLY PATIENTS : MAINLY FACTORS OF DEPRESSION AND COGNITIVE DYSFUNCTION

*Jin-Sung Kim, M.D. Daemyung Dong Nambu, Daegu South Korea 705-717, Bon-Hoon Koo, M.D., Wan-Seok Seo, M.D., Yeong-Hwan Noh, M.D., Sang-Jun Park, M.D., Dai-Seg Bai, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand the factors that affect on ADL among Psychiatric Disorders in Elderly Patients

**SUMMARY:**

The purpose of this study is to investigate specific factors of depression and cognitive dysfunction that affect on activities of daily living among psychiatric disorders in elderly patients. Groups with geriatric depression, Alzheimer's disease and other psychiatric disorders in elderly patients were selected, and was performed Seoul Neuropsychological Screening Battery(SNSB). In group with geriatric depression, agitation can affect on activities of daily living rather than factors of cognitive dysfunction. Factor of cognitive dysfunction that affect on activities of daily living in group with Alzheimer's disease is category/semantic fluency relation to frontal/executive function, and Factors of depression that affect on activities of daily living in group with Alzheimer's disease are social withdrawal tendency and feeling of unhappiness. And, factor that affect on activities of daily living in group with other psychiatric disorders in elderly patients is agitation rather than factors of cognitive dysfunction. Overall, cognitive dysfunction, especially category/semantic fluency relation to frontal/executive function, can affect on activities of daily living in all 3 groups rather than factors of depression. The degrees and specific factors of depression and cognitive dysfunction that affect on activities of daily living among psychiatric disorders in elderly patients are variable in each specific illness, but this study suggested that some factors of cognitive dysfunction are more important than factors of depression.

**REFERENCES:**

1. Von Gunten A, Giannakopoulos P, Duc R. Cognitive and de mographic determinants of dementia in depressed patients with subjective memory complaints. Eur Neurol, 54(3):154-8, 2005
2. Guy GP, David CS. Contribution of depression to cognitive impairment and dementia in older adults. The Neurologist, 13:105-117, 2007

**NR7-058**

## CAN HIPPOCAMPAL VOLUME AND CLINICAL DEMENTIA RATING PREDICT DEMENTIA IN MILD COGNITIVE IMPAIRED PATIENTS? A TWO-YEAR PROSPECTIVE STUDY.

*João Borgio, M.D. Rua Dr. Bacelar, 334, São Paulo, Brazil 04.026-001, Leonardo Baldaçara, M.D., Walter Moraes, M.Sc., Maria B. Montaño, M.Sc., Acioly Lacerda, Ph.D., Andrea P. Jackowski, Ph.D., Luiz R. Ramos, Ph.D., Rodrigo A. Bressan, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able

to recognize the importance of combined methods for predicting conversion to dementia in patients with mild cognitive impairment.

**SUMMARY:**

Introduction: Reduction in hippocampal volume (HV), measured by region of interest approach using Magnetic Resonance Imaging (MRI) is a hallmark of dementia, especially the Alzheimer´s type, being described even in pre-clinical states (1). Once it may be present in patients with Mild Cognitive Impairment (MCI), it might be a predictor of conversion to dementia (2). Along with other measures of cognitive function (as clinical and neuropsychological scales), it might be clinically helpful in identifying people at higher risk of conversion. Methods: Twenty-eight patients (9 normal, 19 MCI) from a larger epidemiological study in São Paulo city, Brazil, were submitted to clinical (including Clinical Dementia Rating Box Score - CDR-BS) and neuropsychological (Mini-Mental Status Evaluation – MMSE and Alzheimer's Disease Assessment Scale - Cognitive Subscale – ADAS-COG) evaluation and underwent MRI scan (for HV measure) at baseline. Subjects were divided in three groups based in CDR-BS: low-risk (CDR-BS=0, n=9); medium-risk (CDR-BS=0.5, 1 or 1.5, n=10) and high-risk (CDR-BS=2, 2.5 or 3, n=9). After two years, they were re-evaluated to detect dementia. Results: Thirty percent of the medium-risk and 89% of the subjects in the high-risk group converted to dementia ($p<0.001$). The HV was significantly smaller in the low- and medium-risk groups comparing to the high-risk group ($p<0.001$). The individuals who developed dementia had a smaller HV ($p=0.02$) in the overall sample. The HV correlated with ADAS-COG ($p=0.029$) but not with MMSE. Conclusion: Hippocampus volume can be used along with clinical scales to predict risk of conversion to dementia in elders with cognitive impairment.

**REFERENCES:**

1. Tapiola T, Pennanen C, Tapiola M, Tervo S, Kivipelto M, Hänninen T, Pihlajamäki M, Laakso MP, Hallikainen M, Hämäläinen A, Vanhanen M, Helkala EL, Vanninen R, Nis sinen A, Rossi R, Frisoni GB, Soininen H: MRI of hippo campus and entorhinal cortex in mild cognitive impairment: A follow-up study. Neurobiol Aging 2008; 29:31-38
2. Wang PN, Liu HC, Lin KN: The MCI study in Taiwan. Acta Neurol Taiwan 2006; 15:66-68

**NR7-059**

## THE RELATIONSHIP OF DEPRESSION (DEP), APATHY (APA), COGNITIVE IMPAIRMENT (CI) AND MEDIAL TEMPORAL ATROPHY (MTA) IN ELDERLY SUBJECTS

*Maria T Greig, M.D. 170 Ocean Lane Dr. # 606, Key Biscayne, FL 33149, Elizabeth Potter, Ph.D.; Warren W Barker, M.S.; Ashok Raj, M.D.; Angela McBride, Ph.D; Yougui Wu, Ph.D. ; Elizabeth Schofield, B.S. ; John Schinka, Ph.D.; David A Loewenstein, Ph.D. and Ranjan Duara, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the reader should understand the relationship of depression and apathy to Cognitive Impairment and Medial Temporal Lobe Atrophy.

**SUMMARY:**

Introduction: Depression and apathy have both been associated with Alzheimer s disease (AD), but not specifically to the pathology of AD. To further explore these relationships we used MTA as a biomarker of the presence of AD-related pathology. Hypothesis: Cognitive impairment, but not apathy or depression will be related to the presence of MTA. Design/Methods: Clinical and neuropsychological evaluations, including the Geriatric Depression Scale (GDS) and Neuropsychiatric Inventory (NPI), were conducted on194 elderly subjects (mean age=75±6 yrs), classified as No Cognitive Impairment (NCI) (n=87), MCI (n=71) or dementia (DEM). A GDS score of 5+ and a non-0 score on the NPI Apathy scale identified subjects as DEP+ve and APA+ve, respectively. Subjects were classified as having MTA, based upon semiquantitative ratings of hippocampal and entorhinal cortex atrophy on coronal MRI scans. Results: The frequency of APA+ve status was 15% in NCI, 28% in MCI and 72% in DEM (chi-square =39.8; $p<.0001$) and for DEP+ve status was 14% in NCI, 20% in MCI and 11% in DEM (chi square = NS). MTA was present in 43% of NCI, 59% of MCI and 75% of DEM (chi-square=11.8, $p=.003$). Although APA and GDS scores were generally unrelated to the presence of MTA, those NCI subjects with MTA had higher GDS scores than those without MTA ($p = .03$). Conversely, MCI and DEM subjects with MTA had lower GDS scores than those without MTA (chi-square=6.8, $p=.009$). Conclusions/Relevance: Apathy, but not depression increased with level of cognitive impairment. The frequency of MTA increased with the level of cognitive impairment but was unrelated, overall, to frequency of depression or apathy. However, NCI subjects with MTA (i.e., those with incipient AD, yet likely to have retained insight) were more depressed than those without MTA, whereas cognitively impaired subjects with MTA (i.e., those most likely to have lost insight) were less depressed than those without MTA.

**REFERENCES:**

1. Starkstein SE, Jorge R, Mizrahi R, Robinson RE A Prospec tive Longitudinal Study of Apathy in Alzheimer's Disease. J. Neurol. Neurosurg. Psychiatry 2006; 77:8-11.
2. Dickerson BC, Goncharova I, Sullivan MP, Forchetti C, Wilson RS, Bennet DA, Beckett LA, de Toledo-Morrell I: MRI-derived entorhinal and hippocampal atrophy in incipi ent and very mild Alzheimer's Disease. Neurobiology of Ag ing 2001; 22(5):747-54.

**NR7-060**

## CHOLINESTERASE INHIBITORS FOR TREATMENT OF ALZHEIMER'S DISEASE: PHYSICIANS' CURRENT KNOWLEDGE AND BARRIERS TO USE

*Timothy J Petersen, Ph.D. Massachusetts General Hospital7th Floor, Office 744, Boston, MA 02114, Charissa F. Andreotti, Sc.B., Jeff Huffman, M.D., Robert J. Birnbaum, M.D., Ph.D., William Falk, M.D, James M. Ellison, M.D., M.P.H.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to 1) demonstrate an understanding of barriers to the use of cholinesterase inhibitors for the treatment of Alzheimer's Disease; and 2)At the conclusion of this presentation, the participant should be able to identify knowledge gains experienced by physicians during an evidence-based CME.

**SUMMARY:**

Background:
Cholinesterase inhibitors may delay symptom worsening and often postpone the necessity for full-time nursing care in patients diagnosed with Alzheimer's Disease (AD). Prescribing of these compounds may be associated with small, but potentially significant risks of bradycardia and syncope. This investigation sought to examine, in a large, diverse sample of community-based physicians, perceived barriers to the use of cholinesterase inhibitors and the degree to which knowledge of side effects associated with these medications can increase across an educational event. Method:Responses from physicians who attended 2007 Massachusetts General Hospital Psychiatry Academy CME events held in ten cities across the United States were used for this analysis. The focus of this report is on the pre- and post-educational activity question as well as a polling question pertaining to side effects and barriers to usage of cholinesterase inhibitors for the treatment of AD. Descriptive statistics were utilized to calculate knowledge increase as well as perceived barriers to prescription of these medications. Results:556 of 958 (58.0%) participants responded to the questions. A 19.6% increase in correct responses was observed (29.1% vs. 48.7% pre/post event), representing significant learning during the event ($p<.05$). The most frequently endorsed barrier was worry about bradycardia, syncope, and seizure (30.1%). When analyzing provider characteristics, no significant differences were found in perceived barriers between psychiatrists and other physicians ($p>.05$). Conclusion: Data from this investigation suggest a relatively low level of knowledge concerning the significant side effects of a front-line treatment for AD, but CME delivered in a live symposia format had a substantial impact on knowledge. Future studies are needed to develop methods to better disseminate information regarding current treatments to front-line providers.

**REFERENCES:**

1. Bordier P et al. Cardiovascular effects and risk of syncope related to donepezil in patients with Alzheimer's disease. CNS Drugs. 2006;20(5):411-417.
2. Birks J. Cholinesterase inhibitors for Alzheimer's disease. Cochrane Database Syst Rev. 2006 25;(1):CD005593.

**NR7-061**

## SUBTYPES OF DEPRESSION IN ALZHEIMER'S DISEASE AND OTHER DEMENTIAS

*Ruby C Castilla-Puentes, M.D. 530 South 2nd. St. Suite 743, Philadelphia, PA 19147, Miguel E. Habeych, M.D., M.P.H.;*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to identify the prevalence and subtypes of depression in patients with Alzheimer's disease (AD), vascular dementia (VaD), or undifferentiated dementia (UD).

**SUMMARY:**

Objective: To explore the prevalence and subtypes of depression in patients with Alzheimer's disease (AD), vascular dementia (VaD), or undifferentiated dementia (UD).Methods: Analysis of subtypes of depression was conducted on 6,440 patients 60 years or older with dementia (2,947 AD, 725 VaD and 2768 with UD) from the Integrated Healthcare Information Services (IHCIS), a National Managed Care Benchmark Database database, identified from January 1, 2001 to December 31, 2001. Sub-types of depression, AD, VaD and UD were diagnosed using ICD-9 criteria.
Results: The prevalence rate of depressive disorders was 27.41% in all patients with dementia independent of the dementia subgroup. The prevalence of depressive disorders was much higher in the VaD (44.14%) and UD (32.48%) compared to AD sub group (18.53%). Compare with AD and UD, VaD patients had significantly higher prevalence in artherosclerotic dementia, depressive disorder NOS, major depressive disorder single and recurrent episodes and neurotic depression ($p<0.005$). Adjustment disorder, presenil and dementia senile with depression were significantly more common in UD patients, whereas depressive psychosis was similar in all dementias subgroups. AD patients had the lowest prevalence in all subtypes of depression.
Conclusions: This study supports that depression is more prevalent in VaD compared to UD and AD and also provide indicators to the clinician for further evaluation of subtypes of depression in dementia subgroups.

**REFERENCES:**

1. Lopez OL, Becker JT, Sweet RA, Klunk W, Kaufer DI, Saxton J, Habeych M, DeKosky ST.Psychiatric symptoms vary with the severity of dementia in probable Alzheim er's disease.J Neuropsychiatry Clin Neurosci. 2003 Sum mer;15(3):346-53.
2. Boland RJ. Depression in Alzheimer's Disease and Other Dementias. Curr Psychiatry Rep 2000 Oct;2(5):427-433

**NR7-062**

## PREVALENCE AND CORRELATES OF DIABETES AND PSYCHIATRIC MORBIDITY AMONG THE ELDERLY

*Sergio L Blay, M.D. Associated Professor, Department of Psychiatry UNIFESPR. Botucatu, 740 , CEP 04023-900São Paulo - São Paulo BRAZIL, Valeska Marinho M.D., Ph.D., Sergio Baxter Andreoli M.D., Ph.D., Fábio Leite Gastal MD, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to should know the prevalence and correlates of diabetes and psychiatric morbidity among the elderly.

**SUMMARY:**

Objective: The main purpose of this study is to investigate the association of diabetes and depression in an elderly community population in BrazilMethod: Cross sectional population–based random sample of 7040 household residents aged 60 years and over, examined in a face-to-face interview. Self-rated presence of diabetes, sociodemographic variables, health behavior and self rated health, ADL, and current psychiatric morbidity (assessed through the Short Psychiatric Evaluation Schedule) were assessed through a structured interview. The main outcome measure of the investigation is the presence of diabetes. Logistic regression analysis was used to control for demogrhaphic , health and other mediating variables ( health status, ADL). The sociodemographic variables were first added to the model, then other mediating variables (social support, health behavior, health status). Psychiatric morbidity was the last variable added to the model.Results: : The overall prevalence of diabetes morbidity was 11% (males 9.2%, females 11.9%). In controlled analyses,

ADL impairments, poor self-rated health, no current smoking were significantly associated with diabetes. When depression was added to the model it has an independent contribution for diabetes increasing the odds by 50%. Older age groups (75 – 80 ; and 80 + years old) reduced the odds of diabetes. The other covariates were not associated with diabetes morbidity. Conclusion: The overall prevalence of diabetes was 11%. In controlled analyses, prevalence declined as age increased, and rates were higher in with non-smokers, poorer health and functional status. Psychiatric morbidity makes a unique and independent contribution to diabetes.

**REFERENCES:**


1. Kee-Lee Chou, PhD and Iris Chi, DSW. Prevalence of depres sion among elderly Chinese with diabetes. Int J Geriatr Psy chiatry 2005; 20: 570–575
2. S. Ali, M. A. Stone, J. L. Peters, M. J. Davies and K. Khunti The prevalence of co-morbid depression in adults with Type 2 diabetes: a systematic review and meta-analysis. Diabetic Medicine,2006; 23 : 1165–1173


**NR7-063**

## ATYPICAL ANTIPSYCHOTIC USE AND METABOLIC CHANGES ELDERLY IN PRIMARY CARE: A RETROSPECTIVE CHART REVIEW


*Shilpa Srinivasan, M.D. 3555 Harden St Ext.Suite 301Columbia SC 29203, Victor Hirth, M.D., Rebecca H. Boland, M.A., Mridul Mazumdar, M.D., Meera Narasimhan, M.D., Richard Harding, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to identify metabolic syndrome parameter changes associated with atypical antipsychotic use in the elderly. The participant should also be able to recognize conditions associated with atypical antipsychotic use in elderly in primary care settings.

**SUMMARY:**


OBJECTIVE: To investigate atypical antipsychotic use and metabolic syndrome parameter changes in elderly patients in a primary care setting.

METHOD: A retrospective electronic record review of Primary Care patients, age 60+ receiving atypical antipsychotics between 2005 and 2007 was conducted. Data gathered included demographics, diagnosis, premorbid/new-onset metabolic changes, atypical antipsychotic prescriptions, weight/BMI, and lab parameters.

RESULTS:

• 77 patients received atypical antipsychotics; 75.3% (n=58) for >6 months. Mean treatment duration was 366 days.

•Demographic distribution: 26% male, 74% female; 87% White, 13% Black; Mean age- 81.04 years

• Quetiapine was most commonly prescribed (63.6%), risperidone (23.4%), aripiprazole (11.7%), olanzapine (1.3%). No patients received clozapine, ziprasidone or olanzapine-fluoxetine.

• Most commonly associated psychiatric diagnosis was depression (41.6%), dementia (33.8%) and psychosis (29.9%).

• In 2005, 20.8% of the sample had hypertension, 14.3% had hyperlipidemia, 5% had diabetes mellitus, 4% had cerebrovascular disease.

• There were no statistically significant differences in weight change, glucose or BMI based on duration of treatment.

• Among those receiving atypical antipsychotics for >6 months, quetiapine users lost weight (mean -2.22 lbs.) while risperidone, aripiprazole, olanzapine users gained weight (mean +6.71 lbs.), p=0.004.

• Lack of available data precluded lipid profile change analysis.

• There was no correlation between baseline BMI and weight change in the total sample.

• Patients receiving quetiapine had a non-statistically significant decrease in systolic blood pressure (mean -10.4mmHg).

CONCLUSIONS: Results from this study are reflective of existing limited data on atypical antipsychotic use and associated metabolic changes in the elderly. Improving the collaboration between psychiatry and primary care is crucial to the optimal care of patients with mental illness.


**REFERENCES:**


1. American Diabetes Association, American Psychiatric As sociation, American Association of Clinical Endocrinologists, North American Association for the Study of Obesity. Con sensus Development Conference on Antipsychotic Drugs and Obesity and Diabetes. Diabetes Care 2004;27(2): 596-601
2. Etminan M, Streiner DL, Rochon PA. Exploring the associa tion between atypical neuroleptic agents and diabetes mel litus in older adults. Pharmacotherapy. 2003;23(11):1411-5.


**NR7-064**

## WEIGHT GAIN AND USE OF ATYPICAL ANTIPSYCHOTICS IN LONG-TERM CARE ELDERLY: A RETROSPECTIVE CHART REVIEW


*Shilpa Srinivasan, M.D. 3555 Harden St ExtSuite 301Columbia SC 29203, ColumbiaSC 29203, Kimberly B. Rudd M.D., Micah Baxley M.D., Shilpa Srinivasan M.D., James Bouknight, M.D., Christian Neal, M.D., Paul K. Switzer, M.D., Ronald E. Prier, M.D., John Magill, M.S.W., Richard Harding, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the target diagnoses and demographics of elderly patients treated with atypical antipsychotics. Participants will gain a better understanding of prescribing patterns of atypical antipsychotics in long-term care elderly and learn about the association between weight gain and emergent diabetes in elderly long-term care patients with premorbid medical conditions.

**SUMMARY:**


OBJECTIVE: To investigate the association between weight gain and atypical antipsychotic use in elderly long-term care patients.

METHODS: A retrospective chart review of 28 patients ages 60+, admitted between 1995- 2007 to C.M.Tucker Long-Term Care Center was conducted. Data included demographics, diagnosis, premorbid cardiovascular disease and diabetes mellitus (DM), atypical antipsychotic prescriptions, weight, new-onset DM and cardiovascular disease. 64% received atypical antipsychotics during the period investigated. The most common diagnosis was dementia (71%), followed by schizophrenia (21%). 68% of patients were male, 71% African American, 29% Caucasian.

RESULTS:

• Most commonly prescribed agent was risperidone (61%),

followed by olanzapine (55%), quetiapine (28%), ziprasidone (22%) and aripiprazole (0.05%).
• 43% of patients had cardiovascular disease and 18% had DM prior to admission.
• 75% with new onset diabetes (n=4) had been prescribed olanzapine prior to DM diagnosis.
• Weight parameters (on admission):
o 46% of patients were overweight (BMI 25-29.9)
o 46% of patients were normal weight (BMI 18.5-24.9)
• 61% (n=11) of patients prescribed atypicals lost weight (0.55-29.6lbs, mean 14.33 lbs). Dementia was the most common diagnosis (82%) in these patients.
• 33% of patients receiving atypicals gained weight, with risperidone and olanzapine prescribed the most (83% and 66% respectively).
• 66% with weight gain on atypicals had normal BMIs on admission.
• There was no difference in the number of individuals with weight gain vs. loss among those patients not receiving atypical antipsychotics (n=10).
CONCLUSIONS:
Our review suggests lack of association between weight gain or treatment emergent diabetes in elderly patients receiving atypical antipsychotics. Due to the paucity of data, furthe research is warranted to identify risk factors for metabolic dysregulation associated with atypical antipsychotic use in long-term care elderly.

**REFERENCES:**


1. Alexopoulos GS, Streim J, Carpenter D, Docherty JP; Expert Consensus Panel for Using Antipsychotic Drugs in Older Patients. Using antipsychotic agents in older patients J Clin Psychiatry. 2004;65 Suppl 2:5-99
2. Etminan M, Streiner DL, Rochon PA. Exploring the associa tion between atypical neuroleptic agents and diabetes mellitus in older adults. Pharmacotherapy. 2003 Nov;23(11):1411-5.


**NR7-065**

## EXECUTIVE DYSFUNCTION IN SUBCORTICAL WHITE MATTER LESIONS


*Yujin Lee, M.D. Soonchunhyang University Hospital, 1174 Jung-dong Wonmi-Gu, Bucheon-Si, Kyounggi-Do, Korea, Bucheon 420-767, Han yong Jung, M.D., Ph.D., So young Lee, M.D., Ph.D., Yang rae Kim, M.D., Ji Hyea Hong, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the importance of working memory which can be a clinical predictor of cognitive decline. Future large sampled and prospective studies should be performed to examine the utility of working memory.

**SUMMARY:**


Introduction: White matter lesions(WML) is known to be associated with subcortical frontal circuit damage. Therefore it has been suggested that WML may cause executive dysfunction. The executive function is classified into inhibition, working memory, generation, planning, and sequencing etc. The purpose of this study is to evaluate the relationship between the severity of WML and executive function profile.
Methods: 47 subjects with subjective memory complaints were evaluated. WML were assessed by MRI T2 flair images and divided into 3 groups of mild(24), moderate(18) and severe(7), and into 2 groups of mild(24) and moderate-severe(23) by Fazeka and Erkinjintti criteria. The elements of executive functions were evaluated by Stroop test interference score(STIS: inhibition), Controlled Word Association Test(COWAT: generation), Digit span Backward(DS backward: working memory). Medical and neurological conditions which affect cognitive dysfunction and definite dementia(CDR: above 1) were also excluded. Results: 1) In comparing mild and moderate-severe WML, there were significant differences in DS Backward(-0.63±0.67 vs -1.85±1.62, t=3.09, df=25.85, p=0.005) and COWAT(-0.69±0.83 vs -1.53±1.42, t=2.17, df=36, p=0.035). 2) In the three group (mild vs moderate vs severe) analysis, DS Backward(-0.64±1.01 vs -1.48±1.43 vs -2.63±1.92; F=6.62, df[2,46], P=0.003), COWAT(-0.68±0.86 vs -1.82±1.32 vs -0.87±1.16; F=5.64, df[2,45], p=0.007) and STIS(-1.20±1.96 vs -3.57±3.42 vs -5.39±7.02; F=3.73, df[2,33], p=0.035) were significantly different between the groups.
Conclusions: When divided into 3 groups according to severity of WML, especially impairments of working memory was associated with increased severity of WML grading. These findings suggest that simple working memory tests can be a clinical predictor for cognitive decline or disease severity of vascular cognitive impairment.


**REFERENCES:**


1. Niels D. Prins, Ewoud J. van Dijk, Tom den Heiger, Sarah E. Vermeer, Jellemer Jolles, Peter J. Koudstaal, Albert Hof man, Monique M.B. Breteler.Cerebral small-vessel disease and decline in information processing speed, executive func tion and memory. Brain (2005).128,2034-2041
2. M O'Sullivan, R G Morris, H S Markus. Brief cognitive assessment for patients with cerebral small vessel disease. J Neurol Neurosurg Psychiatry 2005;76:1140-1145


**NR7-066**

## PSYCHIATRIC DISORDERS AND HEALTH-RELATED ANXIETY IN CARDIAC PATIENTS ATTENDING A SUPERVISED EXERCISE PROGRAM


*Aline Sardinha, Rua Aníbal de Mendonça 32/402 - IpanemaRio de Janeiro - 22410-050, Brazil, Antonio E. Nardi, M.D., Ph.D., Claudio G S Araújo, M.D., Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should learn the high prevalence of psichiatric disorders and health-related anxiety in cardiac patients. Participants should also be able to identify psychiatric comorbidities and health-related anxiety among cardiac patients and to recognize the importance of diagnosing these conditions to the treatment of cardiac patients.

**SUMMARY:**


Objective: Although the association between cardiac diseases and psychiatric disorders is already established, the impact of health-related anxiety on these patients remains unclear. This study aimed to assess the prevalence of psychiatric disorders, anxiety sensitivity, cardiac anxiety and agoraphobic symptoms and cognitions among cardiac patients attending an exercise program. Method: Thirty-five patients (30 men), aged between 53 and 89 years (mean=70.7; SD=9.6) regularly participating in a medically-supervised exercise program were assessed by the Mini International Neuropsychiatric Interview (MINI)

version 5.0. Patients also filled in the Anxiety Sensitivity Index, the Agoraphobic Cognitions Questionnaire, the Physical Sensations Scale and the Cardiac Anxiety Questionnaire. Data were analyzed using repeated-measures ANOVA and Bonferroni test for multiple comparisons. Results: only 12 patients (35%) did not present any psychiatric disorder, with relatively high prevalence of current agoraphobia (20%), social phobia (14%), binge eating (14%) and generalized anxiety disorder (17%), past depressive episodes (14%), and panic attacks (14%). No suicidal ideation was found. Health-related anxiety was significantly prevalent (f=34,14; p<0.01) and specifically cardiac anxiety was significantly higher than non-cardiac related cognitions (t=3,075; p<0.05) and general anxiety sensitivity (t=5,912; p<0.05). Conclusions: Psychiatric comorbidity seems to be significantly prevalent among cardiac patients, as well as health-related anxiety and cardiac-related anxiety.

**REFERENCES:**


1. Smoller JW et al. Panic attacks and risk of incident cardio vascular events among postmenopausal women in the Wom en's Health Initiative Observational Study. Arch Gen Psychia try 2007 Oct; 64:1153.
2. Jiang W et al. Prognostic value of anxiety and depression in patients with chronic Heart failure . Circulation 2004; 110:3452-3456.


**NR7-067**

## ECONOMIC BURDEN OF SCHIZOPHRENIA IN SOUTH KOREA


*Chang Sung Man, M.D. Department of Psychiatry and Behavioral Science, Kyungpook National University Hospital, 200 DONGDUK-RO, JUNG-GU, DAEGU, South Korea, DAEGU-South Korea 700-721, Sung Man Chang, M.D.,M.A., Seong-Jin Cho, M.D.,Ph.D., Hong Jin Jeon, M.D.,Ph.D., Bong-Jin Hahm, M.D.,Ph.D., Jong-Ik Park, M.D.,Ph.D., Byung-Jo Kang, M.D.,Ph. D., Maeng Je Cho, M.D.,Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the importance of psychosocial rehabilitation of schizophrenia in Korea.

**SUMMARY:**


Introduction: This study estimates the treated prevalence of schizophrenia and the annual costs associated with the illness in Korea in 2005, from a societal perspective. Methods: Annual direct healthcare costs associated with schizophrenia were estimated from National Health Insurance and Medical Aid records. Annual direct non-healthcare costs were estimated for incarceration, transport, community mental health centers, and institutions related to schizophrenia. Annual indirect costs were estimated for the following components of productivity loss due to illness: unemployment, reduced productivity, premature mortality, and caregivers' productivity loss using a human capital approach based on market wages. All costs were adjusted to 2005 levels using the health care component of the Consumer Price Index. Results: The treated prevalence of schizophrenia in 2005 was 0.4% of the Korean population. The overall cost of schizophrenia was estimated to be $3,174.8 million (3251.0 billion Won), which included a direct healthcare cost of $418.7 million (428.6 billion Won). Total direct non-healthcare costs were estimated to be $121 million (123.9 billion Won), and total indirect costs were estimated at $2,635.1 million (2,698.3 billion Won). Unemployment was identified as the largest component of overall cost. Conclusion: These findings demonstrate that schizophrenia is not rare, and that represents a substantial economic burden.


**REFERENCES:**


1. Knapp M, Mangalore R, Simon J: The global costs of schizo phrenia. Schizophr Bull 2004; 30(2):279-93
2. Goeree R, Farahati F, Burke N, Blackhouse G, O'Reilly D, Pyne J, Tarride JE: The economic burden of schizophrenia in Canada in 2004. Curr Med Res Opin 2005; 21(12):2017-28


**NR7-068**

## MINI MENTAL STATE EXAMINATION AS A PREDICTOR OF LENGTH OF PSYCHIATRIC HOSPITALIZATION


*David Fraguas, M.D. Departamento de Psiquiatría Hospital General Universitario Gregorio Marañón, Madrid-Spain 28009, Sara Terán, M.D., Esther Chapela, M.D., Juan José de la Peña-Esbrí, M.D., Fernando García-Solano, M.D., Alfredo Calcedo-Barba, M.D., Ph.D. Francisco Ferre-Navarrete, M.D., Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to rocognize the value of MMSE assessment in psychiatric wards.

**SUMMARY:**


OBJECTIVE: To assess whether Mini Mental State Examination (MMSE) score upon admission to a psychiatric ward is related with the length of the hospitalization. METHODS: A total of 143 patients consecutive admitted to a psychiatric general ward, were assessed with the MMSE, Spanish version. Patient's socio-demographic data (age, gender, prior lifetime psychiatric admissions, and ICD-9 CM diagnosis) were obtained, and Acuity Psychiatric Illness Scale, to measure the clinical severity of the psychiatric episode requiring hospitalization, was administered. Relationship between the length of hospitalization and the MMSE score was evaluated by means of a Pearson's correlation. To control for confounding variables, a linear regression analysis, controlled by age, gender, number of prior lifetime psychiatric admissions, diagnosis and clinical severity, was conducted. RESULTS: The correlation between length of admission and the MMSE score was -0.301, (P<0.001). That is, the higher MMSE score upon admission the shorter length of admission. After controlling for age, gender, number of prior lifetime psychiatric admissions, diagnosis and clinical severity, this relationship remained significant (P=0.034). CONCLUSIONS: MMSE score upon psychiatric admission may be used as a predictive variable of length of hospitalization, independently of number of prior lifetime psychiatric admissions, diagnosis and clinical severity.


**REFERENCES:**


1. Huntley DA, Cho DW, Christman J, Csernansky JG.Predicting length of stay in an acute psychiatric hospital. Psychiatr Serv 1998;49(8):1049-53.
2. Thompson EE, Neighbors HW, Munday C, Trierweiler S. Length of stay, referral to aftercare, and rehospitalization among psychiatric inpatients. Psychiatr Serv 2003;54(9):1271-6.

**NR7-069**

## TRENDS IN ANNUAL METABOLIC SCREENING FOR PATIENTS TAKING SECOND-GENERATION ANTIPSYCHOTIC MEDICATIONS

*Elaine H Morrato, D.P.H. P.O. Box 6508, Mailstop F443, Aurora, CO 80045, John W. Newcomer, M.D., Siddhesh Kamat M.S., Onur Basar, Ph.D., James Harnett, Pharm.D., Brian Cuffel, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize that annual rates of serum glucose and lipid monitoring associated with the usage of second-generation antipsychotic drugs are higher than previous reports of screening at drug initiation but that annual testing rates did not increase following the APA Consensus Statement.

**SUMMARY:**

Introduction: The 2004 Consensus Statement on second-generation antipsychotics (SGA) and diabetes recommends routine metabolic screening1. Glucose and lipid testing at SGA initiation is low2. This study estimates screening rates following SGA initiation and evaluates whether screening improved after the Consensus Statement versus background trends. Methods: Lab claims for serum glucose and lipid testing were identified for an incident cohort of 3,143 adults initiating SGA drugs in a US commercial health plan (2000-2005) and a control group of 43,317 adults with diabetes not receiving antipsychotics. Rates of testing during the year(1yr), 31-365 days post-index date, were compared after adjusting for age, sex, mental health disorders and cardiovascular risk using propensity score matching. Interrupted time series models were used to measure the effect of the Consensus Statement on quarterly trends in 1yr testing. Results: In the incident cohort, 38% of SGA patients had 1yr glucose testing vs. 20% at drug initiation; 23% had 1yr lipid testing vs. 9% at initiation. 1 yr glucose testing was higher if the SGA patient had diabetes (50% vs. 37%, $p<0.001$) as was lipid testing (31% vs. 22%, $p=<0.001$). Among matched SGA and diabetic adults (n=2,218 each), 1yr glucose testing in SGA patients grew 15%/qtr ($p=0.01$), but background testing rates in control patients increased at a faster rate (134%/qtr, $p<0.001$). 1yr lipid testing in SGA patients grew 0.5%/qtr ($p=0.03$) compared to a 92%/qtr growth trend in diabetic patients ($p<0.001$). The Consensus Statement had no effect on 1yr glucose or lipid testing. Conclusions: In a commercially-insured population, annual glucose and lipid testing for adults taking SGA drugs was 2 times higher than rates reported for drug initiation, but more than half still had no glucose and three-quarters had no lipid testing. Research is needed on barriers to screening to identify interventions for improving screening.

Pfizer funded this study.

**REFERENCES:**

1. ADA, APA, AACE, NAASO: Consensus development con ference on antipsychotic drugs and obesity and diabetes. J Clin Psychiatry. 2004; 65:267-272.
2. Morrato EH, Newcomer JW, Allen RR, Valuck RJ. Preva lence of baseline serum glucose and lipid testing in users of second-generation antipsychotic drugs: A retrospective, popu lation based study of Medicaid claims data. J Clin Psychiatry. 2007 (in press).

**NR7-070**

## METABOLIC, CARDIAC AND ENDOCRINOLOGIC EFFECTS OF ATYPICAL ANTIPSYCHOTICS IN CLINICAL DEPARTMENTAL PRACTICE.

*Giancarlo G Cerveri, M.D. Departement of PsychiatryHospital Fatebenefratelli e Oftalmico,C.so Porta Nuova 23 Milan Italy, 20100, Ala Pierluigi, M.D., Cerveri Giancarlo, M.D., Netti Irene, M.D., Volonteri Lucia, M.D., Mencacci Claudio, M.D.*

**EDUCATIONAL OBJECTIVE:**

Atypical antipsychotics tolerability vs haloperidol: we hypothesized that new antipsychotic drugs are more effective than haloperidol in terms of cognitive, negative and affective symptoms but may have a different profile of long and short-term side effects such as improved risk of metabolic syndrome, high prolactin plasma levels and QT interval prolongation. These factors may affect our patients life quality and should be taken in careful consideration in terms of quality of public expending.

**SUMMARY:**

Introduction: Atypical antipsychotics represent an important advance in the treatment of schizophrenia and related disorders. However, endocrinologic and metabolic alterations have been noticed; these complications have been associated with increased mortality due to hypertension, cardiovascular and cerebrovascular diseases. The aim of this study is to evaluate the prevalence of metabolic, endocrinologic and cardiologic disorders in outpatients under chronic treatment, in a context of a “Mental Health Department”. Methods: we subjected all the patients under mono-therapy antipsychotic treatment to evaluation of their body weight and Body Mass Index, fasting glucose plasma level, glycated haemoglobin, prolactin, cholesterol and triglycerides, and ECG with evaluation of QT interval. Results: among 54 subjects evaluated, 39.4% of them presented a BMI greater than 25, which is the overweight threshold value; 8.5% exceeded the fasting glucose plasma level threshold value; 29.8% exceeded the cholesterol threshold value; and the prolactin threshold value was passed by 20.8% of the subjects. 9,1% of the subjects presented a QT interval greater than the normal range. Data were analysed for each antipsychotic singularly taken and it showed that atypical antipsychotic drugs did not present an homogeneous profile in terms of tolerability, regarding both metabolic-endocrinologic and cardiologic issues.
Conclusions: this observational study shows a clinical comparison of the side effects of the long term administration of new antipsychotic drugs (olanzapine, clozapine, risperidone, quetiapine, amisulpride, aripiprazole) versus haloperidol, and allows to compare them each other.

**REFERENCES:**

1. Lieberman JA, Stroup TS, McEvoy JP, Swartz MS, Rosen heck RA, Perkis DO, Keefe RSE, Davis SM, Davis CE, Lebowitz BD, Severe J, Hsiao MS and JK, for the Clinical Antipsychotic Trials of Intervention Effectiveness (CATIE) Investigators. Effectiveness of Antipsychotic Drugs in Patients with Chronic Schizophrenia. N Engl J Med 2005; 53:1209-1223.
2. Marder SR, Essock SM, Miller AL, Buchanan RW, Casey DE, Davis JM, Kane JM, Lieberman JA, Schooler NR, Covell N, Stroup S, Weissman EM, Wirshing DA, Hall CS, Pogach

L, Pi-Sunyer X, Bigger JT, Friedman A, Kleinberg D, Yevich SJ, Davis B, Shon S. Physical Health Monitoring of Patients With Schizophrenia. Am J Psychiatry 2004; 161:1334-1349

**NR7-071**

## MEDICAID PRESCRIPTION DRUG POLICIES AND PSYCHOPHARMACOLOGIC TREATMENT ACCESS AND CONTINUITY: FINDINGS FROM TEN STATES

*Joyce C West, Ph.D. APIRE 1000 Wilson Blvd, Suite 1825Arlington, VA 22209, ArlingtonVA 22209, Irvin L. Muszynski, J.D., Donald S. Rae, M.S., Maritza Rubio Stipec, Sc.D., Lisa Countis, Jennifer Chen, B.A., Carol L. Alter, M.D., William E. Narrow, M.D., M.P.H., Stephen Crystal, Ph.D., and Darrel A. Regier, M.D., M.P.H.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to; 1) Understand the extent and nature of medication access and continuity problems experienced by patients with mental and addictive illnesses treated by psychiatrists in state Medicaid programs; and 2)Identify medication access problems and Medicaid prescription drug management features most highly associated adverse clinical events, including ER visits, hospitalizations, and homelessness.

**SUMMARY**

In*troduction*: As Medicaid costs continue to increase, states have used prescription drug (PD) utilization management to contain costs. Study Aims: 1) Compare medication access/continuity among psychiatric Medicaid patients in ten states; 2) Assess whether medication access problems and PD management features are associated with adverse clinical events.
Methods: 5,000 psychiatrists in ten states were randomly selected from AMA Physician Masterfile. 61% responded; 34% met study eligibility criteria of treating Medicaid patients their last typical workweek, reporting clinically detailed data on 1,625 systematically-selected Medicaid patients. Results: 48% (SE=2.0) of the patients had at least one medication access problem the past year, with a 38% absolute difference between states with the lowest (New York, 27%) and highest rates (Michigan, 65%; p<.0001). Most common access problems were: not being able to access clinically indicated medication refills or new prescriptions because they weren't covered/approved (34%, SE=1.9); discontinuing medications as a result of PD coverage/management issues (26%, SE=1.6); and prescribing a medication not clinically preferred because clinically indicated/preferred medications not covered/approved (29%, SE=1.8). All medication access problems were associated with increased odds of adverse events. Patients with medication access problems had 2.7 times increased odds of a significant adverse event (p<.0001), including ER visits, hospitalizations, homelessness, increase in suicidal ideation/behavior, or being incarcerated. All PD management features were associated with increased medication access problems (p<.0001) and adverse events (p<.0001). States with greater PD utilization management had higher PD access problems and adverse events.
Summary: More effective Medicaid PD management practices are needed to promote medication continuity and improve outcomes of treatment for psychiatric patients.

**REFERENCES:**

1. Soumerai SB: Benefits and risks of increasing restrictions on access to costly drugs in Medicaid. Health Affairs Health Aff (Millwood) 2004; 23(1):135-146
2. Koyanagi C, Forquer S, Alfano E: Medicaid policies to contain psychiatric drug costs. Health Aff (Millwood) 2005; 24:536–544

**NR7-072**

## OUTCOMES OF ASSESSMENTS FOR POSSIBLE DETENTION IN 1179 PEOPLE AGED 60 AND OVER IN NORFOLK, UNITED KINGDOM 2001-2005.

*Julian Beezhold, M.D. Milestones Hospital, Vicarage Road, Salhouse United Kingdom NR13 6HA, George Mosa, M.R.C.Psych., Andy Collins, Robert Equus, Jenni Sims*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to describe outcomes of assessments under the Mental Health Act 1983 for compulsory admission to hospital in patients aged 60 and over in rural Norfolk, England; and also be able to comment on the influence of gender and advancing age on these outcomes.

**SUMMARY:**

Background
A significant number of people aged over 60 are considered for compulsory admission to hospital under the Mental Health Act 1983. There is a lack of published research that examines data regarding the whole population referred for such formal assessment.
AimsTo establish the numbers and demographic profile of individuals aged 60 and above referred for formal assessment for compulsory admission under the Act in Norfolk.Method Data related to formal Mental Health Act assessments for admission, involving people aged 60 or over, collected by Norfolk County Council during the period 2001 - 2005, were examined. Rates of assessment were standardized to 5-year age bands and gender-specific populations.Results Over the five-year 2001 - 2005 period, 1179 formal assessments for compulsory admission were carried out involving individuals aged 60 and over, with an outcome of a 66% rate of detention in hospital, 7% admitted voluntarily and 27% not admitted. Men comprised 37% of people assessed and accounted for 38% of all admissions and 38% of all detentions.Conclusions This data provides new insight on the whole population of older adults assessed for detention including those not detained. Additionally, unique data regarding use of the Act in a rural area is presented. Data suggests that there is no gender bias affecting outcomes of assessment. Further data on the population assessed for possible detention will allow for research to examine differences between subgroups and trends over time, including the impact of proposed changes to the existing Mental Health Act legislation.

**REFERENCES:**

1. Hotopf M et al: Changing patterns in the use of the Mental Health Act ibn England 1984 - 1996, British Journal of Psy chiatry, 2000, 176, 479-484
2. Lelliott et al: Trends in the use of Part II of the Mental Health Act 1983 in seven English local authority areas, British Jour nal of Psychiatry, 2002, 182, 68-70

NR7-073

## MEDICAL CARE OF PATIENTS WITH DIABETIC NEUROPATHY: IMPACT OF TYPE 1 DIABETES AND PRESENCE OF OTHER DIABETES-RELATED COMPLICATIONS

*Kristina S Boye, Ph.D. Lilly Corporate Center, IndianapolisIN 46285, Yang Zhao,Ph.D., Wenyu Ye,PhD, John Holcombe, M.D., Jerry A Hall,.M.D., Stacey L Bledsoe, R.N., B.S.N.,M.S.N., Ralph Swindle,.Ph.D*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to describe the prevalence of Type 1 diabetes and other complications associated with diabetes, the extent to which these conditions contribute to healthcare charges, and utilization of patients with diabetic neuropathy (DN).

**SUMMARY:**

Introduction: Type 1 (T1D) and Type 2 (T2D) diabetes are serious and costly medical conditions. Complications related to diabetes include diabetic neuropathy (DN), heart disease, kidney disease, visual impairment, depression, and amputation. Using claims data, we estimated the impact of T1D or any other diabetes-related complications on healthcare charges and utilization among DN patients.

Methods: Individuals who were 18-64 years old and continuously enrolled in a large US commercial plan between 7/2004 and 6/2006 were identified. The DN cohort was constructed by selecting patients with at least 1 DN diagnosis anytime between 7/2004 and 6/2005 (Year 1). We compared the prevalence of other diabetes-related complications by type of diabetes (T1D vs. T2D). Among DN patients with no or >/=1 other diabetes-related complications, we used multivariate regressions to assess the marginal contribution of T1D vs. T2D on Year 2 (7/2005 through 6/2006) healthcare charges and utilization.Results: The majority of DN patients (7,720 out of 8,665) had >/=1 other diabetes-related complications, and T1D accounted for 42% of the DN cohort. T1D patients had more co-morbid medical conditions than patients with T2D (7.6 vs. 6.1 among patients with no other diabetes-related complications; 13.4 vs. 10.3 among those with >/=1 other diabetes-related complications). The prevalence was higher for all other diabetes-related complications, except heart disease, among patients with T1D than patients with T2D. Controlling for comorbidities, patients with T1D or T2D had similar healthcare utilization among DN patients with no other diabetes-related complications; however, patients with T1D had significantly higher total medical charges than patients with T2D among those with >/=1 other diabetes-related complications.

Conclusion: Many DN patients have T1D and other diabetes-related complications, which can have significant impact on healthcare charges and utilization.Funding provided by Lilly

**REFERENCES:**

1. Le TK, Able SL, Lage MJ. Resource use among patients with diabetes, diabetic neuropathy, or diabetes with depression. Cost Effectiveness and Resource Allocation 2006; 4:18.
2. O'Brien JA, Patrick AR, Caro JJ. Cost of managing complica tions resulting from type 2 diabetes mellitus in Canada. BMC Health Services Research 2003; 3:7.

NR7-074

## FACTORS ASSOCIATED WITH HEALTHCARE COSTS AMONG ELDERLY PATIENTS WITH DIABETIC NEUROPATHY

*Luke Boulanger, M.A. 181 Spring Street, 2nd Floor, Lexington-MA 02421, Yang Zhao, Ph.D., Yanjun Bao, Ph.D., Cassie Cai, M.S., Wenyu Ye, Ph.D., Mason W. Russell, M.A.P.E.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand which demographic and clinical factors are associated with increased healthcare costs among elderly diabetic patients who also are diagnosed with diabetic neuropathy.

**SUMMARY:**

INTRODUCTION: There is limited data on the economic impact of mood disorders among patients with diabetic neuropathy (DN).

OBJECTIVE: This study examines factors associated with healthcare costs among elderly DN patients with or without depression/anxiety (DA).METHODS: Using a retrospective cohort design and claims data, we assessed the predictors of total healthcare costs over a 1-year follow-up period for patients 65+ years with 1+ diagnosis of DN. The index date was defined as the first observed medical claim with a diagnosis for DN in 2005. Patients with continuous eligibility for 12 months prior to and following the index date were included. Two cohorts of patients were constructed for individuals with DA (DN-DA) or without (DN-only). Multivariate linear regression was performed to assess whether DN-DA patients have higher healthcare costs than DN-only patients, controlling for demographic and clinical characteristics (diabetes-related comorbidities and treatment regimen for diabetes observed within 12 months prior to index date).

RESULTS: We identified 16,831 DN-only patients, and 1,699 DN-DA patients. The DN-only and DN-DA groups were similar by age (75.6 vs 75.4, p=0.44), but DN-DA patients were more likely to be female (56% vs. 47%, p<0.01). DN-DA patients had higher prevalence of diabetes-related comorbidities for cardiovascular disease, nephropathy, neuropathy, obesity, and hypoglycemic events than DN-only patients (all p<0.01). Controlling for differences in demographic and clinical characteristics, DN-DA patients had $9,785 (p<0.01) higher total healthcare costs than patients with DN-only. Factors associated with increased costs included insurance type, geographical region, diabetes-related comorbidities, and insulin therapy.

CONCLUSION: These findings indicate that healthcare costs were significantly higher for DN patients with depression/anxiety relative to those without these mood disorders. Funding provided by Eli Lilly and Company

**REFERENCES:**

1. Goodnick PJ. Use of antidepressants in treatment of comorbid diabetes mellitus and depression as well as in diabetic neu ropathy. Annals of Clinical Psychiatry 2001;13;1;31-41.
2. Currie CJ, Poole CD, Woehl A, et al. The financial costs of healthcare treatment for people with Type 1 or Type 2 diabe tes in the UK with particular reference to differing severity of peripheral neuropathy. Diabetic Medicine 2007;24;187-194.

**NR7-075**

## CLINICAL OUTCOMES IN A PSYCHIATRIC CASE MANAGEMENT PROGRAM IN A TERTIARY PSYCHIATRIC HOSPITAL

*Margaret H Hendriks, B.S.N. Institute of Mental Health10 Buangkok View, Singapore 539747, Rathi Mahendran, M.B.B.S., M.Med(Psych), FAMS*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant will: 1) recognize the effectiveness of psychiatric case management across cultural and ethic groups of patients; and 2) understand how psychiatric case management reduces readmissions, hospitalization days and dropout rates, reduces psychiatric complications and increases patient contact with services.

**SUMMARY:**

Introduction: This is a research of a 3-year case management (CM) program in a tertiary psychiatric hospital in Singapore where a brokerage model is used. Method: Patients referred to psychiatric CMs (Jan 2004 – Dec 2006) were reviewed and data analyzed with SPSS. Results: Increase in referrals to psychiatric CMs over the 3 years (1021 in 2004, 1066 in 2005, 2185 in 2006), with a doubling of cases accepted in 2005 and 77% increase in 2006. The male to female ration of cases was closely similar and racial distribution similar to the state. Predominant diagnosis, schizophrenia (75%). In 2004, 11(4.8%) CM patients were admitted within 28 days and 15 patients (6.6%) readmitted after 28 days. This was reduced to 8(2.1%) readmitted within 28 days and 24(6.4%) after 28 days in 2005 and less in 2006 (25 or1.5%) within 28 days and 71(4.4%) after 28 days (the hospital's unplanned readmission rate is 9%). In 2005, comparison of patients' readmission rates before and after CM showed a decrease, 65 readmissions before CM to 26 readmissions (excluding the index admission) after CM was provided (p=0.001). A decrease in patients who defaulted follow-up (11.9% patients receiving CM compared to 24% for all outpatients; p=0.001) was noted. Hospitalization days decreased from 1014 days in the year before CM was provided to 104 days the following year (p=0.001). The average number of admission days decreased from 15.6 to 4 days (p=0.001). Other outcomes: Reductions in suicide, suicide attempts and forensic complications for CM cases. Conclusion: The chosen CM service improved quality of care, clinical service and enhanced clinical outcomes for our patients.

**REFERENCES:**

1. Rapp CA, Goscha RJ: The principles of effective case man agement of mental health services. Psychiatr Rehabil J 2004; 27: 319-333.
2. Zigura SJ, Stuart GW, Jackson AC: Assessing the evidence on case management. Br J Psychiatry 2002; 181: 17-21.

**NR7-076**

## FACTORS DETERMINING LENGTH OF STAY IN AN ACUTE PSYCHIATRIC HOSPITAL

*Rosa Quelhas, M.D. Rua da Boa Nova, 153 1º DT-B4050-101 Porto, 4050-101 Portugal, Tiago Rodrigues, M.D., Liliana Castro, M.D., Henrique Pereira, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to; 1) identify feasible predictive factors of extended psychiatric hospitalization; and 2) become aware about the need of a multidisciplinary effort in order to minimize those adverse factors

**SUMMARY:**

Introduction

Psychiatric hospitals meet the challenge of reduce health care spending while still maintaining quality care. One feasible way is to optimize length of stay at acute psychiatric admission. Previous studies reported predictive factors of length of stay: diagnosis, severity, age, sex, co-morbidities, socioeconomic and treatment issues. However these factors can't be applied to all psychiatric institutions. This study has the main purpose of assessing predictive factors for extended hospitalization at acute psychiatric admission in the Hospital Magalhães Lemos. MethodThis study consists in a cross-sectional assessment of socio-demographic, clinical and institutional characteristics of acute psychiatric admissions since Janeiro/2007. Subjects signed an informed consent and were assessed by a clinical interview on first three days after admission. Main assessment instrument was BPRS-A scale; BDI and/or YMRS were administered whenever indicated. Data was complemented by psychiatrist report of relevant problems interfering with hospitalization length. Statistical analysis was carried out by NCSS 2000. ResultsPreliminary results included 169 subjects, with mean age of 41 years, equally distributed by sex. Mean duration of hospitalization was of 18 days, with statistically significant different means when comparing psychiatric diagnosis and presence of problems reported by the patient' psychiatrist; the most significant ones were «bad therapeutic results" and "need to change therapeutic plan". The multiple regression analysis revealed significant relation between BPRS-A score and length of stay.At the time of abstract submission the inclusion period hasn't finished, which explain partial results, mainly about multiple regression analysis.ConclusionThe cross-sectional evaluation of patients at acute psychiatric admission may give us major predictive factors of extended hospitalization, in order to allow further assessment of indices of quality care

**REFERENCES:**

1. Jimenez R et al. Observed-predicted length of stay for an acute psychiatric department, as an indicator of inpatient care inefficiencies. Retrospective case-series study. BMC Health Services Research 2004; 4:4.
2. Hopko DR, Lachar D, Bailley SE, Varner R. Assessing pre dictive factors for extended hospitalization at acute psychiat ric admission. Psychiatric Services 2001; 52(10): 1367-1373.

**NR7-077**

## QUALITY AND MANAGEMENT OF CARDIOVASCULAR RISK FACTORS AMONG PATIENTS WITH SCHIZOPHRENIA AND TYPE II DIABETES WHO SMOKE

*Seth S Himelhoch, M.D. 737 West Lombard Street, Suite 560, Baltimore, MD 21201, Deborah R. Medoff, Ph.D., Richard W. Goldberg, Ph.D., Julie A. Kreyenbuhl, Ph.D., Jaclyn Leith, B.A., Lisa B. Dixon, M.D., M.P.H.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize that; 1) Compared to those smokers who have type

II diabetes without schizophrenia, those with schizophrenia receive poorer quality of care for modifiable risk factors associated cardiovascular disease; and 2) Compared to those with schizophrenia and type II diabetes who do not smoke, smokers receive poorer quality of care for for modifiable risk associated cardiovascular disease.

**SUMMARY:**
Background: Smoking increases the risk for cardiovascular mortality among those with diabetes, and those with schizophrenia smoke at rates that are 2-3 times that of the general population. We sought to determine whether individuals with schizophrenia and type II diabetes who smoke were being monitored and treated for modifiable risk factors associated with cardiovascular disease.
Methods: Cross-sectional analysis of medical chart data was performed on 199 adult patients, 100 with schizophrenia and 99 without serious mental illness (SMI), with a diagnosis of type II diabetes. After stratifying patients by current smoking status and diagnosis, indicators of quality of care for cardiovascular risk factors were examined. Services assessed included smoking cessation counseling, blood pressure and lipid monitoring, and prescription of medication known to reduce cardiovascular events (e.g. ACE inhibitors and statin cholesterol lowering agents).
Results: Individuals with schizophrenia were nearly twice as likely to be current smokers compared to those without SMI (62% vs. 34%). Among current smokers, those with schizophrenia were significantly less likely to receive blood pressure exams, lipid profiles, or treatment with ACE inhibitors or statins compared to those without SMI. Both groups were as likely to receive smoking cessation counseling. Among those with schizophrenia, those who smoke were significantly less likely to receive blood pressure exams, lipid profiles, or treatment with statins compared to those who do not smoke. Both groups were as likely to receive treatment with ACE inhibitors.
Conclusions: Individuals with type II diabetes and schizophrenia who smoke are significantly less likely to receive services and treatments known to improve cardiovascular outcomes. Efforts to increase awareness and improve delivery of services to this vulnerable group of patients are warranted.

**REFERENCES:**

1. Buse, JB et al.: Primary prevention of cardiovascular diseases in people with diabetes mellitus: A Scientific statement from the American Heart Association and the American Diabetes Association. Circulation 2007; 115: 114-126.
2. Goldberg, RW et al.: Quality of diabetes care among adults with serious mental illness. Psychiatric Services 2007; 58: 536-543.

**NR7-078**

## CLINICAL AND ECONOMIC CHARACTERISTICS OF PATIENTS WITH DIABETIC NEUROPATHY

*Trong K Le, M.P.H. Lilly Corporate Center, Indianapolis, IN 46285, Yang Zhao, Ph.D., Wenyu Ye, PhD, Kristina S Boye, Ph.D., John Holcombe, M.D. Jerry A Hall, M.D., Ralph Swindle, Ph.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to gain better knowledge of co-morbid medical conditions among patients with diabetic neuropathy (DN) and describe what drives the healthcare charges and utilization associated with DN.

**SUMMARY:**
Objective: To examine medical conditions associated with diabetic neuropathy (DN) and to identify drivers of healthcare charges and utilization using administrative claims database.
Methods: We studied commercially-insured individuals aged 18-64 with 24 months continuous enrollment in a national health plan. DN patients were identified by having =1 claim with a DN diagnosis between July, 2004 and June, 2005. Using propensity scoring, we selected a demographically-matched control cohort of patients with diabetes (10:1 ratio to DN). We compared disease prevalence, Year 2 distribution of charges, and reasons for ER visits and inpatient admissions between DN patients and controls. Logistic regression was used to assess the marginal contribution of DN to the most common reasons for ER and inpatient admissions controlling for differences in overall illness burden. Results: Compared with controls (n=86,550), DN patients (n=8,655) had more unique number of co-morbid medical conditions (9.7 vs. 6.8) and higher ($41,394 vs. $16,983) total medical charges. Both groups had the highest medical charges for inpatient services, followed by outpatient hospital and pharmacy use. Compared with controls, more DN patients had ER visits (13% vs. 9%), inpatient hospital encounters (28% vs. 13%), and longer hospitalizations (2.4 vs. 0.6 days). The top 5 reasons for ER visits were the same for both groups, with nonspecific backache being the most common. Three of the top 5 reasons for inpatient admissions were also the same: coronary atherosclerosis and other chronic ischemic heart disease, chest pain, and cellulitis. Controlling for excess illness burden, DN patients were still at a higher risk for hospitalizations due to chest pain, heart failure, and cellulitis.
Conclusions: DN patients had significantly more co-morbid medical conditions, ER visits, inpatient admissions, and longer hospitalizations than age-and-sex matched controls.Funding provided by Eli Lilly and Co.

**REFERENCES:**

1. Le TK, Able SL, Lage MJ. Resource use among patients with diabetes, diabetic neuropathy, or diabetes with depression. Cost Effectiveness and Resource Allocation 2006; 4:18
2. O'Brien JA, Patrick AR, Caro JJ. Cost of managing complica tions resulting from type 2 diabetes mellitus in Canada. BMC Health Services Research 2003; 3:7.

**NR7-079**

## FACTORS ASSOCIATED WITH HIGH TREATMENT CHARGES IN PATIENTS WITH DIABETIC NEUROPATHY

*Wenyu Ye, Ph.D., Lilly Corporate Center, Indianapolis IN 46285, Yang Zhao,Ph.D., Ralph Swindle, Ph.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to understand some key factors that predict high health care charges in patients with diabetic neuropathy (DN).

**SUMMARY:**
Purpose: To identify factors associated with high healthcare charges in patients diagnosed with diabetic neuropathy (DN).

Method: Data were extracted from a large, commercial health plan database between 7/2004 and 6/2006. Patients aged 18-64 were selected if they had a DN diagnosis (ICD9: 357.2x; 250.6x) between 7/2004 and 6/2005 (Year 1) and were continuously enrolled over the study period. High (low) charges groups were constructed for patients in the top and bottom decile of annual charges. Comorbidities in Year 1 were identified, and total charges in Year 2 (7/2005-6/2006) were examined. Logistic regression was used to identify factors associated with high charges. The factors considered were age, gender, type of health plan, and other comorbidities.
Results: A total of 8,655 DN patients (mean age 51 years, 46% female) were included in the study. Compared to the low charges group, patients in the high charges group had significantly more unique number of co-morbid medical conditions (16 vs. 10) and higher charges ($231,898 vs. $20,213) (both $p<0.001$). The high charges group contributed 56% of the total charges of all DN patients. Factors significantly ($p<0.001$) contributing to high charges included dialysis status (OR=19.2),metastatic cancer and acute leukemia (OR=3.4), end-stage liver disease (OR=2.8), renal failure (OR=2.8), kidney transplant status (OR=2.8), severe hematological disorders (OR=2.4), decubitus ulcer of skin (OR=1.9), congestive heart failure (OR=1.9), pancreatic disease (OR=1.7), and major depressive/bipolar/paranoid (OR=1.7), peripheral vascular disease (OR=1.6), and type 1 diabetes (OR=1.4). Age, gender, and type of insurance were not significantly related to high charges.
Conclusions: The most expensive DN patients spent over 50% of the total charges. The comorbidities of DN patients incurred significant treatment charges. Managing comorbidities is important for treating patients with DN.
Funding provided by Eli Lilly and Company

**REFERENCES:**

1. Le TK, Able SL, Lage MJ. Resource use among patients with diabetes, diabetic neuropathy, or diabetes with depression. Cost Effectiveness and Resource Allocation 2006; 4;18.
2. Ray JA, Valentine WJ, Secnik K, Oglesby AK. Cordony A. Gordois A. Davey P. Palmer AJ. Review of the cost of diabe tes complications in Australia, Canada, France, Germany, Italy and Spain. Current Medical Research & Opinion 2005; 2:1617-1629.

**NR7-080**

## TWO DECADES OF PSYCHOLOGICAL EVALUATION OF POTENTIAL KIDNEY DONORS

*Wilze L Bruscato, Ph.D. Rua Santa Isabel, 305, 7º andar. Santa Cecília., São Paulo. Brazil 01221-010., Paula S. Kioroglo, psychologist*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the importance of the psychological evaluation for the kidney donors.

**SUMMARY:**

Introduction: The psychological evaluation of potential donors has as its aim to observe the emotional dynamics, psychological functioning and both the manifest and latent reasons for donation. To verify the presence of emotional and financial coercions is made necessary due to the negative repercussions that could be caused by these behaviors in the post-transplant period for both receptors and donors.
Aim: To track data obtained in the pre-transplant psychological evaluation protocol of potential kidney donors.
Method: 34 potential donor protocols were analyzed (1990 – 2007).
Results: The group of potential donors was 62% female and 38% male. 76% of these did not have psychopathological records. The intellectual resources were considered good for 76% of the donors. The quality of life was satisfactory for 53%, regular for 41% and unsatisfactory for 6%. Most of the donors (79%) demonstrated to seek solutions when faced with predominant difficulties. Looking at the family background, the family of origin was satisfactory for 74% and the current family nucleus was satisfactory for 85%. The connection with the receiver was evaluated as satisfactory in 88% of the cases and regular in 12% and the emotional implications observed for the transplant situation were considered without unreal expectations for 85%. The information about transplant were adequate in 38%, partial in 53% and 9% did not have any information at all. Regarding the expectations about transplant, 79% were predominantly positive. The fears facing transplant were absent in 41% of the donors and were specific for 59%: 40% were related to surgical procedure, 10% to hospitalization, 15% to clinical evolution in post-transplant, 10% were not in context with the transplant situation and 25% were related to other fears. The emotional state relative to transplant was considered without evidence of a non-adaptive emotional state for 47%, adjustment reaction in the context of transplant for 32% and non-adjuste

**REFERENCES:**

1. SHARMA, V. K. & ENOCH, M. D. – Psychological Sequelae of Kidney Donation: A 5-10 Year Follow-up Study. Acta Psychiatrica Scandinavica, 75 (3):2 64-7, 1987.
2. SALOMÃO FILHO, A.; SALAZAR, H. M.; CÂMARA, F. P. & RAMBALDUCCI, S. – Transplante Renal. In: Pereira, W. A. (Org.). Manual de Transplantes de Órgãos e Tecidos. MEDSI. Rio de Janeiro, 1996.

**NR7-081**

## RESIDENT DOCTOR'S EMOTIONAL REACTIONS TOWARDS A PATIENT IN PALIATIVE TREATMENT

*Wilze L Bruscato, Ph.D. Rua Santa Isabel, 305, 7º andar. Santa Cecília., São Paulo.Brazil 01221-010., Daniele Achette, Psychologist*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the importance of evaluation of the resident medical student emotional reactions towards A patient in paliative treatment

**SUMMARY:**

Introduction: Literature points to a gap in the formation of doctors which relates to the theme of death and such a theme frequently generates feelings of omnipotence in the doctor.
Aim: to identify which are the resident doctor's main emotional reactions and attitudes towards terminal patients. Method: This study had residents of General Surgery as participants. A standardized questionnaire created by the researcher was used. The format of the study was descriptive transversal. Results:

28 questionnaires were distributed and out of these, 13 were answered. 69% of the researched residents talked about the prognosis with patients, but 91% of these make use of help from the family members. The main feelings experienced by the residents are impotence and sadness (23% each), indicating that, for them, death represents failure. In cases where patients or family members ask the resident for a procedure to cure the disease, we noted feelings of impotence (18%), anguish (22%) and pity (22%), due to difficulty when dealing with the situation. Most of the residents (73%) answered that they would tell the patients in palliative treatments who asked about their prognosis the truth. They affirm that the patient knowing or not depends mainly on each one's structure of personality (31%) and the importance of their preservation of independence (49%). The main requirement, according to the residents, is the cultivation of the doctor-patient relationship, necessary when dealing with patients (39%). Conclusions: The study indicates difficulty in most of the participants in dealing with the theme and communication of death to their patients, family members and themselves.

**REFERENCES:**


1. BENEVIDES-PEREIRA, A. M. T. – O Adoecer dos que se Dedicam à Cura das Doenças: O Burnout em um Grupo de Médicos. In: BENEVIDES-PEREIRA, A. M. T. (Org.), Burn out: Quando o Trabalho Ameaça a Vida do Trabalhador. São Paulo. Casa do Psicólogo, 2002a.
2. GUIMARÃES, L. A. M. & FERREIRA JUNIOR, M. – Condições Ligadas ao Trabalho. Em Fráguas Júnior, R. & Figueiró, J. A. B., Depressões em Medicina Interna e em Outras Condições Médicas: Depressões Secundárias. São Paulo. Atheneu, 2000.


**NR7-082**

## A WEB APPLICATION TO INCREASE INTEREST IN TREATMENT AMONG PROBLEM DRINKERS


*Daniel Z Lieberman, M.D. Department of Psychiatry Rm 8-421 2150 Pennsylvania Ave, NW, Washington, DC 20037, Sheela Kadekar, M.D., Suena W. Huang, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand how a new technological approach was used to help people with alcohol problems increase their interest in change, and move towards treatment. The participant will analyze the relevance of both enhanced interest in a specific modality of alcohol treatment, and the role of focus when presented with multiple possible modalities.

**SUMMARY:**


Objective: Recent studies have shown that use of information technology can improve access to care, particularly in the alcohol abusing population. These systems are cost-effective and less stigmatizing than traditional clinics. Additionally, online interventions reach a hidden population of non-treatment seekers. The objective of this study was to evaluate whether an online motivational intervention would increase the their level of interest in treatment in currently untreated individuals with drinking problems. Methods: An interactive online application, based on Miller's "Drinkers' Checkup," was developed, designed to increase motivation for change. The target population was individuals with significant drinking problems who were not receiving treatment. Level of interest in four different modalities of treatment was measured on a five point Likert Scale, pre and post intervention. Results: Prior to the intervention, 19% of the 244 participants (n=46) reported being "very interested" (5/5 on the Likert scale) in at least one modality; after the intervention, 28% of individuals (n=68) described themselves as "very interested" (P=.02). Participants became more focused on a specific modality following the intervention. Individuals showed higher levels of interest in their top choice and lower levels of interest in the other three choices. Conclusions: The greatest challenge in reducing alcohol related morbidity and mortality is converting non-treatment seekers into treatment seekers. An online interactive application significantly increased the number of non-treatment seekers who reported they were very interested in receiving care.


**REFERENCES:**


1. Lieberman D.Z: Clinical Characteristics of Individuals Us ing an Online Alcohol Evaluation Program. Am. J. Addic tions 2005; 14:155-165.
2. Lieberman D.Z: Determinants of satisfaction with an automated alcohol evaluation program. CyberPsychology & Behavior 2003; 6:677-68.


**NR7-083**

## THE EFFECT OF METHYLPHENIDATE ON INTERNET VIDEO GAME PLAY IN CHILDREN WITH ATTENTION DEFICIT HYPERACTIVITY DISORDER


*Doug Hyun Han, M.D. Department of Psychiatry, Chung Ang University Yong San Hospital Han Gnag Ro 3Ga, Yong San Gu, Seoul, Korea, 140-757, Young Sik Lee, M.D., Ph.D., Chur Na, M.D., Ph.D., Kyung Joon Min, M.D., Ph.D., Sung Gwo Yoon, M.D., Melissa A. Daniels, M.S.W., Perry F. Renshaw, M.D., Ph.D., M.B.A.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to demonstrate that internet video game play might be a means of self-medication in children with ADHD. In addition, we cautiously suggest that MPH might be evaluated as a potential treatment for internet addiction. To our knowledge, this is the first clinical follow up study to assess internet addiction and changes as it relates to treatment with methylphenidate (MPH) in attention deficit and hyperactivity disorder (ADHD).

**SUMMARY:**


Introduction

A number of studies of attention deficit hyperactivity disorder (ADHD) and internet video game play have examined both prefrontal cortex and dopamine levels, finding deficits in both functions. Moreover, both stimulant treatment and video game playing has been found to increase synaptic dopamine. We hypothesized that methylphenidate (MPH) treatment would reduce internet usage in subjects with co-occurring ADHD and internet video game addiction.MethodsThe participants in this study included 62 children (52 males and 10 females) all of whom were drug naïve, diagnosed with ADHD and were internet video game players. At the beginning of the study and after 8 weeks of treatment with Concerta® (OROS methylphenidate HCl), the participants were assessed by Young's internet addiction scale (YIAS-K), internet usage time,

Korean DuPaul's ADHD Rating Scale (K-ARS-PT), and the Visual Continuous Performance Test (VCPT).
ResultsAfter 8 weeks of treatment, the YIAS-K scores and internet usage times were significantly reduced. The changes in the YIAS-K score between baseline and 8 weeks were positively correlated with the changes in total and inattention scores from the K-ARS-PT as well as omission errors from the VCPT. There was a significant difference in the change of omission error from baseline to 8 weeks between non internet-addicted (nIA), mildly internet addicted (mIA), and severely internet addicted (sIA)(Figure1).
DiscussionWe suggest that internet video game playing might be a means of self-medication in children with ADHD. In addition, we cautiously suggest that MPH might be evaluated as a potential treatment for internet addiction.

**REFERENCES:**


1. Green CS, Bavelier D: Action video game modifies visual selective attention. Nature 2003; 423: 534-537.
2. Bedard AC, Martinussen R, Ickowicz A, Tannock R: Methyl phenidate improves visual-spatial memory in children with at tention-deficit/hyperactivity disorder. J Am Acad Child Ado lesc Psychiatry 2004; 43: 260-268.


**NR7-084**

## CHIP LEGISLATION: DIFFERENCES IN USE OF MENTAL HEALTH SERVICES IN AFRICAN-AMERICAN, HISPANIC, AND WHITE CHILDREN AND ADOLESCENTS WITH MAJOR DEPRESSION


*Sophia H Haeri, B.A. 16th St & 1st Ave, New York, NY 10006, Sophia Haeri, B.A., Eda Inan, B.A., Jamie Johnson, B.A., Ramin Mojtabai, M.D., Ph.D., M.PH*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should: have more information about historically existing disparities in mental health care in children and adolescents across the U.S.; see how the advent of the Children's Health Insurance Program (CHIP)has impacted these disparities, using data obtained from a national sample of 37,000 children and adolescents; understand racial-ethnic differences in service use and provision of mental health care for depression in the sample population.

**SUMMARY:**


Background: Despite the growth of public insurance mechanisms for children in recent years, concerns and questions about racial-ethnic disparities in the use of mental health services persist. Prior research in this area has shown wide varieties in sampling frame, and much of it predates introduction of Children's Health Insurance Program (CHIP), which enrolls a larger proportion of racial-ethnic minority as compared to white children and adolescents. Method: Data regarding differences in use of mental health services in African-American (AA), Hispanic, and White children and adolescents were assessed in a sample of 37,000 children and adolescents drawn from the National Survey on Drug Use and Health (NSDUH) for 2004-2005 who met diagnostic criteria for 12-month major depression.Results: In bivariate analyses, there were no significant differences between groups with regard to severity of depression or need for treatment; however, there were large differences across racial-ethnic groups with regard to use of services and professionals for mental health problems. AA respondents with major depressive episodes were more likely to be put into custodial care than prescribed medication for their depression. Among Medicaid/CHIP enrollees, AA respondents with major depressive episodes were less likely than their white counterparts to see psychiatrists or psychologists.Conclusions: Disturbing racial-ethnic disparities in mental health care persist, despite the introduction of programs such as CHIP. Further research is necessary to determine possible biases in referral, as well as system-level and individual factors which might affect service utilization patterns.


**REFERENCES:**


1. Garland A, Lau S, Yeh M, et al.(2007). Racial and Ethnic Differences in Utilization of Mental Health Services Among High-Risk Youths. Am J. Psychiatry, 162:1336-1343
2. Costello EJ, Pescosolido BA, Angold A, Burns BJ (1998). A family-netowrk based model of access to child mental health services. Res Community Ment Health, 9:165-190


**NR7-085**

## GLOBAL BENEFIT–RISK ANALYSIS OF ARIPIPRAZOLE AS ADJUNCTIVE THERAPY IN TREATMENT OF PATIENTS WITH MAJOR DEPRESSIVE DISORDER (CN138-139 AND CN138-163)


*Diane Ammerman, Pharm.D. Bristol-Myers Squibb Company777 Scudders Mill Road, Plainsboro, NJ 08536-1615, Stephen Wisniewski, Ph.D., Chi-Chang Chen, Ph.D., Edward Kim, M.D., M.B.A., Hong J. Kan, Ph.D., Zhenchao Guo, Ph.D., Quynh-Van Tran, Pharm.D., Berit Carlson, Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand the relative gain of aripiprazole adjunctive therapy in managing major depressive disorder

**SUMMARY:**


Introduction: Results from two randomized clinical trials demonstrate that, in MDD patients with an inadequate response to standard ADT, adjunctive aripiprazole was efficacious and well tolerated. The objective of this study was to quantify the overall merit of adjunctive aripiprazole compared to adjunctive placebo in treating MDD by simultaneously evaluating efficacy and safety data. Methods: Data were pooled from two identical randomized controlled trials. Patients with MDD received open-label escitalopram, fluoxetine, paroxetine CR, sertraline or venlafaxine XR plus placebo. Patients with an inadequate response after 8 weeks were randomized to a 6-week phase of either: continued adjunctive placebo or adjunctive aripiprazole (2–20 mg/d). Global benefit-risk (GBR) analysis was used to quantify the benefit and risk differences between two treatment arms. Benefit was defined using the MADRS Total score for response (=>50% reduction in total score) and remission (response plus total score <=10). Treatment emergent adverse events were classified as mild, moderate or severe based on severity. GBR ratio measures were calculated and compared across two treatment arms to evaluate the relative gain of adjunctive aripiprazole treatment. Results: With MADRS-defined response as an outcome variable, the relative gain of adjunctive aripiprazole compared with ADT monotherapy was 1.46 (p=0.044). For MADRS remission, the relative gain of adjunctive aripiprazole was 1.43 (p=0.085) versus ADT alone. Compared with ADT monotherapy, patients with adjunctive

aripiprazole were almost twice as likely (OR=1.91, 95% CI 1.36–2.68) to be in the benefit > risk category. Conclusions: GBR analysis of the efficacy and safety data shows that, compared with ADT monotherapy, adjunctive aripiprazole treatment was associated with an improved benefit–risk profile in the treatment of MDD. Supported by Bristol-Myers Squibb and Otsuka.

**REFERENCES:**


1. Berman RM, Marcus RN, Swanink R et al: The efficacy and safety of aripiprazole as adjunctive therapy in major depres sive disorder: a multicenter, randomized, double-blind, pla cebo-controlled study. J Clin Psychiatry 2007;68:843-853.
2. Entsuah R and Gorman JM. Global benefit-risk assessment of antidepressants: venlafaxine XR and fluoxetine. Journal of Psychiatric Research 2002;36:111-118.


**NR7-086**

**TRANSCUTANEOUS VAGUS NERVE STIMULATION (T-VNS): BOLD-FMRI EFFECTS OF A SHAM-CONTROLLED STIMULATION OF THE POSTERIOR OUTER AUDITORY CANAL**


Thomas t Kraus, M.D. Reschenbergstraße 20

*D-91238 Engelthal/Nuremberg, EngelthalGermany (west) 91238, Thomas Kraus M.D., Olga Kiess, Anja Schanze (, Clemens Forster M.D., Johannes Kornhuber Ph.D., M.D., Katharina Hösl*


**EDUCATIONAL OBJECTIVE:**

This presentation shows latest research results within the field of transcutaneous vagus nerve stimulation (t-VNS).
Keeping the fact in mind that general mechanisms that mediate beneficial effects of vagus
nerve stimulation as a medial treatment modality are still obscure, this neuroimaging study suggests a t-VNS mediated gateway to limbic parts of the central nervous system
via specific brain stem nuclei. Therefore, participants are encouraged to critically evaluate a novel method of cranial nerve stimulation that shows promise for a privileged place in the management of resistant depression. Moreover, this novel non-invasive method will be discussed in respect of feasibility as well as socio-economic implications.

**SUMMARY:**


Introduction:
Electrical stimulation of sensory afferences within the outer auditory canal has recently been shown to facilitate a transcutaneous way of vagus nerve stimulation going along with mood elevating effects and improved general well-being. However, stimulation parameters as well as the optimal anatomical localization for the electrical stimulus remain to be elucidated.
In the present study we investigated BOLD fMRI effects in response to transcutaneous electrical stimulation of vagal afferences specifically on the posterior wall of the outer auditory canal.
Methodology:
Eight healthy subjects were stimulated with an electrode (silver plate, 5 mm in diameter) on the posterior wall of the outer auditory canal.
Electrical stimulation of the corresponding ear lobe – that is generally known to be spared of cutaneous vagal innervation - served as a sham control.
Imaging was performed using a 1.5T Siemens Sonata MRI Scanner. Functional data were collected using a multi slice echo planar imaging technique (EPI).
Results:
During acute t-VNS there was a prominent decrease of the BOLD signal in limbic and temporal brain areas, especially the bilateral uncus, the superior frontal and temporal gyrus
An increase of the BOLD signal was detected in the insula and precentral gyrus, as well as the nuclei of the solitary tract.
Discussion:
The marked deactivation of limbic and temporal brain areas evoked by t-VNS could possibly offer a novel therapeutic option by suppression of pathologic neuronal hyperactivity that is- to current knowledge- a common feature in affective disorders. Activation of the solitary tract –that is regarded to be a key relay station of vagal neurotransmission – shows promise for a specific novel method of cranial nerve stimulation.


**REFERENCES:**


1. Kraus T, Hosl K, Kiess O, Schanze A, Kornhuber J, Forster C. BOLD fMRI deactivation of limbic and temporal brain structures and mood enhancing effect by transcutaneous vagus nerve stimulation. J Neural Transm 2007; 114(11):1485-1493.
2. Fallgatter AJ, Neuhauser B, Herrmann MJ, Ehlis AC, Wa gener A, Scheuerpflug P et al. Far field potentials from the brain stem after transcutaneous vagus nerve stimulation. J Neural Transm 2003; 110(12):1437-1443.
3. Ventureyra EC. Transcutaneous vagus nerve stimulation for partial onset seizure therapy. A new concept. Childs Nerv Syst 2000; 16(2):101-102.


**NR7-087**

**NARRATIVES CHANGES IN THE EXPERIENCE OF CHRONIC PAIN AFTER PSYCHIATRIC TREATMENT: A QUALITATIVE ANALYSIS**


*Ángela Palao, Hospital la Paz.Pº de la Castellana 261. Psiquiatría, Madrid Spain 28035, Guillermo Benito Ruiz, José Enrique Benítez, Mari Fe Bravo Ortiz, Beatriz Rodríguez Vega, Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant will have a overview of qualitative analysis. It also shows how subjective experience of pain changes with the treatment

**SUMMARY:**


The interrelation between depression and pain experience is bidirectional, many data support the idea that a depressive affect boosts the experience of pain. Over a 12% of the European population suffers some kind of chronic pain. A 20% of them develops a depressive disorder. Studies do not show which disease beguins first. Objectives: Identify the changes in the narrative of pain experience that are associated with a better quality of pain after a psychotherapy and antidepressant treatment Method: Qualitative analysis of focal discussion groups of patients with chronic pain. Groups of over ten patients are aimed to talk about their pain experience and it's affective implications. Every patient is under psychotherapy and psychopharmacological treatment for their pain (and affective disorder if needed). What groups say is transcribed and analyzed

by a team of researchers (psychiatrists and psychologists). Atlas-Ti software is used to assist the analysis of the transcriptions, all the process is based on grounded theory methodology. Results: An evolution of the personal narrative of patients about their pain is observed. Psychotherapy and antidepressants seem to promote changes in the way that patients experience pain. While we did not find significative changes in the punctuation of EVA pain scale, we observe a change in the way the patients talk about pain and cope with it. It is this change in the subjectivity of the experience that it is in the core of a better quality of life for the patients.

**REFERENCES:**


1. Survey of chronic pain in Europe: Prevalence, impact on dai ly life, and treatment Harald Breivik a, Beverly Collett, Vittorio Ventafridda, Rob Cohen, Derek Gallacher European Journal of Pain 10 (2006) 287–333.
2. Effect of improving Depression care on pain and functional outcomes among older adults with arthritis. Elizhabet H.B. Lin, Wayne Keaton, Michael Von Korff et al. JAMA, Vol 290, No 18.


**NR7-088**

## PAINFUL PHYSICAL SYMPTOMS IN DEPRESSION: 4 WEEKS DIARY DATA ON DULOXETINE TREATMENT


*Edith Schneider, M.D. Lilly Deutschland GmbHMedical DepartmentSaalburgstrasse 153 61350 Bad Homburg Germany, , Deborah Quail, Martina Grigat, Hans-Peter Hundemer, M.D., Ulrich Heger, M.D., Michael Linden, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be aware that in a clinical practice population with depression, painful physical symptoms are common and of clinical relevance. Adequate treatment of depression should consider both, the emotional and painful physical symptoms.

**SUMMARY:**


Introduction: In an analysis of the 4-week data of the German PADRE observational study, physical and emotional symptoms of depressed patients treated with duloxetine (DLX) were evaluated. Methods: Multicenter, prospective, 6-month observational study in adult outpatients with a depressive episode. Severity of depression was assessed by 'Inventory for Depressive Symptomatology' (IDS-C), and patient diaries using visual analog scales (VAS) for emotional and painful physical symptoms (PPS) were used. Correlations were based on Spearman's correlation coefficient. Results: 4,500 patients, mean age 52.2 yrs (range 18-95), 71.7% female, were evaluated at baseline (BL). 59.6% were pretreated, and most common reason for starting DLX was inadequate effectivity of pretreatment. Mean (?SD) IDS-C total score was 39 (?12.4). Relevant pain symptoms were reported in 87.8% of the patients. 80.1%, of patients documented >30mm on the VAS 'overall pain' at BL. During the first 4 weeks of treatment (N=3,950), pain and emotional symptoms decreased considerably based on patient diaries. A clinically relevant pain reduction of =30% and = 50% was reported by 52.8% and 39.0% of the patients, respectively. Mean VAS 'overall pain' decrease at the 4 week clinic visit was -16mm (?24.5) for all patients. Patients with BL pain severity >30mm showed strong improvements: females ( 21mm, ?23.4), males (-20mm, ?22.8). Single pain symptoms improving most were back and joint pain. Mean change of VAS 'mood' at week 4 was 20mm (?27.3). Improvement was independent of BL pain severity and gender. Correlation between VAS 'mood' and VAS 'overall pain' increased over time in the diary Day 1 r=-0.231 (95% CI: -0.264 to -0.197) , day 28 r=-0.478 (-0.509 to -0.447). Conclusion: PPS in depression are common and of clinical relevance. A broad population of depressed patients recorded relevant improvement of PPS and emotional symptoms after 4 wks treatment with DLX in clinical practice.


**REFERENCES:**


1. Bair MJ, Robinson RL, Katon W, Kronke K: Depression and pain comorbidity - A literature review. Arch Intern Med 2003; 163:2433-2445.
2. Perahia D GS, Pritchett YL, Desaiah D, Raskin J: Efficacy of duloxetine in painful symptoms: an analgesic or antidepres sant effect? Int Clin Psych Pharm 2006; Vol 21, No 6:311-317.


**NR7-089**

## AN OPEN-LABEL STUDY OF TRAZODONE IN THE TREATMENT OF FIBROMYALGIA


*Fernando Rico-Villademoros, M.D. Ferraz 13, 1º-7, Madrid-Spain 28008, Elena P. Calandre, M.D., Carmen Mª Rodriguez-Lopez, M.D., Piedad Morillas-Arques, M.D., Juan M. Garcia-Leiva, M.D., Rocío Molina-Barea, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to learn about fibromyalgia and its management.

**SUMMARY:**


Background: Trazodone is a sedative antidepressant recommended for the treatment of sleep disturbances in patients with fibromyalgia. However, there are no full published studies evaluating trazodone's effects in this population. Methods: This unicenter, open-label study, conducted on 27 outpatients, 18 years or older, meeting the ACR criteria for fibromyalgia, aimed to assess the efficacy and tolerability of trazodone. After a 4 weeks wash-out period, trazodone, flexibly dosed (25-250 mg/d), was administered for 12 weeks. The primary outcome measure was the mean change from baseline to endpoint in the Fibromyalgia Impact Questionnaire (FIQ) total score. Secondary efficacy measures included mean changes from baseline to endpoint in the scores of the Brief Pain Inventory (BPI), Pittsburgh Sleep Quality Index (PSQI), Hospital Anxiety Depression Scale (HADS), and the Beck Depression Inventory (BDI). Results: patients had a mean age of 49 +/- 10 and 96.3% were females. Mean final dose of trazodone was 150 mg/d (range 75-250). Ten (37%) withdrew from the study, 6 (22.2%) due to adverse effects. Twenty-one (77.8%) patients had a post-baseline evaluation (ITT efficacy sample). Mean FIQ total score (0-80) decreased significantly at the study endpoint (63.1 +/-10.0 vs 55.5 +/- 13.5, p<0.01). A statistically significant reduction was also observed in PSQI score (15.5 +/- 3.4 vs 10.6 +/- 3.8, P<0.001). In contrast, no improvement was observed in the BPI average pain score. Other significant improvements included stiffness, depression and BPI interference measures. Most frequent side effects were palpitations (14.8%), somnolence (11.1%) and dry mouth (11.1%). Conclusions:

Our results appear to support the recommendation of using trazodone as a sedative for patients with fibromyalgia. Its positive impact on fibromyalgia symptomatology appears to extend beyond the sleep disturbance to other symptoms such as stiffness, depression and the interference of pain with daily activities.

**REFERENCES:**


1. Buckhardt CS, Goldenberg D, Crofford L, Gerwin R, Gowens S, Jackson K, Kugel P, McCarberg W, Rudin N, Schanberg L, Taylor AG, Taylor J, Turk D. Guideline for the manage ment of fibromyalgia syndrome pain in adults and children. Glenview (IL): American Pain Society (APS); 2005. Gold enberg, L., Burckhardt, C. and Crofford, L. Management of fibromyalgia syndrome. JAMA 2004, 292(19): 2388-2395.


**NR7-090**

## EFFECT OF PREGABALIN ON PAIN, ANXIETY AND DEPRESSIVE SYMPTOMS IN PATIENTS WITH FIBROMYALGIA


*Lesley M Arnold, M.D. 222 Piedmont Avenue, Suite 8200, Cincinatti, OH 45219, Lynne Pauer, M.S., Ed Whalen, Ph.D., Jeannette Barrett, Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize that pregabalin is effective for improving anxiety and depression in addition to pain symptoms in patients with fibromyalgia.

**SUMMARY:**


Objective: Explore the relationship between pregabalin's effect on symptoms of pain, anxiety and depression in patients with chronic pain from fibromyalgia.

Design/Methods: Patients meeting ACR criteria for FM for >=3 months and who had pain VAS score >=40 mm were treated for 8-14 weeks in 3 randomized, double-blind, placebo-controlled trials. A total of 2025 patients received either 150, 300, 450 or 600 mg/d pregabalin or placebo after a 1 week baseline phase. The primary efficacy parameter was change in Endpoint Mean Pain Score (MPS). Changes from Baseline to Endpoint in anxiety and depression levels were assessed using the Hospital Anxiety and Depression Scales (HADS-A and HADS-D). Estimate mean changes in HADS-A and HADS-D were examined using ANCOVA. Pearson correlations were used to explore associations between changes in pain, HADS-A and HADS-D.

Results: Pregabalin doses of 300, 450, and 600 mg/d showed statistically significant improvements in pain compared with placebo ($p<0.0001$). Pregabalin 450 and 600 mg/d showed statistically significant improvements in HADS-A compared with placebo ($p<0.01$). Results were mixed for HADS-D. Correlations, by treatment, between changes in pain and HADS-A/HADS-D were as follows: 0.44/0.48 (150 mg/d), 0.29/0.37 (300 mg/d), 0.26/0.34 (450 mg/d), and 0.27/0.31 (600 mg/d). Adverse events were consistent with known side effects of pregabalin; dizziness and somnolence were the most frequently reported AEs for patients who received pregabalin. There were no pregabalin-related serious AEs or deaths.

Conclusions/Relevance: Pregabalin treatment at 300, 450 and 600 mg/d resulted in significant reductions in pain from fibromyalgia. The changes in pain score correlated with changes in anxiety scores as measured by HADS-A. The correlation of pain effects with changes in depressive symptoms were less consistent.


**REFERENCES:**


1. Arnold LM, Crofford LJ, Martin SA, et al: The Effect of Anxiety and Depression on Improvement in Pain in a Randomized, Controlled Trial of Pregabalin for Treatment of Fibromyalgia. Pain Medicine 2007; 8(8):632-638.
2. Goldenberg DL, Burckhardt C, Crofford L: Management of Fibromyalgia Syndrome. JAMA 2004; 292:2388-2395


**NR7-091**

## EFFICACY OF MILNACIPRAN IN THE TREATMENT OF THE FIBROMYALGIA SYNDROME AMONG PATIENTS WITH VARYING DEGREES OF DEPRESSED MOOD


*R. Michael Gendreau, M.D. 4350 Executive Drive, Suite 325, San Diego, CA 92121, Daniel J. Clauw, M.D., Robert H. Palmer, M.D., Kim Thacker, M.D., Olivier Vitton, M.D., Philip Mease, M.D., Ian D'Souza, Ph.D. (presenting)*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to identify key symptoms of the fibromyalgia syndrome (FMS), understand the clinical relevance of composite response analyses, and recognize the role of milnacipran in the treatment of FMS in patients with or without depressive symptomatology at baseline.

**SUMMARY:**


Introduction: Fibromyalgia syndrome (FMS) comprises a constellation of symptoms that include widespread pain and fatigue and is often associated with comorbid depressive episodes. Independent analgesic effects of milnacipran, a dual NE and 5-HT reuptake inhibitor, have been supported by preclinical and clinical studies.

Methods: This was a 6-month DB trial with a pre-defined 3-month primary endpoint. 888 patients with FMS were randomized to placebo (n=223) or milnacipran 100 (n=224) or 200 mg/d (n=441). Pursuant to revised FDA guidelines for the approval of FMS therapies, the primary endpoint consisted of 2 composite responder analyses based on the following criteria: 1) Composite Pain Responders – patients having >=30% improvement in pain and a rating of "very much improved" or "much improved" on the Patient Global Impression of Change (PGIC) 2) Composite Syndrome Responders – patients meeting the above pain and PGIC criteria, and a >=6-point improvement on the SF-36 Physical Component Summary score. Subset analyses based on baseline Beck Depression Inventory (BDI) scores were also performed.

Results: Both doses of milnacipran were statistically significant on the syndrome composite analysis at 3 months (100 mg/d, P=.028; 200 mg/d, P=.017). For the pain analysis, milnacipran 200 mg/d was significant at 3 months (P=.032) and 6 months (P=.034). Among 3 month completers, PGIC response rates were significantly higher with both doses of milnacipran than placebo (100 mg/d: 53% vs 37%, P=.007; 200 mg/d: 55% vs 37%, P<.001). When PGIC responder rates were analyzed by baseline BDI score groupings of 0-9 (n=305), 10-18 (n=349), and >=19 (n=234), milnacipran demonstrated efficacy in all BDI subgroups. Commonly reported AEs were nausea, headache,

and constipation.
Conclusions: Milnacipran is safe and effective in treating the multidimensional symptoms of FMS in patients with or without baseline depressive symptomatology. Funded by Forest Laboratories and Cypress Bioscience

**REFERENCES:**


1. Clauw DJ: Fibromyalgia: update on mechanisms and manage ment. J Clin Rheumatol 2007; 13:102-109.
2. Gendreau RM, Thorn MD, Gendreau JF, Kranzler JD, Ribeiro S, Gracely RH, Williams DA, Mease PJ, McLean SA, Clauw DJ: Efficacy of Milnacipran in Patients with Fibromyalgia. J Rheumatol 2005; 32:1975-1985.


**NR7-092**

## ARIPIPRAZOLE AUGMENTATION VS STANDARD ANTIDEPRESSANT THERAPY: A POOLED SUICIDALITY ANALYSIS (CN138-139 AND CN138-163)


*Andrei Pikalov, M.D. Otsuka America Pharmaceutical Inc.2440 Research Boulevar, Rockville, ME 20850, Richard H. Weisler, M.D., René Swanink, M.S., Robert D. McQuade, Ph.D., Ying Qi, Ph.D., Berit X. Carlson Ph.D., Rolando Gutierrez-Esteinou, M.D., Ronald N. Marcus, M.D., Robert M. Berman, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to understand the clinical impact of aripiprazole augmentation on suicidality in patients with major depression with an inadequate response to standard antidepressant therapy.

**SUMMARY:**


Objective: To assess the clinical impact of adjunctive aripiprazole versus adjunctive placebo on suicidality using pooled data from two, 6-week, double-blind, randomized trials in patients with major depressive disorder. Methods: Data from two identical studies of aripiprazole augmentation, consisting of an 8-week prospective antidepressant treatment (ADT) phase and a 6-week randomized controlled trial phase were pooled to evaluate efficacy in patients with major depression without psychotic features. Patients with an inadequate response (<50% reduction HAM-D17 Total, HAM-D 17 =>14 and CGI-I =>3 at the end of the ADT phase) were randomized to adjunctive placebo or adjunctive aripiprazole (2-20 mg/day) for 6 weeks. Adverse events (AE) related to suicidality were identified in the AE database by using the text term MedDRA preferred term. Treatment-emergent suicidal ideation was defined on outcome scales using item 10 (suicidality) of the Montgomery-Asberg Depression Rating Scale (MADRS) or item 18 (suicidality) of the Inventory of Depressive Symptomatology (IDS). Results: There were 737 patients in the safety database; aripiprazole (n=371); placebo (n=366). There were no suicides in these two trials. There were no treatment-emergent, suicide-related AEs in the aripiprazole group; two patients in the placebo group had =>1 AE related to suicide. The IDS-SR item 18 scores showed a low incidence of suicidal ideation, 0.3% in the aripiprazole group and 0.6% in the placebo group (p=0.616, Fisher's Exact test). Adjunctive aripiprazole significantly improved MADRS suicidality line item at all time points from Week 2 onwards as compared to adjunctive placebo (p< 0.001). Conclusion: The current analysis demonstrated that treatment-emergent suicidality was low and there was no evidence that the use of adjunctive aripiprazole in a depressed population is associated with an increased rate of suicidal ideation. Supported by Bristol-Myers Squibb and Otsuka.


**REFERENCES:**


1. Berman RM, Marcus RN, Swanink R, et al: The Efficacy and Safety of Aripiprazole as Adjunctive Therapy in Major Depressive Disorder: A Multicenter, Randomized, Double-blind, Placebo-controlled Study. J Clin Psych 2007;68:843-853.
2. Gibbons RD, Brown CH, Hur K, et al: Relationship Be tween Antidepressants and Suicide Attempts: An Analysis of the Veterans Health Administration Data Sets. Am J Psych 2007;164:1044-1049.


**NR7-093**

## SYSTEMS REDESIGN TO A MENTAL HEALTH CLINIC AT A TERTIARY CARE VETERANS AFFAIRS MEDICAL CENTER


*Antony Fernandez, M.D. McGuire VAMC (116A),1201 Broad Rrock Blvd.,, Richmond,VA 23249, Cheryl W. Jones, M.D., Ama Arthur, M.D., Antony Fernandez, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand the application of Systems Redesign principles towards: 1) providing access by balancing supply and demand; and 2) improving patient satisfaction.

**SUMMARY:**


Background: Systems Redesign is a patient-centered, scientifically-based set principles and tools that enable staff to examine their health care processes and redesign them with the goal to provide improved access, patient, staff and provider satisfaction, improved quality, efficiency, and decreased cost. Methods: Systems redesign principles were utilized as follows: 1) Provided same day access for crisis intervention and new patient evaluation via creation of Urgent Care Clinic and Intake Clinics; 2) Improved efficiency by eliminating under-utilized clinics; 3) Implemented strategies that reduced external demand for management of uncomplicated first episode; 4) depression/ anxiety; and 5) Revised consult template, Results: The MHSL team redesigned the system of consultation and delivery from the top down. Physician workload was reduced while providing same day Access through the creation of the Urgent Care clinic and Intake Clinics. Patients scheduled in Urgent Care and Intake clinics are evaluated by a multi-disciplinary team reducing individual physician workload while increasing access. The reduction of clinic types by 25% reflected a more accurate representation of the supply of available provider slots for access. The external demand for consultations was directed toward refractory psychiatric problems. The revision of the consultation template was instrumental in streamlining the process of referral to the Service line. It is an accurate reflection of services available. Feed back has generally been positive. Overall patient satisfaction is improved. Of 472 responses 80% of the respondents rated the service delivery as very good to excellent. Conclusion:
Our systems-based interdisciplinary model emphasizes liaison and collaboration with other services to provide holistic care to the veterans making movement between services as seamless as possible by breaking down barriers to access and balcnace supply and demand wherever possible.

**REFERENCES:**
1. von Bertalanffy, L. (1968). General systems theory: Founda tions, development, applications. New York: Braziller.
2. Schall M, Duffy T, Krishnamurthy A, et al. Improving patient access to the Veterans Health Administration's primary care and specialty clinics. Jt Comm J Qual Saf 2004;30:415–23.

**NR7-094**

## TRANSFORMING A STATE HOSPITAL: STAFF ATTITUDES AND PERCEPTIONS DURING A PERIOD OF CHANGE

*David I Mayerhoff, M.D. Greystone Park Psychiatric Hospital 50 Ellis Drive, Greystone Park, NJ 07950, Steven J. Schleifer, M.D., Russel Smith, M.S., LCPC, Jeffry R. Nurenberg, M.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to better understand the effects of change and strain in long term hospital units on staff attitudes and perceptions and how such effects may affect patient care and staff retention.

**SUMMARY:**
To facilitate discharge from a State Hospital, a 20 patient unit was established in 2003 focusing on "difficult to discharge" long term patients. The unit increasingly utilized wellness/ recovery principles and involved a State-University affiliation. Transforming a traditional hospital unit can challenge long-established systems of extended patient care and we had the opportunity to monitor the course of change. The unit underwent a period of strain in early 2007 when, partly in anticipation of moving to a new facility, dramatic increases occurred in both patient discharges and staff turnover. The strain on the unit, which was evident to administrative staff, appeared to normalize later in the year. Using measures collected periodically, we assessed, retrospectively, whether the overt change in milieu was reflected in ongoing measures of staff attitudes and perceptions. METHODS: Staff had completed the Psychiatric Rehabilitation Attitudinal Survey (PsyR), a measure of attitudes concerning psychiatric rehabilitation, wellness and recovery, the Moos S Ward Atmosphere Scale, and the Greystone Intrusiveness Measure (GIM), an indicator of staff perceptions of patient intrusiveness. Scores in mid-2007 were compared with the preceding measure in 2006 and, for PsyR and GIM, with measures in November, 2007 (ANOVA). RESULTS: PsyR decreased from March, 2006 to June, 2007 ($p<0.05$) as did MOOS items such as staff encouragement of patient independence ($p<0.02$). PsyR increased in November, 2007 ($p<0.02$), becoming indistinguishable from the 2006 score. GIM showed a corresponding pattern, albeit not reaching statistical significance, increasing transiently in mid-2007. DISCUSSION: Adverse changes in several dimensions of staff attitudes and perceptions coincided with the temporary disruption in unit stability. During periods of change, monitoring attitudes and perceptions may help identify staff in need of support as well as interventions to maintain wellness orientation.

**REFERENCES:**
1. Birkmann, J.C., Sperduto, J., Smith R.C., Gill, K.J. A Collab orative Rehabilitation Approach to the Improvement of Inpatient Treatment for Persons with a Psychiatric Disability. Psychiatric Rehabilitation Journal,2006: 29:157-165.
2. Talbott, JA, & Robinowitz, CB: Working together: State-Uni versity collaboration in mental health. Washington,DC, American Psychiatric Press, Inc.,1986.

**NR7-095**

## EVALUATION OF EARLY OUTCOME OF DISCHARGE AGAINST MEDICAL ADVICE FROM A GENERAL PSYCHIATRIC SERVICE IN TURKEY.

*Omer Saatcioglu, M.D. Atakoy, 9.Kisim, A5-ABlok, D:61, Istanbul, Turkey 34750, Zeynep Ugur, M.D., Mehmet Guduk, M.D., Muzaffer Kasar, M.D., Rahsan Erim, M.D., Medaim Yanik, M.D.*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this session, the participant should be able to evaluate changes in most frequent psychiatric diagnoses from admission to discharge against medical advice at voluntary hospitalization.

**SUMMARY:**
Introduction: Little is known about the outcome of brief inpatient treatment interventions and discharge against medical advice (AMA)in routine psychiatric practice. In this sudy, we aimed to investigate the duration of hospital stay, demographics, and diagnostic features of the female psychiatric inpatients with discharges against medical advice in a general psychiatric service. Methods: A total of 160 admitted female patients were evaluated retrospectively according to medical records between January 2006 and December 2006. The patients were divided into two groups regarding admission in the hospital as involuntarily and voluntarily. These two groups were compared and contrasted by means of sociodemographic features, additional physical disorders, psychological trauma history, diagnosis of psychiatric disorder at admission and discharge. Results: The mean age of the whole group was 33.91±10.48 (20–64). The mean duration of hospital stay of the whole group was 7.92±9.26 hours. Changes in most frequent psychiatric diagnoses from admission to discharge were found as unipolar depression in 78 patients (49%) to unspecified mental disorder in 71 (44.4%). The two groups were similar regarding their distrubution of age, educational, marital and social security status. Chi square analysis revealed a significant difference between the groups in admission diagnoses ($x2=18.27$, $df=4$, $p<.001$), but no significant difference was observed in discharge diagnoses ($x2=8.77$, $df=4$, $p>.05$). Conclusion: In this study we found that sociodemographic features, some characteristics and psychiatric diagnosis did not effect voluntarily admission in discharges against medical advice. The literature on AMA discharges from psychiatric inpatient units has suffered from small sample sizes and lack of a categorical diagnostic classification system. Outpatient clinic and community support systems should be established to provide continuing treatment for these patients in our country.

**REFERENCES:**
1. Pages KP, Russo JE, Wingerson DK, Ries RK, Roy-Byrne PP, Cowley DS: Predictors and Outcome of Discharge Against Medical Advice From the Psychiatric Units of a Gen eral Hospital. Psychiatric Serv 1998; 49:1187-1192.
2. Wallsten T, Kjellin L, Lindström L: Short-term outcome of inpatient psychiatric care-impact of coercion and treatment characteristics. Soc Psychiatry Psychiatr Epidemiol;

2006:975-980.

**NR7-096**

**VISION (VIRTUAL INTERVIEWS FOR STUDENTS INTERACTING ONLINE) EVALUATION OF ONLINE SIMULATIONS TO TEACH PSYCHIATRIC INTERVIEW SKILLS**

*Brian Fitzmaurice, Department of Psychiatry, Trinity College Dublin,Trinity Centre for Health Sciences, St James's Hospital, Dublin, Ireland, Michael Gill, M.D., M.R.C.Psych., Katie Armstrong, M.Sc., Cathy Rogers, M.B., M.R.C.Psych, Declan Dagger, Ph.D., Vincent Wade, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this Poster delegates should have; 1) understanding use of Information Technology in Teaching Communication Skills in Psychiatry; and 2. Examination of educational theory supporting use of simulations in learning Interview Skills

**SUMMARY:**

Introduction: Using actors as Simulated Patients is an established method of Teaching Communication skills but is labor intensive and one-off in nature.

The creation of interactive tools using video and other electronic materials has been advocated as the logical progression in teaching clinical skills in Psychiatry (Vasillas, 2000). Online simulations might bring greater efficiency to teaching these vital skills by creating realistic learning environments that are more accessible and that can be re-used. We have locally developed a set of simulations (VISIOn) focusing on Depression, Mania, and Schizophrenia (Fitzmaurice et al, 2007).

Aim: To test the validity of using these video based online simulations to teach communication skills to undergraduate students of psychiatry. Method: Qualitative study of undergraduate Medical Students using Questionnaire Survey and Focus Group.

Results: 18 students participated. 86% found the instructional material useful and appropriate, 76% of students thought it a valid method of teaching, 65% felt it highlighted the different learning objectives and skills needed for interviews in Psychiatry. They commented that it gave a sense of the structured nature of an interview and that they got to see the implications of different lines of questioning. They described having a better idea of how to approach questions and areas that are particularly sensitive and that it made them more aware of phrasing appropriate questions.Conclusion: The use of online simulations is a valid and potentially cost-efficient method for teaching communication skills in Psychiatry to undergraduate students. Financial support:VISIOn for Psychiatry (Research, Development and Travel Expenses) – supported by unrestricted educational grants from AstraZeneca, Janssen-Cilag, Pfizer, and Enterprise Ireland.

**REFERENCES:**

1. Fitzmaurice, B, Armstrong, K, Carroll, V, Gill, M. VISIOn (Virtual Interviews for Students Interacting Online) for Psychiatry – a novel way of learning clinical skills. Psychiat ric Bulletin Jun 2007; 31: 218 – 220
2. Chris Vassilas and Luk Ho, Video for teaching purposes Ad van. Psychiatr. Treat., Jul 2000; 6: 304 - 311.

**NR7-097**

**ENHANCING THE QUALITY OF SUPERVISION IN PSYCHIATRIC RESIDENCY TRAINING: DEVELOPMENT OF A SPECIFIC QUESTIONNAIRE: RASQ.**

*Jaap J Kool, M.D. Hazelaarlaan 2, Oss Netherlands 5342 HL, Toine den Hollander, M.D., Anja Laan, Psy, Albert Scherpbier, Ph.D.*

**EDUCATIONAL OBJECTIVE:**

After having studied this poster and discussed with the presenter the psychiatrist/clinical supervisor will be encouraged to ask his residents to structurally evaluate his supervisory activities. The residents will be eager to give structured feedback to their clinical supervisors.

**SUMMARY:**

Introduction: Supervision is an important issue in the training of residents in psychiatry. To improve their quality supervisors need feedback from residents. In the literature no accurate questionnaires to deal specifically with this issue in psychiatry training were found.

Some studies report on satisfaction of psychiatric residents with their clinical supervision but do not address the matter from the perspective of psychiatric training. Other studies assume that clinical supervision in other educational situations can be used in psychiatry training as well.

Method: We developed a 40 questions simple questionnaire for residents. Residents scored their opinion on their clinical supervisor on a 7-point Likert scale. We received 188 questionnaires from 28 residents in 4 training hospitals in the vicinity of 's-Hertogenbosch in The Netherlands.

Results: In our statistical analysis factor analyses leads to 6 components that can be reduced to 2 main components. We found a Crombach Alpha of 9,74.

Discussion: We will discuss the impact of this questionnaire and the meaning for residency training. One of the problems of this study was our commitment to privacy of residents and psychiatrist in nearby hospitals. We will launch a larger scale study with this promising questionnaire, comparing psychiatry with other medical and psychological training programs.

**REFERENCES:**

1. Killminster,S.M., Jolly,B.C., Effective supervision in clinical practice settings,: a literature review. Medical Education, 2000, 34, 827-840.
2. Lehrman-Waterman,D.,Ladany,N. Development and valida tion of the Evaluation Process Within Supervision Inventory. Journal of Counseling, 2001, 48,2,168-177.

**NR7-098**

**FOCUS SUB-REGISTRY: PRELIMINARY RESULTS OF CLOZAPINE ORALLY DISINTEGRATING TABLETS ON REDUCED SIALORRHEA IN PATIENTS WITH SCHIZOPHRENIA**

*Jason Kellogg, M.D. 1501 E. 16th Street, Newport Beach,CA 92663, Jason Kellogg, M.D., Ramesh Gihwala, M.D., Gil Golden, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this presentation, the participant should be able to define potential differences in treatment–related

sialorrhea between different formulations of clozapine. This information should assist the clinician in the decision-making process when considering clozapine for patients with treatment-refractory schizophrenia.

**SUMMARY:**
Introduction: Hypersalivation is a frequent, troubling adverse event associated with atypical antipsychotics. A retrospective study reported decreased sialorrhea after patients were switched from standard oral clozapine to a newer clozapine formulation, FazaClo® Orally Disintegrating Tablets (FODT). Preliminary data from the FOCUS sub-registry evaluating the effect of FODT on salivation are presented here. Methods: 261 patients who failed on other atypical antipsychotics or were switched from standard clozapine to FODT entered the registry (baseline) and 174 (67%) completed 12 Weeks of FODT treatment. All patients were evaluated under naturalistic conditions for ?12 weeks. Salivation (0=normal; 1=mild sialorrhea; 2=moderate sialorrhea; 3=marked sialorrhea; 4=marked drooling) was assessed at baseline (prior to FODT treatment initiation) and Weeks 4, 8, and 12.
Results: The percentage of patients with a baseline salivation score of 0 or 1 improved over time (55% at baseline to 68% at Week 4, 74% at Week 8, and 83% at Week 12; p<.001). The percentage of patients with a baseline salivation score of 2–4 decreased over time from 46% at baseline to 32%, 26%, and 17% at Weeks 4, 8, and 12, respectively (p<.001). Thirty-three percent, 41%, and 51% of patients demonstrated a 2-level improvement from baseline or normal salivation (level 0) at Weeks 4, 8, and 12, respectively (p<.001). When patients were analyzed by dose categories, a 2-level improvement from baseline or normal salivation was observed in 39%, 43%, and 65% of patients receiving <300 mg/day at Weeks 4, 8, and 12, respectively, P =.006. A 2-level improvement from baseline or normal salivation was observed in 32%, 47%, and 51% of patients receiving 300-600 mg/day (p=.003) and 15%, 17%, and 26% of patients receiving >600 mg/day (p=NS) at Weeks 4, 8, and 12, respectively. Conclusions: Results from the FOCUS registry suggest that FODT may decrease sialorrhea in patients with treatment-refractory schizophrenia.

**REFERENCES:**

1. Reinstein MJ, Sonnenberg JG, Mohan SC, Jones LE, Girard S. Difference in weight change and hypersalivation between FazaClo® (clozapine, USP) orally disintegrating tablets and solid oral clozapine tablets. Poster presentation at: 159th Annual Meeting of the American Psychiatric Association; May 20–25, 2006; Toronto, Canada.
2. Davydov L, Botts SR. Clozapine-induced hypersalivation. Ann Pharmacother. 2000;34(5):662-665.

**NR7-099**

## FOCUS REGISTRY: PRELIMINARY RESULTS OF CLOZAPINE ORALLY DISINTEGRATING TABLETS ON SIALORRHEA, WEIGHT, AND OVERALL CLINICAL CONDITION IN SCHIZOPHRENIA

*Jason Kellogg, M.D. 1501 E. 16th Street, Newport Beach CA 92663, Ramesh Gihwala, M.D., Gil Golden, M.D., Ph.D, Azur Pharma, Exton, PA*

**EDUCATIONAL OBJECTIVE:**
At the conclusion of this presentation, the participant should be able to define potential differences in treatment–related adverse effects between different formulations of clozapine. This information should assist the clinician in the decision-making process when considering clozapine for patients with treatment-refractory schizophrenia.

**SUMMARY:**
FOCUS (FazaClo® Outcomes in the Control of Schizophrenia) sub-registry: Preliminary Results on Sialorrhea, Weight, and Overall Clinical Condition
Jason Kellogg, MD1; Ramesh Gihwala, MD2; Gil Golden, MD, PhD3; 1Newport Bay Hospital, Newport Beach, CA; 2Ramesh Gihwala and Associates, Gastonia, NC; 3Azur Pharma, Exton, PA
Introduction: Weight gain and sialorrhea are frequent adverse events associated with atypical antipsychotics. A retrospective study reported reduced weight and sialorrhea after patients switched from standard oral clozapine to newer clozapine formulation, FazaClo® Orally Disintegrating Tablets (FODT). Preliminary data from the FOCUS survey, a multicenter, prospective registry, evaluated the effect of FODT on weight, salivation, and overall condition in patients with treatment-refractory schizophrenia.
Methods: 261 patients entered the registry (baseline) and 174 (67%) completed 12 Weeks of FODT treatment. All patients failed on other atypicals or were switched from standard clozapine to FODT and were evaluated under naturalistic conditions ?12 weeks. Body weight, salivation (0=normal to 4=marked drooling), and Clinical Global Impression (CGI) scores for Severity of Illness (1=normal to 7=extremely ill) were assessed at baseline (prior to FODT treatment initiation) and Weeks 4, 8, and 12. CGI scores for Global Improvement (1=very much improved to 7=very much worse) were assessed at Weeks 4, 8, and 12. Results: The mean ?SD weight of patients was 212.4 ?46.9 lb at baseline and 212.6 ?47.4, 210.6 ?46.6, and 208.9 ?45.3 lb at Weeks 4, 8, and 12, respectively. The mean ?SD salivation score was 1.6 ?1.4 at baseline and 1.3 ?1.2, 1.1 ?1.1, and 0.9 ?1.0 at Weeks 4, 8, and 12 (p<.001 trend over visits), respectively. The mean CGI-Severity score decreased over time, from 4.6 ?1.2 at baseline to 4.0 ?1.4 at Week 12. The CGI-Improvement scores improved over time: 58% of patients were “minimally,” “much,” or “very much improved” at Week 4, 65% at Week

**REFERENCES:**

1. Reinstein MJ, Sonnenberg JG, Mohan SC, Jones LE, Girard S. Difference in weight change and hypersalivation between FazaClo® (clozapine, USP) orally disintegrating tablets and solid oral clozapine tablets. Poster presentation at: 159th Annual Meeting of the American Psychiatric Association; May 20–25, 2006; Toronto, Canada.
2. De Leon J, Diaz FJ, Josiassen RC, Cooper TB, Simpson GM. Weight gain during a double-blind multidosage clozapine study. J Clin Psychopharmacology. 2007 Feb;27(1):22-27.

**NR7-100**

## MINDFUL PRACTICE CURRICULUM FOR PSYCHIATRY RESIDENTS:EXPERIENCE AS PART OF A UNIVERSITY WIDE PROGRAM

*Tana A Grady-Weliky, M.D. University of Rochester Medical Center Department of Psychiatry 300 Crittenden Blvd., Box*

*PSYCH/Geri-Neuro, Rochester, NY 14642, Sue K. DiGiovanni, M.D., Anola Tanga, M.D., David Garrison, M.D., Christopher Mooney, M.S., and Ronald M. Epstein, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to; 1) define mindful practice and its role in the clinical care of patients; 2) list at least two components of mindfulness; and 3) identify at least two new educational methods for teaching mindful practice to psychiatric residents.

**SUMMARY:**

Mindful practice refers to our ability to be aware, in the moment, on purpose, with the goal of providing better care to patients and to take better care of ourselves. The University of Rochester School of Medicine and Dentistry developed a program designed to give medical students, residents and practicing physicians tools that will assist them in becoming more mindful during daily clinical practice. The explicit aim of the curriculum is to help participants develop self-awareness and self-care skills so that they can be attentive and present in clinical settings. Self-awareness is an essential element of communication, technical skill, professionalism, teamwork, and life-long learning. All of these attributes are included among the ACGME core competencies and are critical to training all residents, and perhaps, psychiatrists, in particular. Because of the importance of the development of these attributes in resident physicians, the general psychiatry residency program elected to have its residents participate in the university-wide program. General psychiatry residents from across the four years are required to attend the Mindful Practice curriculum sessions, which include the following topics: 1) Noticing and Attention; 2) Professionalism and Informal Curriculum; 3) How Doctors Think; 4)Physician Self-Care and Burnout; and 5) Dealing with Medical Errors. Several educational methods are used throughout the curriculum including: 1) Brief meditation exercises 2) written narratives; and 3)"Appreciative Inquiry" interviews. This poster will describe the details of the curriculum and include resident feedback about the course.

**REFERENCES:**

1. Epstein, RM: Mindful Practice. JAMA. 282: 833-839, 1999.
2. Epstein, RM: Mindful Practice in Action: Cultivating Habits of Mind. Families Systems and Health. 21: 11-17, 2003.

**NR7-101**

## CLINICAL SUPERVISOR AND PHARMACEUTICAL REPRESENTATIVE INFLUENCES ON PRESCRIBING HABITS OF PSYCHIATRY RESIDENTS

*Thomas L. Schwartz, M.D. 750 East Adams Street, SyracuseNY 13210, Adam C Tripp MD, Ph.D.,*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to; 1)Better understand the influence of the pharmaceutical industry and its impact on resident prescribing; and 2)Better understand the influence of attending supervision and its impact on resident prescribing

**SUMMARY:**

OBJECTIVE: This study investigates whether resident physicians prescribing habits show a correlation with pharmaceutical industry and/or their supervising attending psychiatrists' influences.

METHODS: Demographic data and pharmacotherapy data were collected for 100 random patient charts of psychiatric residents, and were then compared with 100 random patient charts of attending psychiatrists. Interactions with drug representatives were collected and quantified.

RESULTS: Analysis of brand name atypical antipsychotic and antidepressant prescriptions between residents and attendings correlated statistically, but no association with pharmaceutical industry sponsored lunches for residents was noted.

CONCLUSIONS: There seems to be a strong influence of resident medical management by their attending supervisors but less from pharmaceutical representative sales pressure and marketing.

**REFERENCES:**

1. Steinman MA, Shlipak MG, McPhee SJ: Of principles and pens: attitudes and practices of medicine housestaff toward pharmaceutical industry promotions. Am J Med 110:551-7, 2001
2. Watson PY, Khandelwal AK, Musial JL, et al.: Resident and faculty perceptions of conflict of interest in medical educa tion. J Gen Intern Med 20:357-9, 2005

**NR7-102**

## THE LONG-TERM OUTCOMES AND UNMET NEEDS OF A COHORT OF FORMER LONG-STAY PATIENTS IN MELBOURNE, AUSTRALIA

*Prem K Chopra, M.B.B.S St Vincent's Mental Health Service Melbourne PO Box 2900 Fitzroy Victoria 3065 Australia, Helen Herrman, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to: 1) recognize the challenges faced by former long-term institutionalized patients with psychotic disorders; 2) understand the needs of former long-stay patients with respect to rehabilitation services; and 3) recognize the need to incorporate patient perspectives in psychiatric rehabilitation service development.

**SUMMARY:**

BACKGROUND

Several longitudinal studies now confirm that schizophrenia has a variable long-term outcome. Few studies to date have assessed the long-term outcomes and unmet needs of this group of patients in the Australian setting. Community Care Units (CCUs) provide residential rehabilitation appropriate to the needs of this group. However the focus of CCUs has now changed and many former long-stay patients have been discharged to alternative accommodation.AIMTo examine the outcomes of the initial cohort of 18 patients with long-term psychotic disorders admitted to the CCU at St Vincent's Mental Health Service Melbourne.METHODSThe longitudinal outcomes of a cohort of 18 former long-stay patients with chronic psychotic disorders who were the original residents of the CCU, were assessed 7.5 years following their admission to the CCU using a combination of clinician assessments obtained from case records, and qualitative analysis of research interviews.RESULTSMembers of this cohort of former long-stay patients were found to suffer significant disability. Only one patient was able to achieve independent living in

the community. Although many patients demonstrated some improvement in their level of functioning and community integration with significant support, this was not maintained following their discharge from the CCU. There is a risk of "reinstitutionalization" within services that are not specifically designed for the care of patients with severely disabled patients. CONCLUSIONSThe following key unmet needs were identified: (1) Promotion of independence (2) Stability in accommodation (3) Stability in social networks (4) Consistency of care (5) Addressing the theme of loss. This study has relevance to other settings where the process of deinstitutionalization may be at different stages of development; whilst community mental health care is appropriate for the majority of patients, it is important to provide appropriate longer term care for more severely disabled patients. Mental health policy and service provision need to be informed by intervention studies using appropriate measures regarding the outcomes of people living with psychotic disorders in the community setting.

**REFERENCES:**


1. Harding, C.M., Course types in schizophrenia: an analysis of European and American studies. Schizophrenia Bulletin, 1988. 14: p. 633-643
2. Warner, R., Recovery from Schizophrenia: Psychiatry and Political Economy. 3rd ed. 2003, London: Brunner-Routledge


**NR7-103**

## THE IMPLICATION OF NOCICEPTIN IN ALTERATIONS OF CEREBRAL BLOOD FLOW REGULATION FOLLOWING POSTNATAL EXPOSURE TO ETHANOL IN RATS


*Cho D.Hwan, M.D. Maryknoll general hospital 5-12 Daechung-Dong Jung-Ku, Pusan, South Korea 600-094, KH Jin, M.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to know that nociceptin is deeply implicated in the compensatory mechanism for the nitric oxide-dependent alterations in cerebral blood flow autoregulation following postnatal exposure to ethanol.

**SUMMARY:**


This study aimed to investigate whether nociceptin is implicated in the alterations in cerebral blood flow regulation following postnatal exposure to ethanol in Sprague-Dawley rats. Animal received ethanol(2.5g/Kg, s.c.)twice a day, 2hour apart, on postnatal 6, 7 and 8 days. The change in mean arterial blood pressure werw determined at 4-, 8-, and 12-weeks of age by laser-doppler flowmetry. Hypotension was induced by the gradual withdrawal of blood from arterial catheter, and the reversal of blood pressure was produced by the reinfusion of blood. Expression of nociceptin-like immunoreactivity was determined in dura mater and cerebral cortex using immunohistochemistry. The results are as follows:
1. Postnatal exposure to ethanol almost abolished the autoregulation of regional cerebral blood flow in all age groups.
2. Pretreatment with nociceptin(0.138 ug/kg, i.p.), 5 minutes prior to ethanol administration preserved the autoregulation of regional cerebral blood flow in all age group.
3. Postnatal exposure to ethanol markedly increased the expression of nociceptin-like immunoreactivity in dure mater and cerebral cortex, which was significantly inhibited by pretreatment with 7-nitroindazole monosodium salt(7-NINA. 50mg/kg, i.p.) as well as aminoguanidine(1mg/kg, i.p.) 5 minutes prior to ethanol administration in all age groups.
4. The values of arterial blood gas analysis were not significantly different from the basal levels in all groups
These results suggest that nociceptin is deeply implicated in the compensatory mechanism for the nitric oxide-dependent alterations in cerebral blood flow autoregulation following postnatal exposure to ethanol.


**REFERENCES:**


1. Ikonomidou C, Bittigau P, Ishimaru MJ, Wozniak DF, Koch C, Genz K, Price MT, Stefovska V, Horster F, Tenkova T, Dikranian K, Olney JW. Ethanol-induced apoptotic neurode generation and fetal alcohol syndrome. Science 287:1056-1060, 2000
2. Nelson RM, Calo G, Guerrini R, Hainsworth AH, Green AR, Lambert DG. Nociceptin/orphanin FQ inhibits ischemia-in duced glutamate efflux from rat cerebrocortical slices. Neuro report 11:3689-3692, 2000


**NR7-104**

## PSQ19: A MEASURE TO EVALUATE THE SUBJECTIVE EXPERIENCE OF PSYCHIATRIC RESEARCH PARTICIPANTS.


*Kayla A Chase, B.A. University of Illinois at ChicagoPsychiatric Institute 1601 West Taylor, Chicago, Illinois, 60612, Cherise Rosen, Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand and explain the process by which to develop a measure within a multidisciplinary team to evaluate the subjective experience of psychiatric research participants.

**SUMMARY:**


Objective:To date, there are no standardized measures with established psychometric properties that explores patient satisfaction and research participation.The Patient Satisfaction Questionnaire (PSQ19) was designed to allow persons with mental illness an opportunity to provide their self-reported levels of satisfaction with clinical research. The objective of this study is to describe the measure and report findings.Method: The PSQ19 is a self-report instrument that was designed to be administered to patients upon discharge from a psychiatric research hospital.This questionnaire asks subjects to rate their satisfaction with their clinical care and research involvement. Response formats include categorical items, 5-point Likert ratings, and narratives.The PSQ provided an evaluation of the information and education patients received that focused on research, overall level of satisfaction, satisfaction compared to expectations, whether they would return or recommend others, and whether they would be willing to participate in future research.
Results:The PSQ was administered to 313 patients.Individuals who completed the research protocol were significantly more satisfied globally and more likely to express that treatment had been effective.Factors contributing to willingness to participate in future research included favorable perceptions of: a) psychoeducation,b) safety, andc) comfort level with research procedures.Research participants were willing to participate in future research regardless of their perception of medication

efficacy.
Conclusions:Few measures exist that assess the experience of research participation of persons with mental illness.Research incorporating the subjective experience of persons with mental illness is important in that it may facilitate the development of standardized criteria that will protect persons with mental illness, while not adding unnecessary obstacles and patients should have a voice in the process.

**REFERENCES:**


1. Glass A: (1995) Identifying issues important to patients on a hospital satisfaction questionnaire. Psychiatric Services 46:83-85.
2. Marshall RD, Spitzer RL, Vaughn SC, Vaughn R, Mellman L, MacKinnon R, Roose S: (2001) Assessing the subjective ex perience of being a participant in psychiatric research. Ameri can Journal of Psychiatry 158:312-321.


**NR7-105**

## A STUDY ON THE VALIDATION OF THE PERSONALITY ASSESSMENT INVENTORY IN PSYCHIATRIC CLINICAL SAMPLES


*Min-Cheol Park, M.D. Wonkwang Psych HospDongsan-Dong 144-23 Iksan, Chonbuk, 570-060 Korea, Sang-Woo Oh, Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognized the clinical validity of the Morey's Personality Assessment Inventory(PAI) in patients with schizophrenia and depression.

**SUMMARY:**


Objective: The present study was examined the clinical validity of the Morey's Personality Assessment Inventory(PAI) in patients with schizophrenia and depression.
Methods: Th patients with schizophrenia and depression were 85 each. The depression scale and schizophrenia scale of the PAI, job and marital status states in demographic variables were used as tools of assessment in this study. Materials are analysed statistically by t-test and binary logistic regression analysis.
Result: The results are as follows,
1) First model, probability to be discriminated patients with schizophrenia and depression by using depression scale of the PAI was 67.1%.
2) Second model, probability to be discriminated patients with schizophrenia and depression by using depression scale and schizophrenia scale of the PAI was 77.1%.
3) Third model, probability to be discriminated patients with schizophrenia and depression by using depression scale and schizophrenia scale of the PAI, job and married states in demographic variables was low.
Conclusion: Predictive variables to be discriminated patients with schizophrenia and depression were depression scale and schizophrenia scale of the PAI.



Keywords: Personality Assessment Inventory, Schizophrenia, Depression


**REFERENCES:**


1. Morey LC: The Personality Assessment Inventory. In Psycho logical Testing: Treatment Planning and Outcome Assess ment, 2nd ed, edited by Mauish M, Hillsdale, NJ: Erlbaum, 1999 Morey LC: The Personality Assessment Inventory Man ual. Odessa, FL: Psychological Assessment Resources, 1991


**NR7-106**

## A COMPARISON OF TEMPERAMENT AND EMPATHY WITH PATIENTS BETWEEN MEDICAL SCHOOL STUDENTS AND GRADUATE MEDICAL SCHOOL STUDENTS IN KOREA


*Byung-Kuk Lee, M.D. Heogi 1, Dong Dae Moon Gu, Seoul, Korea Kyung-Hee Medical Center, Dept. of Psychiatry., Seoul Korea 130-702, Geon-Ho Bahn, M.D., Jong-Woo Paik, M.D., Tae-Young Yoon, M.D. Ph.D., Won-Hae Lee, M.D.*


**EDUCATIONAL OBJECTIVE:**

This study identifies the need to investigate the difference between medical college (MC) students and Medical Professional Graduate School(MPGS) students in their attitude to patients and in their personal temperament.

**SUMMARY:**


Introduction
It has been three years since the new education curriculum of our medical school. Prior to this change, applicants were required to pass entrance exam for admission into medical school, subsequent to graduating from high school. Today, however, applicants, after graduating from high school, also have the option of graduating from a science college of their choice before they attend the medical professional graduate school (MPGS).
This study identifies the need to investigate the difference between medical college (MC) students and MPGS students in their attitude to patients and in their personal temperament.
MethodThis research uses data that has been collected by Kyung-Hee medical school for comparisons between the qualities of two groups of students. In order to carry out this research, we investigated demographic factors and carried out related tests (Jefferson scale of empathy, temperament and character inventory (TCI), and the Rosenberg Self Esteem scale) on MC students (N=195) and MPGS students (N=151).
ResultResults of this investigation reveal that, according to the Jefferson scale of empathy, there was no difference in empathy for patients, between the two groups.
MC students showed a higher score in Novelty Seeking, and a lower score in Self-Directedness, according to the TCI test.
In terms of a student's motive to attend medical school, MC students were motivated by other people, such as a parent, or by the desire to acquire a stable job. MPGS students, however, were motivated to attend medical school because of their interest in medical science and their desire for an improved working environment.ConclusionIf the educational environment of the MPGS is able to reinforce in students an enthusiasm for medical science, it has the potential to be a leader in the advancement of medical science in Korea.


**REFERENCES:**


1. Hojat M. et al. : The Jefferson Scale of Empathy: develop ment and preminary psychometric data. Educational and Psychological Measurement 2001; 61; 349-365
2. Hojat M, Gonnella JS, Mangione S, Nasca TJ, Veloski JJ, Erdmann JB, Callahan CA, Magee M: Empathy in medical students as related to academic performance, clinical compe tence, and gender. Med Educ 2002 ; 36 :522-527

NR7-107

## THE CURRENT STATE OF THE APPLICATION OF NON-PHARMACOLOGICAL TREATMENTS IN PSYCHIATRIC RESIDENCY TRAINING PROGRAMS IN KOREA

*Su Jin Moon, M.D. Hoe-Gi 1, Dong-dae-moon gu, Seoul, South Korea, Kyung Hee Medical Center, Dept. of Psychiatry., SeoulKorea 130-702, Su-jin Moon,M.D., Byung-kuk Lee,M.D., Geon-ho Bahn,M.D., Jun-heon Park, M.D., Jin-kyung Park,M.D., Jong-woo Paik, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the importance of the level of education, content of education, methods of education, and current problems in psychiatric residency training, as well as to reform the measures of non-pharmacological psychiatric treatments.

**SUMMARY:**

Introductions: Since pharmacotherapy has become a common treatment for almost all psychiatric diseases, few other types of treatment are currently being applied in the field of psychiatry. Moreover, in each hospital with a psychiatric residency program in Korea, the education levels of the residents differ for a number of unfair reasons. We decided to survey fourth year psychiatry residents in Korean hospitals in order to analyze the current situation in the application of the non-pharmacological psychiatric treatments in psychiatric residency training programs.

Methods: Over the course of two months, from June 6, 2007 to July 31, 2007, we investigated 126 fourth year residents that were on duty at one of 72 hospitals throughout the nation. The final questionnaire was sent to each resident by e-mail, fax, or written letter. A total of 63 (50%) subjects completed the questionnaires.

Results: The total number of non-pharmacological psychiatric treatments that residents can be exposed to during their 4 years of psychiatric residency training ranged from 1 to 17 (mean 6.87). The regional disparity and type of hospital had little relation to the diversity of non-pharmacological psychiatric treatments. The number of board-certified psychiatrists and the number of residents per one grade were positively correlated with the diversity of non-pharmacological psychiatric treatments. The residents were interested in other types non-pharmacological psychiatric treatments, such as hypnosis (47%), EMDR (27.6%), and art therapy (21.7%), which they were not exposed to in their working hospital.

Conclusion: The psychiatric association must make an effort to standardize the types of psychiatric treatments taught in psychiatric residency training programs while making it possible for residents to be exposed to other types of therapy on an individual basis.

**REFERENCES:**

1. the Synopsis of Psychiatry (10th edition, Benjamin Jamed Sadock, M.D., Virginia Alcott Sadock, M.D.) Response of psychiatrists toword current psychiatric Residency training (J Korean Neuropsychiatr Assoc Vol 31.No.4 1992, Seong-Yoon Kim, MD.,Bou-Yong Rhi, MD

NR7-108

## EMOTIONAL PROCESSING IN SCHIZOPHRENIA: THE ROLE OFABSTRACT REASONING IN ESTABLISHING AND REMEMBERING EMOTIONAL LINKS

*Lana Marija Ilankovic, M.S.C. Clinic for Psychiatry, Department for Clinical Psychology and Phychophisiology, Nussbaumstr. 7, 80336, Munich, Germany, MunichGermany 80336, Kristina Fast, Ph.D., Joseph Kambeitz, B.S.C., Nikola Ilankovic, Prof., Ph.D., Rolf Engel, Prof., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the importance of abstaract reasoning for the emotional processing. They should learn how impairment of different psycological functions can account for misinterpering the events in schizophrenia and consider it when treating the patients.

**SUMMARY:**

Introduction

Although numerous studies reported abnormalities in emotional processing inschizophrenia, underlying factors that may account for the deficits in patients'performance on measures of emotion perception are not well understood. Most of the studies on emotional processing in schizophrenia have used facial affect recognition paradigms whereas we introduced a cognitive task that requires more complex social and emotional judgments. We are interested to see how the ability to compare and match stimuli of different emotional valence is related to symptomatology of the disorder and cognitive abilities in schizophrenic patients.

Methods

15 patients with schizophrenia and 15 control subjects were shown two pictures simultaneously, with negative, positive and neutral emotional content. Afterwards, subjects were asked to match the pictures according to their valence and then performed surprise recognition memory test. In addition, several neuropsychological test were administered.

Results

1. The group of patients was significantly less accurate than the group of controls,
when comparing two items, especially when positive or neutral pictures were combined with pictures of negative valence 2.The patients performed significantly worse in recognizing the novel picture combinations (significantly reduced percent of correct rejections), across all the combination categories.3.The group of patients had significantly lower scores on Halstead Category Test and Similarities (HAWIE-R), relative to controls.

Conclusions

1.The patients exhibited a negative bias when evaluating incongruent picture pairs, especially those containing neutral pictures, that are more flexible for interpretations 2. Additionally, they have shown impaired abstract-flexibility and concept learning. It may be the case, that not only impaired affect recognition but also deficits in abstract reasoning could be could be "central" for patients' misinterpreting banal events as significant.

**REFERENCES:**

1. Addinton, J., Addington D., (1998). Facial affect recognition

and information processing in schizophrenia and bipolar disorder. Schizophrenia research, 32, 171-181.
2. Hall, J., Harris, J., McKirdy, J., Johnstone, E., Lawrie, S. (2006). Emotional memory in schizophrenia. Neuropsycholo gia 45, 1152-1159.
3. Kohler,C.G., Bilker,W.,Hagendoom,M., et al (2000). Emotion recognition deficit in schizophrenia: association with symp tomatology and cognition. Biological Psychiatry,48,127-136.
4. Lang, P.J., Bradley, M.M., Cuthbert, B.N. (1997).Interna tional Affective Picture System. Gainesville, FL:NIMH Cen ter for the study of Emotion and Attention Schneider, F., Gur, R.C., Koch, K., Backes, V., Amunts, K., Shah, J., Bilker, W., Gur, R.E., Habel, U. (2006).Impairment in the Specific ity of Emotion Processing. American Journal of Psychiatry 163, 442-447.

**NR7-109**

## STIGMA AND DISCRIMINATION TOWARDS SCHIZOPHRENIA AMONG THE GENERAL POPULATION

*Eduardo A Leiderman, M.D. Salguero 2533 8º 4, Buenos Aires Argentina 1425, Candela Berizzo; Ana Bonifacio; Noelia Bruscoli; Juan I Capria; Betina Ehrenhaus; Manuel Guerrero; Maria Guerrero; Maria Lolich; Gustavo Vazquez, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to know the prevalence of mental health literacy and discrimination towards schizophrenics among the general population.

**SUMMARY:**

Introduction: High rates of discrimination together with low mental health literacy are found among the general population towards the mentally ill and especially towards schizophrenics. Objective: The purpose of our study was to assess the prevalence of individual discrimination and perception of social stigmatization toward schizophrenics among the general population, along with their knowledge about this illness. Methods: One thousand fifty four persons were surveyed at 31 different neighbourhoods of Buenos Aires city. Their knowledge about schizophrenia, personal social distance and perception of social discrimination was assessed with several questions. Afterwards a scale for each one of these measures was built. Results: Two percent of the population lives with schizophrenics and 11% has some kind of relationship with them. Almost half of the general population believes that most of schizophrenics are dangerous and violent. The knowledge of the general population about schizophrenia was moderate (4,6 ± 2,4 in a 10 point scale), social distance was low (1,5 ± 1,4 in a 6 point scale) and perception of social discrimination was high (5,5 ± 1,8 in a 7 point scale). The knowledge about schizophrenia is negatively associated with social distance, however older people have more knowledge but also greater social distance. No differences on gender were found among these measures. Persons that live with patients with schizophrenia or have certain relationship with them have more knowledge about the illness but the same social distance and perception of social discrimination than the rest of the general population. The persons surveyed felt their own attitudes are more favourable to people with schizophrenia than 'most other people's' attitudes are. Conclusions: Different interventions should be designed to decrease stigmatizing attitudes towards people with schizophrenia and public education seems to reduce stigmatization.

**REFERENCES:**

1. Gaebel W, Baumann A, Witte A, Zaeske H. Public attitudes towards people with mental illness in six German cities. Eur Arch Psychiatry Clin Neurosci 2002, 252:278-287.
2. Angermeyer MC, Dietrich S. Public beliefs about and atti tudes towards people with mental illness: a review of popula tion studies. Acta Psychiatr Scand 2006,113: 163-179.

**NR7-110**

## MENTAL ILLNESS STIGMA AND WILLINGNESS TO SEEK MENTAL HEALTH CARE IN THE EUROPEAN UNION

*Ramin Mojtabai, M.D. Department of PsychiatryBeth Israel Medical Center First Ave. at 16th Street, New YorkNY 10003, Eda Inan, B.A., Sophia Haeri, B.A., Jamie Johnson B.A., Anne Ruminjo, M.D., M.P.H.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the association of stigmatizing attitudes with willingness to seek professional help.

**SUMMARY:**

Objective: Mental illness stigma is generally considered a barrier to professional help seeking for mental health problems (1,2). This view, however, is based on limited evidence. This study examined the association of mental illness stigma with willingness to seek professional help in a large and recent community survey.
Method: Data from 29,248 participants of the 2005-2006 Eurobarometer general population survey who resided in 25 European Union (EU) countries as well as Bulgaria, Romania, Croatia, Turkey and the Turkish Cypriot Community were used to assess the association of social stigmatizing attitudes measured in random halves of samples drawn from each sampling point with willingness to seek professional help, in the other halves of the samples. Attitudes were rated using responses to four statements about mentally ill constituting a danger to others, being unpredictable, being blameworthy, and never recovering. Societal attitudes were computed as the mean ratings in each random half of the sample, thus representing the views of other inhabitants of each community.
Results: Both societal and individual stigmatizing attitudes were associated with individuals' willingness to seek professional help. Believing the mentally ill to be dangerous was associated with increased willingness to seek help (AOR=1.93 at societal level and 1.07 at individual level), as was the belief that mentally ill never recover (AOR=1.74 at societal level and 1.11 at individual level); whereas blaming the mentally ill for their illness was associated with decreased willingness to seek professional help (AOR=0.46 at societal level and 0.89 at individual level).
Conclusions: The complex association of mental illness stigma and willingness to use mental health services should be carefully considered in planning anti-stigma campaigns as not all stigmatizing attitudes towards the mentally ill act as barriers to professional help seeking.

**REFERENCES:**

1. Jorm AF, Angermeyer MC, Katschnig H: Public knowledge of and attitudes to mental disorders: A limiting factor in the optimal use of treatment services. In Unmet Need in Psychia try, edited by Andrews G, Henderson S, Cambridge, Cam bridge University Press, 2000, 399-416.
2. Meltzer H, Bebbington P, Brugha T, Farrell M, Jenkins R, Lewis G: The reluctance to seek treatment for neurotic disor ders. Int Rev Psychiatry 2003;15:123-128.

**NR7-111**

**COGNITIVE FUNCTIONING IN SUICIDAL SCHIZOPHRENIA PATIENTS**

*Doina Cozman, M.D. Str. V. Babes, Nr. 43, Pav. 3, Cluj-Napoca, Romania 400012, Sorin Nica, M.D., Bogdan Nemes, M.D., Minodora M. Manea, M.D., Horia G. Coman, M.D., Ph.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the specific features of cognitive functioning schizophrenia patients with suicidal behavior.

**SUMMARY:**

Introduction: The reported suicide rates in schizophrenia patients are 10-15% whereas the estimation of suicide attempts is 28-50%. The existing suicide risk factors are divided in general factors (male gender, family history of suicide, stress, and history of substance abuse), schizophrenia related factors (chronic schizophrenia, poor functioning, prominent positive symptoms) and depression related factors (depressed mood, hopelessness, impulsivity).

Aim: To evaluate the effect of depression in schizophrenia suicidal patients from the point of view of neuropsychological functions.

Methodology: A clinical sample of 67 patients with schizophrenia was assessed. Among them, 19 patients presented a life long history of deliberate self-harm. The control group included a clinical population (n=48) without suicidal behaviour. We performed the assessment of schizophrenia (PANSS, GAS), depression (MADRS), suicidal risk (SIS, SAD PERSONS scale), severity of suicidal ideation (Beck Hopelessness Scale), quality of life (Multicultural Index of Quality of Life) and neuropsychological markers with CogTest battery.

Results: Suicidal behaviour in schizophrenia patients was significantly correlated with depressive symptoms (anhedonia, hopelessness) accompanied by poor global functioning and also with positive symptoms (delusions). Some neuropsychological markers (abstract thinking, reduced capacity to maintain information on-line, working memory, facial emotions discrimination) were significantly correlated with hopelessness and suicidal ideation represented from item 10 on MADRS scale.

Conclusion: The most significant neuropsychological dysfunction is represented by working memory impairment and disturbed facial recognition discrimination which is present in schizophrenia patients with self-harm behaviour even if they have an intact IQ. The better the ability of aquiring is, the better is the ability of producing efficient scenarios for life.

**REFERENCES:**

1. Habel U, Gur RC, Mandal MK, Salloum JB, Gur RE, Sch neider F: Emotional processing in schizophrenia across cul tures: standardized measures of discrimination and experi ence. Schizophr Res 2000; 42:57-66
2. Keilp JG, Sackeim HA, Brodsky BS, Oquendo MA, Malone KM, Mann JJ: Neuropsychological dysfunction in depressed suicide attempters. Am J Psychiatry 2001; 158:735-741.

**NR7-112**

**SOCIAL AND BIOLOGICAL PREDICTORS OF SUICIDE AND DEATH FROM EXTERNAL CAUSES:**

*40 Year Follow-up of the Seven Countries StudyErik J Giltay, M.D. Leiden University Medical Center (LUMC) Department of Pychiatry, P.O. Box 9600, Leiden, Netherlands 2300RC, Frans G. Zitman, M.D., Ph.D., Alessandro Menotti, M.D., Ph.D., Aulikki Nissinen, M.D., Ph.D., David R. Jacobs Jr, Ph.D., Daan Kromhout, Ph.D., M.P.H.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to identify the long-term predictors of suicidal death and death from external causes. This may help to find potential biologic underlying causes (besides proximal causes such as adverse life events and depression) that lead to suicide. Potential mechanisms such as fetal developmental problems and chronic hypoxaemia due to impaired pulmonary function will be discussed.

**SUMMARY:**

Objective: Because most previous studies have a retrospective design, factors that are prospectively associated with suicide and death from external causes remain largely unknown.

Methods: Baseline data was gathered between 1957 and 1964 in 12,763 men aged 40-59 years living in the United States, Finland, The Netherlands, Italy, Croatia, Serbia, Greece, and Japan. Suicidal death (ICD-8 codes E950-959) and deaths from external causes (E800-929, E940-946, or E960-999) were assessed during up to 40 years of follow-up. In Cox multivariable models, hazard ratios (HR) were adjusted for age, socioeconomic status, smoking, body mass index, cholesterol, systolic blood pressure and prevalent coronary heart disease, and stratified for country.

Results: The rates for suicidal death and death from external causes were 0.38 (n=118) and 1.01 (n=313) per 1,000 person-years, respectively. Men who were single had a HR for suicide of 1.86 (95% CI: 0.96-3.59; P=0.06) and death from external causes of 1.93 (95% CI: 1.24-3.01; P=0.003). Men with a low pulmonary forced vital capacity (FVC) had a HR for suicide of 3.39 (lowest vs. top quartile; 95% CI: 1.64-6.99; P<0.001 for trend) and death from external causes of 1.76 (95% CI, 1.10-2.81; P=0.05 for trend). Low socioeconomic status (HR 2.66; 95% CI: 1.10-6.42; P=0.004 for trend) and smoking (HR 1.81; 95% CI: 0.96-3.41; P=0.06) were also associated with suicide. Disability (P=0.03) and body height (P<0.001) were associated with suicide, but not in multivariate analyses.

Conclusions: Independent risk factors for suicidal death and death from external causes were being single and low FVC. Low socioeconomic status and smoking were additional risk factors for suicide. Low FVC and low body height could be markers of impaired fetal and postnatal development, or low respiratory function may lead to impulsivity and affective dysregulation.

**REFERENCES:**

1. van den Hoogen PC, Feskens EJ, Nagelkerke NJ, Menotti A, Nissinen A, Kromhout D. The relation between blood pres sure and mortality due to coronary heart disease among men in different parts of the world. Seven Countries Study Re search Group. N Engl J Med 2000;342:1-8
2. Magnusson PK, Gunnell D, Tynelius P, Davey Smith G, Ras mussen F. Strong inverse association between height and suicide in a large cohort of Swedish men: evidence of early life origins of suicidal behavior? Am J Psychiatry 2005;162:1373-5

**NR7-113**

## EMOTIONAL IMPACT, IN PSYCHIATRISTS AND PSYCHOTHERAPISTS, OF CLINICAL WORK WITH SUICIDE RISK PATIENTS OR THOSE WHO HAD COMMITTED SUICIDE.

*Herbst Luis, M.D. French 3107 - 7C, Buenos AiresArgentina 1425, Luis Herbst, M.D., Eduardo Leiderman, M. D., Anibal Goldchluk, M.D., Gustavo Lipovetzky, M.D., Daniel Abadi, M.D., Carlos Lamela, M.D., Federico Pavlovsky, M.D., Ricardo Diaz, M.D., Graciela Santos, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize and diagnose the emotional reactions that appear in psychiatrist and psychotherapists during the treatment of patients with suicide risk or after a patient suicide

**SUMMARY:**

Introduction: Clinical work with suicidal patients or with patients who had committed suicide causes a high distress in mental health workers. The study of the emotional impact allows us to recognize, diagnose and prevent that distress. The objective of this research is to study it's prevalence and characteristics. Methods: One hundred twenty seven psychiatrists and psychotherapists were surveyed. The survey had 36 items which included demographical data, prevalence of patient's suicides and their emotional reactions, change of professional practice and legal fears after those suicides. Results: Every professional surveyed had experience with patients with suicidal risk, almost half had the experience of a patient's suicide. Different experiences were seen according to sex, type of practice and years of experience. After 10 years of professional experience the rate of suicides stayed constant. Every mental health worker reported an impact on any of the following dimensions: mood, acute stress and quality of life. The 16,4% of the sample refers the patient to another professional after the 1st visit when suicidal risk is detected and 17,1% refers the patient if the risk is detected during the treatment. Every professional had recurrent intrusive ideas, familiar life disturbances and 34% had a psychosomatic impact after a patient suicide. Conclusions: The experience of a patient's suicide and the work with patients with suicide risk produces disturbances on different clinical dimensions of their psychiatrists and psychotherapists.

**REFERENCES:**

1. Gitlin M: A Psychiatrist´s Reaction to a Patient´s Suicide. Am J Psychiatry 1999 156: 1630 - 1634
2. Hendin H; Lipschitz A; Maltsberger J; Haas A; Wynecoop S. Therapist´ Reaction to Patients´ Suicide. Am J Psychiatry 2000; 157: 2022 – 2027

**NR7-114**

## SUICIDAL BEHAVIOUR IN THE PATIENTS OF OBSESSIVE COMPULSIVE DISORDER.

*Jitendra Trivedi, M.D. Dept. of Psychiatry, C. S. M. Medical University, Lucknow, UP, Lucknow, India 226003, Mohan Dhyani MBBS, J.K Trivedi MD, Anil Nischal MD, PK Sinha M.Sc.*

**EDUCATIONAL OBJECTIVE:**

To assess the Suicidal Behavior in patients of Obsessive Compulsive Disorder (OCD)

**SUMMARY:**

Suicidal Behavior is defined as an act through which an individual harms himself (self aggression) whatever may be the degree of lethal intention or recognition of genuine reason for their action. Suicidal behavior is the result of a complex interaction of biological, genetic, psychological, sociological, environmental factors. Well identified demographic and biopsychosocial risk factors consistently associated with completed suicide include male gender, older age, white race, widowed status and poor health ( especially if painful and serious illness is present ) OCD is chronic distressing anxiety disorder associated with significant functional impairment. Major depression has been the most common disorder with a prevalence of up to 67% OCD has a significant negative impact on the sufferer, his family, social life and health related quality of life (Steeketee, 1993) There is a reasonable probability that the patient of OCD have suicidal thoughts , plans or actually attempt suicide

The present work is a single point non-invasive, cross sectional, clinical study of new and follow up cases of Obsessive Compulsive Disorder, (OCD) attending psychiatric outpatient section, which involves the assessment of suicidal behavior in the patients. Informed consent was taken from all the subjects. 52 patients with a diagnosis of OCD were assessed for suicidal behaviour.

Conclusion:

A significant number (19.23%) of patients had a history of past suicidal attempt. This finding is important as past suicidal attempt is considered to be a strong predictor for future suicidal attempt. Hopelessness a predictor of future suicidal risk was significantly high in 25% of the patients on the Beck Hopelessness Scale. 26.9% of patients had a significantly high degree of suicidal ideation, with score of 6 or more on Scale of Suicidal Ideation

**REFERENCES:**

1. O'Carroll PW, Berman AL, Maris RW, Moscicki EK, Tanneyt BL, Silverman MM. Beyong the tower of Babel: a nomencla ture for suicidology. Suicide Life-Threat Behav. 1996;26:237-252
2. Fawcett J, Scheftner WA, Fogg L, Clark DC, Young MA, Hedeker D, Gibbons R. Time-related predictors of suicide in major affective disorder. American Journal of Psychiatry, 1990; 147:1189–1194

**NR7-115**

## ASSESSMENT OF COMPREHENSION OF INFORM CONSENT IN BIPOLAR MANIA

*Jitendra Trivedi, M.D. Dept. of Psychiatry, C. S. M. Medical University, Lucknow, UP, Lucknow, India 226003, Vivek Sharma,*

*M.B.B.S., Harjeet Singh, M.D., J. S. Srivastava, M.D. D.M.*

**EDUCATIONAL OBJECTIVE:**

1.To assess the comprehension of inform consent in the patients of bipolar mania.

2.To compare the comprehension of inform consent according to the severity of bipolar mania.

**SUMMARY:**

It is commonly acknowledged that psychiatric patients do not have a sound mind, but whether this unsoundness of mind precludes there ability to give inform consent is a moot point. A number of studies have already been done to assess the consenting capability of psychiatry population. Bipolar patients specially in mania phase have not been a focus of any such study.

This was a single point non invasive study of new and follow-up cases of bipolar affective disorder currently in mania. It involves administration of standardize competence assessment to assess the performance on closely related abilities viz. understanding (comprehension) appreciation, reasoning and ability to express a choice which are determinants of decision making. 45 patients of bipolar mania were included.

Conclusion: The analysis revealed that the severity of current episodes had significant inverse correlation while educational attainments had significant positive correlation with measure of competence related abilities. Impaired comprehension was found in 76.19 % of mania without psychosis and 100% of psychotic mania.

**REFERENCES:**

1. Appelbaum P. S., Grisso T. (1988): Assessing patients capaci ties to consent to treatment. New England Journal of Medi cine, 319, 1635-1638
2. Martinez-Aran, A. Eduard Vieta, María Reinares et. al. (2004). Cognitive Function Across Manic or Hypomanic, Depressed, and Euthymic States in Bipolar Disorder, Am J Psychiatry 161:262-270

**NR7-116**

## ANALYSIS OF SUICIDAL IDEATION AND BEHAVIOR IN LAMOTRIGINE CLINICAL TRIALS

*Kevin P Nanry, GlaxoSmithKlineFive Moore DriveResearch Triangle Park, NC 27709, 9, Thomas R. Thompson, M.D., Tara K. Dudley, MStat., Kevin P. Nanry, B.S.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand relationship between lamotrigine use and suicide.

**SUMMARY:**

Objective: It has been reported that 25% to 50% of patients with bipolar disorder attempt suicide at least once. Patients with bipolar disorder may experience worsening of their depressive symptoms and/or the emergence of suicidal ideation and behaviors (suicidality) whether or not they are taking medications for bipolar disorder. Similarly, there is also an association between epilepsy and suicide. Lamotrigine (LTG) is indicated for use in patients with bipolar disorder and epilepsy. Regulatory agencies have asked sponsors of 11 anti-epileptic drugs (AEDs) to provide data to support a meta-analysis of a potential association between AEDs and suicidal thinking and behavior. GSK has supplied these data for LTG and has independently conducted a pooled analysis of LTG trials for Definitive Suicidal Behavior and Ideation (DSBI) events. Methods: This pooled analysis comprised data from 35 LTG double-blind, placebo-controlled clinical trials with =< 20 patients/per arm completed up to November 2006 (17 neurological, 17 psychiatric, 1 study in healthy volunteers). A single blinded assessor at Columbia Univ. classified DSBI events. Results: Overall DSBI events occurred in 43/3695 (1.16%) LTG vs 25/2824 (0.89%) placebo treated patients; Odds Ratio (95% CI) = 1.46 (0.89, 2.45), p=0.171. In bipolar trials DSBI events occurred in 29/1212 (2.39%) LTG vs 19/1054 (1.80%) placebo treated patients; OR (CI) = 1.31 (0.73, 2.39), p=0.460. In epilepsy trials DSBI events occurred in 6/1073 (0.56%) LTG vs 2/805 (0.25%) placebo treated patients; OR (CI) = 2.00 (0.40, 14.96), p=0.478. In the analysis of psychiatric indications, events in patients taking LTG were more common in the first month of treatment, and behavioral events were more common in males.

Conclusion: The pooled analysis showed the rate of events was numerically, but not statistically significantly greater, for LTG compared with placebo across all indications and in the bipolar subgroup.

**REFERENCES:**

1. Perroud N, Baud P, Preisig M, Etain B, Bellivier F, Favre S, Reber N, Ferrero F, Leboyer M, Malafosse A. Social phobia is associated with suicide attempt history in bipolar inpatients. Bipolar Disord 2007: 9: 713–721
2. Pompili M, Girardi P, Ruberto A, et al. Suicide in the epilep sies: a meta-analytic investigation of 29 cohorts. Epilepsy Behav 2005;7:305-310

**NR7-117**

## MEDICAL COST OF SUICIDE ATTEMPT IN A PSYCHIATRIC EMERGENCY ROOM POPULATION

*Ki-Young Lim, M.D. Department of Psychiatry, School of Medicine, Ajou University, San 5 Woncheon-dong, Yeongtong-gu, SuwonKorea 442-721, Sook-Hyung Song, M.D.,Yu-Jin Kim, M.D., Chang-Hyung Hong, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize the general characteristics of the medical cost of suicide attempt in a psychiatric emergency room population.

**SUMMARY:**

Introduction: Suicide is the fifth leading cause of death in Korea. The objective of this study was to find out the medical cost of suicide attempt in a psychiatric emergency room population.

Methods: From November 2006 to October 2007, two psychiatrists conducted in-depth interviews with suicide attempters in the emergency room of Ajou university hospital in Korea. We examined the demographics, the methods of attempted suicide, the places attempted suicide and diagnosed psychiatric illness according to *DSM-IV.*

Results: Of the 97 suicide attempters, there were 27 men and 70 women, and their average age was 37.3 (range 14-78). The methods they used for suicide were – drug overdose(74.2%), wrist cutting(14.4%), hanging(2.1%), and others(10.3%). The places they committed suicide were – their own house(74.2%), public places(12.4%), their acquaintances' house(4.1%), and others(10.3%). The average total medical costs caused by suicide attempt was 1,610 US$ (range 54 – 34,172

US$). The medical cost by diagnosis were – adjustment disorder(1,286 US$), major depressive disorder(1,066 US$), schizophrenia(8,720 US$), bipolar disorder(2,442 US$), substance abuse(1,411 US$). The group diagnosed as schizophrenia paid medical charge significantly more than each other groups.(F=4.7, df=4, p=0.002)
Conclusion: These results may be used to provide basic data to establish national plan for suicide prevention.

**REFERENCES:**


1. Holinger PC. The causes, impact, and preventability of child hood injuries in the United States. Childhood suicide in the United States. Am J Dis Child. 1990 Jun;144(6):670-6.
2. Yang B, Lester D. Recalculating the economic cost of suicide. Death Stud. 2007 Apr;31(4):351-61.


**NR7-118**

## MOTIVES AND SUICIDE INTENT OF SUICIDE ATTEMPTERS VISITED TO A UNIVERSITY-BASED HOSPITAL EMERGENCY ROOM.


*Ki-Young Lim, M.D. Department of Psychiatry, School of Medicine, Ajou University, San 5 Woncheon-dong, Yeongtong-gu, Suwon, Korea 442-721, Sook-hyung Song,M.D, Yu-jin Kim,M.D, Chang-hyung Hong,M.D*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to understand variable motives and suicide intent of suicide attempters.

**SUMMARY:**


Introduction: Suicide is the fifth leading cause of death in Korea. The objective of this study was to find out motives and suicide intent of suicide attempters visited to a university-based hospital emergency room.
Methods: From November 2006 to October 2007, two psychiatrists conducted in-depth interviews with suicide attempters in the emergency room of Ajou university hospital in Korea. We examined the demographics, the motives and suicide intent, and followed up whether he (or she) would come to the psychiatry department for treatment or not.
Results: Of the 97 suicide attempters, there were 27 men and 70 women, and their average age was 37.3 (range 14-78). The first reasons for their suicide attempt were – escaping from various stress in life(35%), expecting for their family or lovers' change in behavior(25%), really wanting to die(14%), Being influenced by delusions or hallucinations (8%), and unconfirmed(18%). To all these people, admission to psychiatric department was recommended for psychiatric evaluation and treatment, but only 19% of patients accepted the offer, 20% of patients refused the admission but came to psychiatric treatment, 12% of patients agreed about the treatment but never came, and 49% of patients rejected both psychiatric evaluation and treatment.
Conclusion: These results may be used to provide basic data to establish national plan for suicide prevention


**REFERENCES:**


1. McAuliffe C, Arensman E, Keeley HS, Corcoran P, Fitzger ald AP.,Motives and suicide intent underlying hospital treated deliberate self-harm and their association with repetition,Suicide Life Threat Behav. 2007 Aug;37(4):397-408.
2. Linehan MM, Comtois KA, Brown MZ, Heard HL, Wagner A.,Suicide Attempt Self-Injury Interview (SASII): devel opment, reliability, and validity of a scale to assess suicide attempts and intentional self-injury.,Psychol Assess. 2006 Sep;18(3):303-12


**NR7-119**

## SUICIDES AND GENDER: CHARACTERIZATION USING RADARS® SYSTEM POISON CENTER DATA


*Meredith Kirtland, B.A. Rocky Mountain Poison & Drug Center- Denver Health 777 Bannock St.MC 0180, DenverCO 80204, Sonya Heltshe, Ph.D., J. Elise Bailey, M.S.P.H., Richard Dart, M.D., Ph.D.*


**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, a participant should be able to identify gender differences in suicides involving prescription opioids. The participant should be able to recognize that while suicide by poisoning is reportedly the most common method of for females, RADARS System data show that only some prescription opioid rates and means are significantly higher for females. And while not significant, the suicide rate and mean for methadone is the only opioid higher for males.

**SUMMARY:**


Introduction: Self harm poisoning, the 2nd highest cause of nonfatal injuries in the US, is the most common suicide completion method for females, while firearm use is the most common for males. Prescription opioids have not been examined alone to determine their role in poisoning suicides. The RADARS System Poison Centers (PC) collect suicide data from 43 of 60 US PC. Using these data, we hypothesize that females have higher suicide rates and means for all opioids combined and each individual opioid. Methods: PC use a standard electronic system to record spontaneous calls from the public and health professionals; quality checks are performed to verify coding accuracy. Intentional suspected suicides (ISS), which include attempts and completions, involving buprenorphine, fentanyl, hydrocodone, hydromorphone, methadone, morphine, oxycodone and tramadol were analyzed (2006). In 3-digit ZIP codes (3DZ) with at least 1 ISS, the difference between male and female ISS rates (ISS/1,000 Unique Recipients of Dispensed Drug [URDD, number of individuals who filled a prescription]) and means were examined. Results: The mean ISS number in a given 3DZ for all opioids combined was significantly higher for females (2.1 vs. 1.3, $p<0.05$). The mean ISS number for oxycodone (2.3), hydrocodone (5.5), morphine (0.6) and tramadol (1.9) were all significantly higher for females ($p<0.05$). While not significant, methadone was higher for males (0.8 vs. 0.7). The ISS rate for all opioids combined was significantly higher for females (0.22 vs. 0.18, $p<0.05$). Rates for oxycodone (0.1), hydrocodone (0.1) and tramadol (0.2) were all significantly higher for females ($p<0.05$). Again, while not significant, methadone was higher for males (0.60 vs. 0.58). Conclusion: Mean ISS numbers and rates were higher for females when all opioids were combined. However unique gender differences were found with individual opioids. Additional data and analyses are recommended to further understand these differences.


**REFERENCES:**


1. National Center for Injury Prevention and Control. Web-

based Injury Statistics Query and Reporting System (WISQARS), (2006). Centers for Disease Control and Prevention. Available from: URL: http://www.cdc.gov/ncipc/wisqars
2. Suicide in the U.SA. Based on Current 2004 Statistics. American Association of Suicidology. Available from: URL: http://www.suicidology.org/associations/1045/files/SuicideInTheUS.pdf

**NR7-120**

## PATIENT SATISFACTION WITH A TELEMEDICINE-BASED EVALUATION IN AN ADDICTION TREATMENT PROGRAM

*Ashwin A. Patkar, M.D. 2218 Elder Street, Suite 127, Durham-NC 27705, Rano Matthew, M.D., Robert Hubbard, Ph.D., Kenny House, L.C.A.S., Kathleen Peindl, Ph.D., Michael Youkins, B.B.A., Ashwin A. Patkar, M.D.*

**EDUCATIONAL OBJECTIVE:**

At the conclusion of this session, the participant should be able to recognize telemedicine based approaches for evalution in addiction treatment programs.

**SUMMARY:**

Objective: Access to addiction treatment in underserved rural areas is limited. Although telemedicine holds promise, there are limited data on patient acceptability of telemedicine for addiction treatment. We investigated patient satisfaction with a telemedicine-based evaluation of addictive and co-occurring disorders in a rural setting.

Methods: A telemedicine approach that involved computerized video conferencing was compared to an in-person evaluation for addiction and psychiatric problems, and HIV risk in two rural addiction treatment programs. Consenting subjects seeking treatment selected telemedicine versus in-person evaluation. Subjects were asked to rate their experience on an eight-item patient satisfaction questionnaire. Data analysis involved paired t tests for within group differences in telemedicine scores and chi square or unpaired t tests for between group comparisons.

Results: 210 subjects entered the study; 126 for telemedicine and 84 for in- person evaluation. There were no significant differences in demographics, drugs of abuse or rate of co-occurring disorders (50%) between the two groups. 76% rated the overall experience of telemedicine to be as good as that with an in-person visit ($p < .01$). There were positive or strongly positive ratings (66%-95%) on 6 out of 8 items e.g. ability to talk to clinician (86%), and willingness to use telemedicine for the next visit (74%). However 2 items were rated less favorably: "the clinician cared for me as a person" (57% positive) and 'the clinician was able to address my problems" (31% positive, 52% neutral).

Conclusions: It may be feasible to implement a telemedicine based evaluation in rural addiction treatment programs. The acceptability of telemedicine appears to be comparable to in-person evaluations for most of the items. However on items relating to human problem-solving, the ratings were less strong, indicating certain limitations of telemedicine to substitute for in-person evaluations. NIDA #

**REFERENCES:**

1. O'Reilly R, Bishop J, Maddox K, Hutchinson L, Fisman M, Takhar J Is telepsychiatry equivalent to face-to-face psychiatry? Results from a randomized controlled equivalence trial. Psychiatr Serv. 2007 58(6):836-43.
2. De Las Cuevas C, Arredondo MT, Cabrera MF, Sulzenbacher H, Meise U. Randomized clinical trial of telepsychiatry through videoconference versus face-to-face conventional psychiatric treatment. Telemed J E Health. 2006 12(3):341-50.

# INDEX

## AUTHOR/PRESENTER INDEX

### A



### B



### C

# INDEX



## D



## E



## F



## G

# INDEX



## H



## I



## J

# INDEX

# INDEX



## N



## O



## P

# INDEX

# INDEX

## T



## U



## V



## W



## Y



## Z