10TH CONFERENCE OF THE INTERNATIONAL SOCIETY FOR AFFECTIVE DISORDERS

E-ABSTRACT BOOK

14-16 November 2019
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WELCOME LETTER

Dear Colleagues,

We are delighted to welcome you to ISAD 2019: Emerging Mood Science and Clinical Innovation and, for the second time, to its host city, London.

The ISAD Conference is the most important gathering of the Affective Disorders community and is now an outstanding international meeting. The Scientific Programme this year will once again take in fundamental, clinical and translational issues in affective disorders, with experts from around the world travelling to London to make this a stimulating arena for the discussion of ideas. We will also enjoy posters and oral communications from our emerging and early career researchers.

We would like to thank all those who have worked so hard to organise this Congress, both in the International Society for Affective Disorders and scientists from around the world who’ve given their time freely. We are also very grateful to the many generous sponsors of the meeting and participants of the technical exhibition.

We look forward to an exciting meeting that promises great scientific debate and enjoyable social interaction. We very much hope you enjoy the Conference and your visit to the great city of London.

We look forward to welcoming you to the Conference in November 2019!

Jair Soares
ISAD President

Allan Young
International Scientific Programme Committee Chair
COMMITTEES

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Abi Wassie
Allan Young
Carlos Zarate

Christine Kuehner
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<td>Plenary Session 1 l Developments in Brain Stimulation for Depression</td>
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<td>Jeff Daskalakis, Campbell Family Mental Health Research Institute, Canada</td>
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<td>10:30-12:00</td>
<td>Digital Technology to access and efficiently manage depression and anxiety in primary care and the general community: results of the PReDiCT and REBOOT studies. Richard Morriss, University Of Nottingham, UK, Michael Browning, University of Oxford, UK, Henricus G. Ruhe, Radboud University Medical Centre, Netherlands, Susan Brown, University of Nottingham, UK</td>
<td>Early Life Stress in Affective Disorders: From Neuroscience to Diagnosis and Treatment. Mario F. Juruena, King's College London, UK, Bruno Etain, University Paris Diderot and Assistance Publique des Hopitaux de Paris, France, Monica Aas, University of Oslo, Norway, Rodrigo Machado-Vieira, University of Texas Medical School, USA</td>
<td>Translating evidence from nutritional epidemiology to interventions for depression: challenges, results and future perspectives. Yuri Milaneschi, Amsterdam UMC, The Netherlands, Michael Berk, Deakin University, Australia, Olivia I. Okereke, Massachusetts General Hospital and Harvard Medical School, Boston, USA, Mariska Bot, Amsterdam UMC, The Netherlands</td>
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<td>14:00-15:30</td>
<td>New platforms and approaches to the prediction of treatment outcomes in major depressive disorder. Rudolf Uher, Dalhousie University, Canada, Sidney Kennedy, St. Michael's Hospital, Canada, Oliver Pain, King's College London, UK, Anneka Tomlinson, University of Oxford, UK</td>
<td>Psilocybin Therapy for Treatment Resistant Depression: A Good or Bad Trip? James Rucker, Kings College London, UK, Robin Carhart-Harris, Taylor Lyons, Imperial College London, UK, Gemma Knight, Aster Daniel, King's College London, UK</td>
<td>Sleep &amp; Circadian Dysregulation: From Diagnosis to Treatment. Bruno Etain, Paris Diderot University, France, Jan Scott, Newcastle University, UK, Havard Kallestad, Ntnu, Norway</td>
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<td>16:15-17:45</td>
<td>Oral Presentation Session 1 Moderator: Anthony Cleare, UK</td>
<td>Oral Presentation Session 2 Moderator: Roland Zahn, UK</td>
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<td>16:15-16:30</td>
<td>0-001 A Web-based Decision Aid Tool for Disclosure of a Mental Health Condition in the Workplace: a Randomised Controlled Trial. Elizabeth Stratton, University of Sydney, Australia</td>
<td>0-006 The role of early life stress in the clinical course and outcome of Bipolar Disorder. Mario F. Juruena, King's College London, UK</td>
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<td>16:30-16:45</td>
<td>O-002 The significance of comorbid alcohol use disorder in psychiatric patients with major depressive disorder. Mikael Holma, University of Helsinki and Helsinki University Hospital, Helsinki, Finland</td>
<td>O-007 Impact of Early Life Stress on Affective Disorder Treatment Outcomes. [Systematic Review] Filip Eror, King's College London, UK</td>
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<td>16:45-17:00</td>
<td>O-003 Effects of aerobic exercise on gut microbiota in adolescents with subthreshold mood syndromes and clinically-well adolescents: a 12-week, randomized controlled trial. Runhua Wang, Guangzhou Medical University, China</td>
<td>O-008 Severity of Suicide Attempt is Related to Epigenetic and Transcriptional Changes in the CYP2D6 Gene. Jussi Jokinen, Psychiatry Umea University, Sweden</td>
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<td>17:00-17:15</td>
<td>O-004 Are sleep disturbance and fatigue present in various mental and substance use disorders? Sonia Mccallum, The Australian National University, Australia</td>
<td>O-009 Suicide, Opioid Overdose, and the Gray Areas in Between. Richard K Ries, University of Washington, Seattle, Washington, USA</td>
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<td>17:15-17:30</td>
<td>O-005 Positive mental health as a predictor of recovery from mental illness. Matthew Iasiello, Flinders University, Australia</td>
<td>O-010 Comparison of Treatment Outcomes, Sociodemographic and Clinical Characteristics of Black and Minority Ethnic Service Users in a Southwark IAPT Service. Rebecca Tucker, King's College London, UK</td>
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<td>17:30-17:45</td>
<td>O-011 Reduced gray matter volume in the subgenual anterior cingulate underlies negative psychobehavioral outcomes in early-maturing girls. Naohiro Okada, International Research Center for Neurointelligence (WPI-IRCN), The University of Tokyo, Japan</td>
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<p>| 17:45-18:45| Poster Session 1                                                                 |
| 18:45-19:45| Welcome Reception                                                                 |</p>
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<td>08:30-10:00</td>
<td>Plenary Session 2: Whole-brain modelling of neuropsychiatric disorders: progress and potential Morten Kringelbach, Dept of Psychiatry, Queen's College, Oxford University, UK</td>
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<td>10:30-12:00</td>
<td>The bipolar brain: from risk to treatment, from treatment to aging. Allan Young, Nefize Yalin, King's College London, UK, David Cousins, Newcastle University, UK Tomas Hajek, Dalhousie University, Canada</td>
<td>Computational Neuroscience Approaches in Mood Disorders. Henricus Ruhe, Radboud University Medical Center, The Netherlands, Douglas Steele, University Of Dundee, UK, Sophie Brolsma, Radboud University, Netherlands, Gregor Hasler, Universitat Bern, Switzerland</td>
<td>New approaches to understanding the trajectories of mood disorders across the life course. Jan Scott, Newcastle University, UK, Ian Hickie, The University of Sydney, Australia, Bruno Etain, Diderot University, Paris, France</td>
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<td>Plenary Session Lifetime Achievement Award Prof. Bernard Lerer</td>
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<td>15:30-17:30</td>
<td>Oral Presentation Session 3 Moderator: Mario Juruena, UK</td>
<td>Oral Presentation Session 4 Moderator: James Rucker, UK</td>
<td>Oral Presentation Session 5 Moderator: James Stone, UK</td>
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<td>15:30-15:45</td>
<td>O-012 A double-blind dose-response study of casein glycomacropeptide (Lacprodan CGMP-20). Possible new treatments for mania. Erik Roj Larsen, University Clinic, Mental Health Service, Region of Southern Denmark</td>
<td>O-017 Help seeking attitudes and intentions for anxiety in adolescents: The role of anxiety literacy and stigma. Alison Calear, The Australian National University, Australia</td>
<td>O-022 Extensive blood-brain barrier leakage is a biomarker of neuroprogression in bipolar disorder. Cynthia Calkin, Dalhousie University, Canada</td>
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<td>15:45-16:00</td>
<td>O-013 Mineralocorticoid Receptor Agonist as a Predictor of Treatment Outcome in Treatment Resistant Depression with Early Life Stress. Mario F Juruena, King's College London, UK</td>
<td>O-018 The association of antihypertensive use and depressive symptoms in a large older population with uncomplicated hypertension living in Australia and the United States: A cross-sectional study. Bruno Agustini, Deakin University, Australia</td>
<td>O-023 Electrodermal hyporeactivity as biopsychological marker for suicidal vulnerability in depression indicating Hippocampal Disorienting. Lars H Thorell, Linkoping University, Sweden</td>
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### Scientific Programme

#### November 15, 2019 - Friday

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<td>16:15–16:30</td>
<td>O-015 Bidirectional longitudinal association of omega-3 polyunsaturated fatty acids with depressive disorders. Carisha S. Thesing, Amsterdam University Medical Center, The Netherlands</td>
<td>O-020 Enhancing the clinical effectiveness of depression screening using patient-targeted feedback in general practices: The GET.FEEDBACK.GP multicentre randomized controlled trial. Sebastian Kohlmann, University Medical Center Hamburg-Eppendorf, Hamburg, Germany</td>
<td>O-025 Food craving in bipolar disorder. Martina Platzer, Medical University Graz, Austria</td>
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<td>16:30–16:45</td>
<td>O-016 Th17 and B cells as predictors of responsiveness to add-on cyclooxygenase-2 (COX-2) therapy in major depressive disorder. Gara Arteaga Henriquez, Vall d’Hebron Research Institute (VHIR), Spain</td>
<td>O-021 Symptoms overlap in ADHD and Bipolar Disorder in paediatric population: An overlooked issue? Krysztof Maria Wilczyński, Medical University of Silesia, Poland</td>
<td>O-026 Metabolic parameters as predictors of bipolarity in first-episode psychosis: a retrospective cohort study. Pedro Oliveira, University of Coimbra, Portugal</td>
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<td>Poster Session 1</td>
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# SCIENTIFIC PROGRAMME

## NOVEMBER 16, 2019 - SATURDAY

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| 09:00-10:00 | Plenary Session 3 | From complexity to sustainable psychological interventions for depression.  
Claudi Bockting, University of Amsterdam, The Netherlands |                                                                      |                                                                        |
| 10:00-11:30| Actigraphy research in affective disorders: a global overview from the mMARCH consortium.  
Dr. Femke Lamers, Amsterdam UMC, The Netherlands; Joanne S. Carpenter, University of Sydney, Australia; Jennifer Glaus, Lausanne University Hospital, Switzerland; Jihui Zhang, The Chinese University of Hong Kong, China; Sonia Difrancesco, Amsterdam UMC, Netherlands; Kathleen R Merikangas, National Institute of Mental Health, USA | Pharmacogenetics in unipolar and bipolar depression: review of the latest clinical evidence and new research directions.  
Dr. Simon Kung, Mayo Clinic, USA, Alfredo B. Cuéllar Barboza, Universidad Autonoma de Nuevo Leon, Mexico, Mark Frye, Mayo Clinic, USA, Chiara Fabbri, King’s College London, UK | Suicidality in Pediatric Mood Disorders: Implications for Clinical Practice.  
Iram Kazimi, Ana M. Ugueto, Cristian Patrick Zeni University Of Texas Health Sciences Center, USA |
| 11:30       | Closing Ceremony                                                       |                                                                      |                                                                        |
SPONSORS & EXHIBITORS

The Organising Committee would like to thank to the sponsors and exhibitors of 10th Conference of the International Society for Affective Disorders (ISAD 2019).

Listed in alphabetical order of company names.

Main Sponsor

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ABSTRACTS OF INVITED SPEAKERS
ABSTRACTS OF INVITED SPEAKERS

Claudi Bockting, PhD
Professor of Clinical Psychology in Psychiatry, Amsterdam UMC
and Co-director of the Urban Mental Health Institute at the
University of Amsterdam

From complexity to sustainable psychological interventions for depression.

Common mental health disorders (depressive and anxiety disorders) are a worldwide epidemic and there is no evidence that the epidemic is subsiding. Depression is a major contributor to the overall global burden of disease (WHO). Globally, more than 300 million people suffer from depression. Psychological and pharmacological treatments are effective treatments but only for half of treated patients. Further, relapse rates in depression after remission are unacceptably high. Although, some progress has been made in the past decade on preventing relapse with psychological interventions, also as alternative for continuation of antidepressants. Evidence for leading theories that explain the onset and maintenance of depression is fragmented. Whereas, depression is seen as a disorder that is caused by interplay of mental-, biological, stress related- and societal factors that can change over time characterized by large individual differences. One of the main research challenges is to understand the causal interplay between these factors in order to explore new targets for prevention and treatment. Complexity modelling has been successfully applied in other fields of science. In this presentation an overview will be given of the current evidence for relapse prevention psychological interventions. In addition, a multidisciplinary approach will be presented using complexity modelling in order to find new pathways to target common mental health conditions.

Jeff Daskalakis, Campbell Family Mental Health Research Institute, Canada

Neurophysiological Mechanisms of MST and rTMS Efficacy in Treatment Resistant Depression

Background: Little is known about the neurophysiological pathology of depression and how Magnetic Seizure Therapy and repetitive transcranial magnetic stimulation (rTMS) may affect neurophysiological markers in depression.

Methods: The TMS-Evoked Potential (TEP) waveform was assessed in subjects with major depressive disorder (MDD) undergoing treatment trials with both rTMS and MST.

Results: Patients receiving MST demonstrated significant changes in neurophysiology related to LTP like plasticity. By contrast, patients who received active rTMS demonstrated significant changes in neurophysiology related to LTD-like plasticity. Additional neurophysiologic data demonstrated that both MST and rTMS resulted in suppression in neurophysiological activity from the subgenual cingulate through region of interest analysis.

Conclusions: Our results highlight that TMS-EEG measures of plasticity and inhibition are related to brain stimulation therapy in TRD. The most noteworthy changes occurred in the DLPFC. Our results also demonstrate that while magnetic stimulation treatment was applied to the DLPFC, neurophysiological changes in the subgenual cingulate were also observed and related to treatment response.

Prof Morten L Kringelbach
Dept of Psychiatry, Queen’s College, Oxford University, United Kingdom

Whole-brain modelling of neuropsychiatric disorders: progress and potential

The study of human brain networks with in vivo neuroimaging has given rise to the field of connectomics, furthered by advances in network science and graph theory informing our understanding of the topology and function of the healthy brain. Whole-brain computational models can help generate and predict the dynamical interactions and consequences of brain networks over many timescales. The results show remarkable accuracy in mapping and predicting both spontaneous and task-based healthy network dynamics. This raises great expectations that whole-brain modeling and computational connectomics may provide a better understanding of brain disorders at a causal mechanistic level. In particular, I will show how whole-brain modelling may offer novel insights into the disruption of hedonic networks in neuropsychiatric disorders. This computational neuropsychiatry could potentially be leveraged to provide novel, more effective therapeutic interventions, e.g., through drug discovery and new targets for deep brain stimulation.
ABSTRACTS OF SYMPOSIUM
ABSTRACTS OF SYMPOSIA

S-001 Digital Technology to access and efficiently manage depression and anxiety in primary care and the general community: results of the PreDiCT and REBOOT studies.

Prof. Richard Morriss, University of Nottingham, UK
1. Michael Browning, Department of Psychiatry, University of Oxford, Oxford, United Kingdom;
2. Henricus G. Ruhe, Department of Psychiatry, Radboud University Medical Centre, Nijmegen, Netherlands;
3. Juliana Petersen, Institute of General Practice, Goethe-Universität, Frankfurt am Main, Germany;

Dr Michael Browning will present on the digital algorithm used to predict response to antidepressant treatment in the PreDiCT randomised controlled trial. The PreDiCT algorithm determines whether the current dose of antidepressant is likely or unlikely to result in treatment response. Henricus Ruhe will show the quantitative clinical effectiveness results of the PreDiCT randomised controlled trial conducted in 913 participants with primary care depressive episodes in five European countries comparing the effectiveness of antidepressant treatment supported by knowledge of the PreDiCT algorithm results versus antidepressant treatment without such support over 12 months. Juliana Petersen will outline the acceptability of the PreDiCT algorithm to patients, general practitioners and psychiatrists using both quantitative and qualitative methods.

Richard Morriss will discuss the results of the REBOOT study which ran a public health and digital campaign offering digital peer support targeted at people who score in the clinical range for depression and anxiety on self-rated measures (PHQ-9 and GAD-7 in one county in the United Kingdom (population 1.1 million). It will highlight who might be reached using this method and what other services they may or may not be in contact with. He will also lead the discussion of the whole results in the context of the wider literature presented by each of the speakers in their presentations.

Background: Only one third of people with depression access help from community, primary care or mental health services. Antidepressant treatment in primary care can result in relatively slow improvement before people have relief from their symptoms and return to work. We present 2 studies (PreDiCT and REBOOT) that provide new data on the value of digital approaches to address these two issues.

Presentation 1 will present on the digital algorithm used to predict response to antidepressant treatment in the PreDiCT randomised controlled trial. The PreDiCT algorithm determines whether the current dose of antidepressant is likely or unlikely to result in treatment response.

Presentation 2 will show the quantitative clinical effectiveness results of the PreDiCT randomised controlled trial conducted in 913 participants with primary care depressive episodes in five European countries comparing the effectiveness of antidepressant treatment supported by knowledge of the PreDiCT algorithm results versus antidepressant treatment without such support over 12 months.

Presentation 3 will outline the acceptability of the PreDiCT algorithm to patients, general practitioners and psychiatrists using both quantitative and qualitative methods.

Presentation 4 will discuss the results of the REBOOT study which ran a public health and digital campaign offering digital peer support targeted at people who score in the clinical range for depression and anxiety on self-rated measures (PHQ-9 and GAD-7 in one county in the United Kingdom (population 1.1 million). It will highlight who might be reached using this method and what other services they may or may not be in contact with.

The symposium will then discuss the potential value of digital mental health approaches for reaching and treating people with depression and anxiety in the light of these study results and the wider literature.

Keywords: digital, depression, anxiety, antidepressants, reach

S-002 Early Life Stress in Affective Disorders: From Neuroscience to Diagnosis and Treatment.

Mario Jurjena
Psychological Medicine- Centre For Affective Disorders, King’s London College, UK

Chairperson: Jurjena, Mario F., Centre for Affective Disorders, IoPPN, King’s College London, London, UK

Background: Patients with affective disorders reported frequent and severe Childhood Maltreatment (CM), that negatively influences the clinical expression of the disorders, but also impacts on the physical health of patients. The deleterious consequences of CM are thought to be mediated by disturbances in several biological pathways.

Purpose of the symposium: To present new and convergent data demonstrating the associations between CM, the clinical expression of affective disorders, and physical health, alongside with putative biological mediators and markers. Articulation of the symposium: Using a large sample of patients with bipolar disorders (BD), Prof Etain will show that CM (mainly emotional or sexual abuse) is associated with physical comorbidities, whereas lithium might be protective against such a medical burden. In a large sample of patients, Dr Aas will show that CM decreases telomere length and increases hair cortisol levels, thus possibly predisposing to accelerated ageing in severe mental disorders. She will also describe correlations between such biomarkers and structural brain abnormalities. Dr. Jurjena will present new data on hormonal (cortisol, aldosterone) and genetic biomarkers (glucocorticoid and mineralocorticoid receptors) in patients with affective disorders and highlight different ways of mineralocorticoid receptors functioning in depressive unipolar and bipolar disorders. Prof. Machado-Vieira will open the discussion by reviewing the current conceptual status of biomarkers as clinical and diagnostic tools for BD and as surrogate endpoints in clinical research in BD. His talk will make a focus on stress-response and lithium-response related markers for future research.

Bruno Etain – University Paris Diderot and Assistance Publique des Hopitaux de Paris, Paris, France
Childhood maltreatment and the physical burden of patients with bipolar disorders

Abstract: Childhood maltreatment, including emotional, physical or sexual abuse, is frequent and severe in patients with bipolar disorders (BD). It has been previously demonstrated that childhood maltreatment influences the clinical expression of BD, leading to a more severe and unstable course of the disorder. However, little is known about the potential influence of childhood maltreatment on the physical health of patients with BD. We studied the association between the number of associated physical conditions and childhood maltreatment in a sample of 1465 individuals with BD. The median number of medical disorders was 3 (IQR=1-4). Only 8.4% of individuals with BD presented with no medical disorder, 38.7% had only one medical comorbidity and 53.0% had at least two medical comorbidities. The most prevalent medical comorbidities were hypercholesterolemia (49%), hypertriglyceridemia (22%), migraine (20%), hypertension (19%), allergies (other than asthma) (19.7%) and headache (13.6%). The higher the severity of childhood maltreatment was, the higher the number of associated medical disorders. After adjusting for potential confounders, childhood maltreatment (measured using the Childhood Trauma Questionnaire total score) was significantly associated with a higher number of medical disorders. This association was more particularly observed for emotional abuse and sexual abuse or with the sum of childhood abuse (emotional, physical and sexual abuse). We
ABSTRACTS OF SYMPOSIA

Suggested that childhood maltreatment may contribute to the physical burden of patients with BD.

Monica As- NORMENT K.G Jebsen Centre for Psychology Research, Institute of Clinical Medicine, University of Oslo, Oslo, Norway

Telomere length is associated with childhood trauma experiences in patients with mental disorders.

Abstract: Reduced telomere length (TL) and structural brain abnormalities have been reported in patients with schizophrenia (SZ) and bipolar disorder (BD). Childhood traumatic events are more frequent in SZ and BD than in healthy individuals (HC), and based on recent findings in healthy individuals could represent one important factor for TL and brain aberrations in patients. The study comprised 1024 individuals (SZ [n=373]; BD [n=249]; and HC [n=402]). TL was measured by quantitative polymerase chain reaction (qPCR), and childhood trauma was assessed using the Childhood Trauma Questionnaire (CTQ). Diagnosis was obtained by the Structured Clinical Interview (SCID) for the Diagnostic and Statistical Manual of Mental Disorders-IV (DSM-IV). FreeSurfer was used to obtain regional and global brain volumes from TL - weighted magnetic resonance imaging (MRI) brain scans. All analyses were adjusted for current age and sex. Hair cortisol (a measure of stress over time) was measured by ELISA. A subset of 16 patients had data collected on hair cortisol, childhood trauma and TL. Patients had on average shorter TL (F=7.87, p=0.005, Cohen's d=0.17) and reported more childhood trauma experiences than HC (χ²=14.89, p=0.001). Patients with a history of childhood sexual, physical or emotional abuse had shorter TL relative to HC and to patients without a history of childhood abuse (F=6.24, p=0.01, Cohen's d=0.36). After adjusting for childhood abuse, no difference in TL was observed between patients and HC (p=0.27). Our analyses revealed no significant associations between TL and clinical characteristics or brain morphometry. Higher levels of cortisol measured in hair was associated with childhood trauma experiences and shorter TL (p<0.05). We demonstrated shorter TL in SZ and BD compared to HC and showed that TL was sensitive to childhood trauma experiences. Further studies are needed to identify the biological mechanisms of this relationship.

Mario F. Juruena - Centre for Affective Disorders, IoPPN, King’s College London, London, UK

Genetic, HPA axis and early life stress impact in affective disorders.

Abstract: There are still few studies assessing biomarkers for differentiation of major depressive disorder (MDD) and bipolar disorder (BD), mainly related to glucocorticoid receptors (GR) and mineralocorticoid receptors (MR). The aim is finding genetic and/or hormonal biomarkers and association to early-life stress (ELS). A sample of N = 273, being n = 113 control, n = 78 unipolar, and n = 82 bipolar subjects. Researching for genetic biomarker, genotypic and allelic frequencies of 3 GR polymorphisms (N363S, R22 / 23K and BclI) and 2 MR polymorphisms (MI180V and -2G/C) were evaluated. Genetic and endocrine variables, and the effect of ELS over these variables were assessed. We suggest that MR receptors have a key role of within the epigenetic of unipolar and bipolar depression, and different way of MR functioning in each disorder.

Rodrigo Machado-Vieira - Dept. of Psychiatry and Behavioral Sciences, University of Texas Medical School, Houston, USA

Biomarkers for diagnosis and treatment of Bipolar Disorder: New Findings Supporting a Resilience Role for Lithium.

Abstract: Lithium is a key pharmacotherapy for the treatment of acute mood episodes, prophylactic treatment, and suicide prevention in BD. Besides, lithium blood level is the most widely used biomarker in clinical psychiatry. The concept of stress in BD characterizes short- and long-term deleterious effects at multiple levels (e.g., epigenetic, behavioral, and psychological) and may be efficiently employed to examine the nature of depressive associations emerging in nutritional epidemiology, providing indications on the most promising associations to be prioritized in subsequent intervention studies.

Yuri Milaneschi - Department of Psychiatry, Amsterdam Public Health and Amsterdam Neuroscience, Amsterdam UMC, Vrije Universiteit, Amsterdam, The Netherlands

S-003 Translating evidence from nutritional epidemiology to interventions for depression: challenges, results and future perspectives

Michael, Berk, Deakin University, IMPACT Strategic Research Centre and the Food & Mood Centre, Victoria, Australia

Olivia I., Okereke, Department of Psychiatry, Massachusetts General Hospital and Harvard Medical School, Boston, USA

Marska, Bot, Department of Psychiatry, Amsterdam UMC, Vrije Universiteit, Amsterdam, The Netherlands

In recent years a growing interest has emerged for the potential of nutritional supplementation in the prevention of depression. Epidemiological evidence consistently showed an inverse association between depression and circulating concentrations of compounds that could be easily supplemented, such as vitamin D and omega-3 fatty acids. Nevertheless, the translation of these associations into effective interventions faces several challenges. Observational associations may be biased by unresolved confounding, shared genetic risk, or reverse causality. Furthermore, testing the effect of nutrient supplementation in the prevention of depression requires the design of methodologically robust trials with large samples.

In this symposium, four leading investigators from Europe, the USA and Australia will illustrate state-of-the art research translating evidence from nutritional epidemiology to interventions for depression, showing results from the broader scientific literature and from their own studies, including the two largest randomized controlled trials.

Professor dr. Michael Berk will provide an overview of nutritional epidemiology in the context of mental health, highlighting methodological pitfalls and challenges, candidate biological mechanisms and the potential for nutritional and lifestyle strategies in preventing mental disorders. Prof. dr. Olivia Okereke will describe the implementation of the VITAL-DEP trial, assessing the effects on prevention of depression and trajectory of mood symptoms of long-term supplementation with vitamin D and marine omega-3 fatty-acids in 25,874 older adults. Dr. Mariska Bot will report the results from the EU-funded MooDFOOD trial, examining the effectiveness of two different nutritional strategies (multi-nutrient supplementation and food-related behavioral change therapy) to prevent depression over a 12-month follow-up in 1025 overweight individuals with elevated depressive symptoms. Finally, dr. Yuri Milaneschi will show how recently developed genomic tools could be efficiently employed to examine the nature of depressive associations emerging in nutritional epidemiology, providing indications on the most promising associations to be prioritized in subsequent intervention studies.
ABSTRACTS OF SYMPOSIA

Keywords: depression, nutrition, supplementation, prevention, trial, genomics

S-004
New platforms and approaches to the prediction of treatment outcomes in major depressive disorder.

Major depressive disorder remains one of the top causes of disability worldwide, partly because of limited success of treatment. Although a number of treatment options are available for individuals with major depressive disorder, treatment success is inconsistent, with response rates ranging between one third and one half of individuals who receive treatment. The burden of major depressive disorder could be substantially reduced if we could accurately predict which treatment will be beneficial for which individual. To date, clinically meaningful personalised treatment choice is not available, because of lack of accessible and accurate predictors. Prediction accurate enough to enable such personalized treatment selection may require multiple measurements across large datasets. This symposium introduces current innovative efforts on obtaining such prediction, including a new network of investigators collecting biomarkers across treatment cohorts, an international collaboration combining genetic data on response to antidepressants, an on-line platform that integrates traditional evidence with observational data in real time to enable personalized treatment for depression and an application of artificial intelligence to integrative analysis leveraging clinical, neuroimaging and molecular data to optimize prediction of treatment outcome. These efforts are currently ongoing and proceeding in parallel while exchanging information. These projects have in common an emphasis on collaboration, integration and rapid translation of knowledge to clinical applications. At the time of presentation, the four projects will be in an advanced phases. We are expecting new results sharing and a lively discussion on implementing biomarkers to personalise treatment selection in clinical practice.

Predicting Antidepressant Treatment Outcome in the Canadian Biomarker Integration Network in Depression (CAN-BIND)

Sidney H. Kennedy, Sakina J. Rizvi PhD, Xiamin Leng, Stefanie Hassel, Amanda Ceniti, Stephen C. Strrother, Raymond W. Lam, Roumen Milev, Susan Rotzinger, Jane A. Foster, Benicio N. Frey, Roumen Milev, Amanda Ceniti, Stephen C. Strrother, Raymond W. Lam, Roumen Milev, Susan Rotzinger, Jane A. Foster, Benicio N. Frey, Sagar V. Parikh, Claudio N. Soares, Rudolf Uher, Gustavo Turecki, Glenda M. MacQueen, Jonathan Downar, Katharine Dunlop

The Canadian Biomarker Integration Network in Depression (CAN-BIND) applies an integrative clinical and biological approach to identifying markers of response to disparate treatment modalities. This presentation will focus on outcome trajectories in a cohort of 211 MDD participants who received escitalopram for 8 weeks, and on outcomes for the non-responder group at 8 weeks who received adjunctive aripiprazole for a further 8 weeks. A healthy comparison (HC) group (n=109) also completed similar assessments over 16 weeks. These included the Dimensional Anhedonia Rating Scale (DARS) and a Monetary Incentive Delay (MID) task, performed during functional MRI at baseline. Outcomes were measured with the observer-rated Montgomery and Asberg Depression Rating Scale (MADRS) every two weeks for 16 weeks. Three outcome trajectories were identified: fast responders (n=57); slow responders (n=60) and non-responders (n=57). Baseline DARS scores did not differ between fast responder and HC groups, though both displayed significantly lower levels of anhedonia compared to slow and non-responders. Furthermore, fast responders were not different on anticipatory or consummatory measures on the MID task. Non-responders displayed significantly less activity in the ventral striatum during anticipation compared to HCs. These findings support further exploration of reward circuitry as part of an integrated biomarker panel to identify responder groups for antidepressant treatment.

Combining datasets to identify genetic predictors of response to antidepressants

Oliver Pain, Andrew McIntosh, Cathryn Lewis, Antidepressants are the first-line treatment for depression, but remission rates are low: only 30% of patients reach remission with their first treatment. We lack specific predictors to identify which patients will respond to which treatments but genetics play an important role with common genetic variants explaining 42% of individual differences in antidepressant response. Nevertheless, consistently replicated genetic associations with treatment outcomes remain elusive. This is likely due to limitations in statistical power. In order to tackle this issue, the Psychiatric Genomics Consortium Major Depressive Disorder working group have brought together existing genome-wide association studies containing information on treatment outcomes within the “Genetics of Antidepressant Treatment” subgroup. We have collected together data from 15 international research groups for the first wave of analysis, which includes more than 11,000 treated, depressed patients with outcome and genome-wide data available. This will is the largest collaborative initiative to detect genetic signals for antidepressant outcomes to date. Studies are from both industry and academia, and include pharmacological and psychological depression treatments. In this talk, we will present the resource that we have collected for this first wave analysis and our analysis approach to better understanding the genetics of treatment response in depression.

Integrating published evidence with observational data in real time to support shared decision making for personalised treatment of depression

Anneka Tomlinson, Andrea Cipriani, Antidepressants are the first line treatment for depressive disorder. Many patients, however, are given antidepressants, which, for them, prove ineffective or cause intolerable side-effects. This happens because antidepressants are prescribed without a clear understanding of which drug is the most appropriate medication for each individual in terms of both efficacy and tolerability. So, people stop the antidepressant early because they are prescribed a drug which might work for an “average person”, but has not been tailored to them individually. There is widespread concern about the negative consequences if antidepressants are prescribed without taking into account individual patients circumstances. Regulatory bodies and guidelines developers across the world have recommended the improved targeting of antidepressant treatment for depression, but this advice has not yet been translated into practice. The aim of our project is to develop an internet-based system which will help doctors and patients together choose the best antidepressant for each individual with moderate to severe symptoms of depression, considering together both the efficacy and the adverse events of these drugs. This system integrates the best available scientific information (randomised evidence) with observational data and the preferences of patients to provide, for the first time, a bespoke clinical decision aid for antidepressant treatment. We will use multiple databases that can be analysed with network meta-analytic approaches to understand which medicine is more effective or causes less adverse events in each particular individual. The system will be tested in a pilot randomised controlled trial recruiting depressed patients in primary and secondary care across the UK. Patients and carers will be involved in the design and development of the internet-based system and the trial. This project will provide patients, carers and doctors with a user-friendly, innovative tool for shared decision making, ready to be implemented in real-world clinical practice.
Emerging Mood Science

New methodologies including neuroimaging and genomics bring the potential for improved prediction of treatment outcomes and personalized treatment selection. With present methods, millions of variables can be accumulated measuring the symptoms, cognition, brain function, genetic sequence and gene expression in a given individual. However, the amount and type of information required to accurately predict outcome of treatment is unknown. We probe the added value of novel methods of measurement in a machine learning integrative analysis of a novel treatment cohort assembled by the Canadian Biomarker Integration Network in Depression (CAN-BIND). In a discovery cohort of 211 individuals with major depressive disorder, we test the improvement in predicting response to antidepressant treatment with the addition of more clinical, neuroimaging and molecular variables in a tiered cross-platform approach. Results to date suggest that: (1) Combination of clinical, neuroimaging and molecular data provides more accurate prediction than a single type of measurement. (2) Addition of measures obtained early in the course of treatment (week 2) substantially improves prediction of eventual treatment outcomes. (3) Predictions replicate in new ‘unseen’ samples. We present our results in the context of an updated systematic review of multivariate prediction of treatment outcomes in individuals with major depressive disorder. A unique feature of CAN-BIND is an ongoing validation study which allows a planned prospective test of predictive model generalization and transfer learning.

Keywords: major depressive disorder, biomarkers, pharmacogenetics, artificial intelligence, personalized medicine, antidepressant medication

S-005
Psilocybin Therapy for Treatment Resistant Depression: A Good or Bad Trip?
The psychedelic drugs, particularly psilocybin, are now being reinvestigated as therapeutic options in non-psychotic mental health problems, with treatment resistant depression the current focus of phase 2 trials in Europe and the US. Research teams at Imperial College London (led by Robin Carhart-Harris and David Nutt) and King’s College London (led by James Rucker and Allan Young) will summarise the current evidence for psilocybin in treatment resistant depression and describe how recent work on the biological and psychological mechanism of action of psilocybin, and psychedelics in general, suggests that this treatment may be more generally applicable than resistant forms of unipolar mood disorder.

Dr Robin Carhart-Harris, BSc, MSc, PhD. Imperial College London. How do Psychedelics Work? A General Overview.

Our group at Imperial College London, and previously in Bristol and Cardiff, have published numerous studies on the mechanism of action of LSD, DMT and psilocybin, which dovetail into a pilot study in treatment resistant depression that was published in 2016, and an ongoing trial in non-treatment resistant depression. I will present some of our group’s work to exemplify how psilocybin may be working in the human brain and why this may have utility in psychiatry.

Taylor Lyons, Imperial College London. Do Psychedelics Cause Long Term Brain Changes?

Taylor Lyons will present work from her PhD looking at long term neuroimaging changes in participants in trials of psilocybin at Imperial College London

Liam Modlin and Gemma Knight, King’s College London. Set and Setting. The Effect of Context in Psilocybin Therapy.

Liam Modlin and Gemma Knight are psychological therapists working within the psilocybin trials at King’s College London. They will present the therapeutic model that we are working with and describe how pre-prohibition work with psychedelics like LSD, as well as more contemporary theory, has informed the modern therapeutic model.

Kristina Posadas and Aster Daniel, King’s College London. Clinical Trials with Psilocybin. What are the Practical Challenges of Delivery?

Kristina Posadas and Aster Daniel are clinical research nurses working within the Clinical Research Facility at King’s College Hospital, where three trials of psilocybin are ongoing. They will discuss the processes and challenges of delivering trials with a drug that makes its users uniquely sensitive to their environment, and the wider challenges inherent in the legal status of psilocybin.

Keywords: Treatment resistant depression, psilocybin, clinical trials

S-006
Sleep and circadian patterns in bipolar disorders: from signal detection to correlation with clinical outcomes

Bruno ETAIN

University Paris Diderot, Paris, France.

Objectives: Patients with Bipolar Disorder (BD) reported altered sleep and circadian patterns, both during acute episodes and remission. We aim at describing which abnormalities better distinguish euthymic patients with BD from controls and how such abnormalities may influence clinical outcomes.

Methods: We use a sample of 150 euthymic patients with BD and 100 healthy controls who underwent 3 weeks of actigraphy recording and a larger database of hundreds of patients from a national network with a clinical assessment of sleep quality using questionnaires. Using discriminant function analysis, we describe which actigraphy parameters optimally characterize patients as compared to controls. We further describe how abnormalities (measured with actigraphy or questionnaires) correlate with several clinical outcomes such as metabolic syndrome, emotional reactivity, exposure to medication and, mood recurrences.

Results: Patients with BD are optimally classified by a combination of neuroimaging and molecular variables in a tiered cross-platform network with a clinical assessment of sleep quality using actigraphy or questionnaires. Using discriminant function analysis, we describe which actigraphy parameters optimally characterize patients as compared to controls. We further describe how abnormalities (measured with actigraphy or questionnaires) correlate with several clinical outcomes such as metabolic syndrome, emotional reactivity, exposure to medication and, mood recurrences.

The combination of variables can be accumulated measuring the symptoms, cognition, brain function, genetic sequence and gene expression in a given individual. However, the amount and type of information required to accurately predict outcome of treatment is unknown. We probe the added value of novel methods of measurement in a machine learning integrative analysis of a novel treatment cohort assembled by the Canadian Biomarker Integration Network in Depression (CAN-BIND). In a discovery cohort of 211 individuals with major depressive disorder, we test the improvement in predicting response to antidepressant treatment with the addition of more clinical, neuroimaging and molecular variables in a tiered cross-platform approach. Results to date suggest that: (1) Combination of clinical, neuroimaging and molecular data provides more accurate prediction than a single type of measurement. (2) Addition of measures obtained early in the course of treatment (week 2) substantially improved prediction of eventual treatment outcomes. (3) Predictions replicate in new ‘unseen’ samples. We present our results in the context of an updated systematic review of multivariate prediction of treatment outcomes in individuals with major depressive disorder. A unique feature of CAN-BIND is an ongoing validation study which allows a planned prospective test of predictive model generalization and transfer learning.

Keywords: major depressive disorder, biomarkers, pharmacogenetics, artificial intelligence, personalized medicine, antidepressant medication
ARE SLEEP & CIRCADIAN DYSREGULATION A MARKER OF FUTURE BIPOLARITY IN YOUTH WITH EMERGING MOOD DISORDERS?
PROFESSOR JAN SCOTT, NEWCASTLE UNIVERSITY, UK.
Objectives: There is limited research on sleep-wake cycle and circadian rhythm disturbances in young people with or without familial risk of mood disorders.
Methods: This presentation explores findings from actigraphy recordings undertaken in ~60 youth aged 200 youth and examined which parameters of sleep-wake cycle and cognitive style identified who developed a full threshold mental disorder over 12 months.
Results: After controlling for confounders (e.g. BMI), the circadian rhythm index differentiated unipolar from bipolar cases. Several actigraphic and self-rated measures of sleep pattern were different in familial bipolar disorder and might represent traits (e.g. sleep duration), with variability being a more useful marker of caseness or current state (e.g. variability in sleep efficiency). Interestingly, self-rated fatigue and rumination were important trans-diagnostic predictors of transition from subthreshold to full threshold disorders.
Conclusions: We conclude that familial and non-familial mood disorders may show some differences in sleep profile. Furthermore, less robust circadian rhythmicity, especially associated with increasing symptom severity, may represent a more specific or a trait marker of young people with mood disorders who are at higher risk of bipolarity.

Digital Cognitive Behavior Therapy for Insomnia for individuals with high levels of depressive symptoms: Secondary analyses of a randomized controlled trial.
DR HAVARD KALLESTAD, NTNU, TRONDHEIM, NORWAY.
Background: Individuals with depression frequently experience insomnia and daytime fatigue.
Aims: To test if digital Cognitive Behavior Therapy for Insomnia (dCBT-I) is effective in reducing levels of insomnia severity, daytime fatigue, and depression in a population of individuals with high levels of depression and insomnia. Secondary, to test if there were differences in treatment response between participants with high and low levels of depressive symptoms.
Method: Secondary analyses of a randomized controlled trial comparing dCBT-I with Patient Education (PE) in individuals with insomnia. A cut-off of 16 points on the Hospital Depression and Anxiety Scale (HADS) was used to categorize participants as depressed or non-depressed. Levels of insomnia were assessed with the Insomnia Severity Index (ISI), levels of fatigue were assessed with the Chalder Fatigue Scale (CFS), and levels of psychological distress was assessed with the HADS. Assessments were performed pre and post treatment.
Results: Of the 1721 participants included in the trial, 610 scored above the HADS cut-off for depression. Compared to PE, the participants with depression who received dCBT-I had a 5.0 (95% CI 3.9 to 6.0) point lower score on the ISI (p
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Speaker 3-Abstract
Brain Age in Bipolar Disorders – Effects of Lithium Treatment
Tomas Hajek
Department of Psychiatry, Dalhousie University, Halifax, Canada

Bipolar disorders (BD) increase the risk of dementia and show biological and brain alterations, which resemble accelerated aging. Lithium may counter some of these processes and lower the risk of dementia. However, until now no study has specifically investigated the effects of Li on brain age. We acquired structural MRI scans from 84 BD participants (41 with and 43 without Li treatment) and 37 controls. We used a machine learning model trained on an independent sample of 504 controls to estimate the individual brain ages of study participants, and calculated BrainAGE by subtracting chronological from the estimated brain age. BrainAGE was significantly greater in non-Li relative to Li or control participants (F(2, 117)=9.74, p<0.001), with no differences between the Li treated and control groups. The estimated brain age was significantly higher than the chronological age in the non-Li (4.2±6.3 years, matched t(42)=4.43, p<0.001), but not the Li treated group (0.48±7.60 years, NS). Even Li treated participants with partial prophylactic treatment response showed lower BrainAGE than the non-Li group (F(1, 64)=4.80, p<0.05). Bipolar disorders were associated with greater, whereas Li treatment with lower discrepancy between brain and chronological age. These findings support the neuroprotective effects of Li, which were sufficiently pronounced to affect a complex, multivariate measure of brain structure. The association between Li treatment and BrainAGE was independent of comorbidity of a variety of neuropsychiatric disorders, including anxiety, depression, ADHD, autism and addiction. Previous studies with relatively clean MDD have suggested that it is altered funding priorities and training future psychiatrists and five training recommendations for psychiatrists will be identified.

S-008
Computational Neuroscience Approaches in Mood Disorders
Henricus Ruhe, Radboudumc/Donders Centre, The Netherlands

With the increasing understanding of brain mechanisms and computing power, neuroscience and especially computational methods are becoming more important in understanding the healthy brain and psychiatric disorders. However what exactly is computational neuroscience and how can it be applied to affective disorders?

In the present symposium 4 expert speakers will present their original work to illustrate the case of computational neuroscience. First Douglas Steele (UK) will introduce the different aspects of computational approaches in psychiatry and explain applications of machine learning and model-based computational work. In the second talk Sophie Brolsma (NL) will present new work on reversal learning in a large cohort of bipolar patients recurrent depression, showing persistent dysfunctions of dopamine-related activity in the brainstem during Pavlovian conditioning. Finally, Gregor Hasler (CH) will provide several examples from the field of neuroeconomics which can be used to better understand among others major depressive disorder. We will end the symposium with a general discussion of the applicability of computational neuroscience in affective disorders.

After this symposium the listener will have learned
1. to distinguish different areas of application of computational models in psychiatry
2. to understand the relevance of these models in understanding (vulnerability for and/or pathophysiology of) Major Depressive Disorder

J. D. Steele, M.P. Paulus
The necessity and pragmatic applicability of Computational Neuroscience for Clinical Psychiatry

There is a remarkable need for progress in the practice of clinical psychiatry. Mental illness and substance use disorders are the leading cause of long term disability and a cause of significant early mortality. Suicide is a leading cause of death in young adults and severe and enduring mental illness is associated with a reduction in lifespan of about a decade. Mood disorder is the single biggest cause. However clinical practice in psychiatry has not fundamentally changed in over half a century. Discussion on the relationship between neuroscience and clinical psychiatry is highly topical. Currently, the Royal College of Psychiatrists is reviewing its trainee curriculum to identify neuroscience that relates to clinical practice. However, neuroscience has had very little impact on routine clinical practice. This presentation will address the causes of this lack of impact and propose a solution. It will be argued that a pragmatic approach to neuroscience is required and a route to implementation in NHS care will be discussed. Published proof of concept studies with an emphasis on mood disorder will be highlighted and challenges to implementation in NHS psychiatric services addressed. The link between pragmatic neuroscience for clinical psychiatry and psychiatric illness mechanisms research into mood disorder, such as computational model-based fMRI and genetics, will be discussed. This perspective has implications for altered funding priorities and training future psychiatrists and five training recommendations for psychiatrists will be identified.

S. Brolsma, R. Cools, J. Vrijsen, E. Vassen, M. Rostami Kandroodi, Ph. van Eijndhoven, R. Collard, H. den Ouden, A.H. Schene
Challenging the negative learning bias hypothesis of depression: reversal learning in a naturalistic psychiatric sample

Major Depressive Disorder (MDD) is a debilitating psychiatric disorder with a high prevalence. Prior studies often examine the neurobiological, cognitive and computational mechanisms of MDD in relatively clean patient groups. We focus on a large naturalistic sample of medicated psychiatric patients, characterized by high comorbidity of a variety of neuropsychiatric disorders, including BD, but also anxiety, ADHD, addiction, and autism. This approach allows us to investigate mechanisms of more “ecologically valid” MDD in a group of patients representing the larger population. Previous studies with relatively clean MDD have suggested that it is characterized by a negative bias, that is, a shift towards enhanced punishment sensitivity and reduced reward sensitivity, during learning and memory. In the current study we exploit computational model-based analyses of probabilistic reversal learning data to assess the specificity of such an effect to MDD relative to other major psychiatric disorders. Results indicate that changes in reward versus punishment sensitivity do not account well for effects of MDD in naturalistic patients, who commonly suffer from more than one disorder. The data highlight the importance of investigating large naturalistic samples of psychiatric patients, characterized by high comorbidity.

Impaired reward-related learning signals in remitted unmedicated patients with recurrent depression

One of the core symptoms of major depressive disorder is anhedonia, an inability to experience pleasure. In patients with major depressive disorder, a dysfunctional reward-system may exist, with blunted temporal difference (TD) reward-related learning signals in the ventral striatum (VS) and increased TD-related (dopaminergic) activation in the ventral tegmental area (VTA). Anhedonia often remains as residual symptom after remission, however, it remains largely unknown whether abovementioned reward-systems are still dysfunctional when patients are in remission. We used a Pavlovian classical conditioning functional MRI task to explore the relationship...
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between anhedonia and the TD-related response of the VTA and VS in medication-free remitted recurrent depression patients (rrMDD; n = 36) versus healthy controls (n = 27). Computational modelling was used to obtain the expected TD-errors during this task. rrMDD-patients, compared to healthy controls, showed significantly increased TD reward-learning activation in the VTA (P(FWE,SVC) = 0.028). No differences were observed between groups for VS activity. A group by anhedonia interaction (t(57) = -2.29, P = 0.026) indicated that in rrMDD-patients, higher anhedonia was associated with lower VTA TD-activation, while in healthy controls higher anhedonia was associated with higher VTA TD-activation. These findings suggest impaired reward-related learning signals in the VTA during remission in rrMDD-patients. This merits further investigation to identify impaired reward-related learning as an endophenotype for recurrent depression. Moreover, the inverse association between reinforcement learning and anhedonia in rrMDD implies an additional disturbing influence of anhedonia on reward-related learning or vice versa, suggesting that the level of anhedonia should be considered in behavioural treatments.

G. Hasler
How the neuroeconomics revolution will revolutionize psychiatry
Neuroeconomics is a growing new research discipline. It is aimed at describing the neural substrate of decision-making using incentivized decisions introduced in experimental economics. The combination of economic decision theory and neuroscience opens up new ways to better examine the interactions of social, psychological and neural factors with regard to motivational forces that may underlie common psychiatric problems. Game theory will provide psychiatry with computationally principled measures of cognitive dysfunction.
Dr. Hasler will illustrate the potential of this new framework for psychiatric research on the basis of his recent research. Examples will include competition avoidance in major depression, impairments of reward-effort integration in remitted bulimia nervosa with comorbid depression, and deficits in trust, cooperation and norm compliance in children with social and affective disorder.

S-009
New approaches to understanding the trajectories of mood disorders across the life course.
Speaker: Professor Ian Hickie, The University of Sydney, Australia.
Speaker: Professor Bruno Etain, Diderot University, Paris, France.
Mood disorders typically emerge during adolescence and young adulthood and are associated with multiple comorbidities and socioeconomic difficulties. This symposium comprises of three presentations that all report on new studies of illness trajectories across different age groups (youth, parents and probands, older adults). Taken together the symposium addresses key gaps in our current knowledge. For example, using clinical histories of individuals included in genetics databases in Europe and America, Scott describes the chronology of comorbidities that precede the onset of depression and mania in familial and non-familial cohorts and highlights evidence for heterotypic continuity over time. Then Hickie summarizes recent work from the Brain and Mind Centre in Australia delineating the longitudinal evolution of onset of adult-pattern disorders and the impact on social and occupational functioning of young people attending early intervention services (Hickie). Using data from a large multicentre cohort attending specialist clinics in France, Etain explores the trajectories and predictors of relapse and functioning in older adults with established illness (Etain).

A trajectory analysis of the evolution of familial and non-familial mood disorders and the similarities in illness patterns between parents and probands.
Professor Jan Scott, Newcastle University, UK.
Objectives
To examine the chronology and prevalence of longitudinal comorbidities associated with the onset of bipolar I disorder (BD-I) in cohorts of familial and non-familial cases from Europe and parent-proband pairs from USA.
Materials and Methods
All participants had passed through the peak age range for onset of bipolar disorders and completed a structured clinical interview that confirmed that they met DSM IV criteria for BD-I and recorded prior history of mental disorders. Trajectories were modelled using e.g. survival analysis, Classification and Regression Trees (CART) and networks.
Results
The European cohort comprised of >300 non-familial cases and >200 familial cases of BD-I; the USA cohort comprised of 92 parent-proband pairs. Less than 50% any subgroup reported no precursor disorders. Although the trajectory plots were similar across all groups, the density of illness (age of onset of first precursor condition and number of comorbidities) was higher in younger familial groups and, along with cannabis misuse, predicted an earlier age at onset of BD-I, especially regarding the first major depressive episode. Proband had a significantly earlier age of BD-I onset compared with their parents. It was noticeable that certain comorbidities consistently occurred after the onset of BD-I in all groups.
Conclusions
This paper uses a developmental approach to psychopathology and examines how trajectory modelling can increase our understanding of the evolution of BD-I. It highlights the complex longitudinal inter-relationships between comorbidities in those with and without genetic risk of BD and confirms the heterotypic continuity of childhood conditions and adult mood disorders.

Delineating the transition from subsyndromal to syndromal disorders and trajectories of social and occupational functioning of young people attending early intervention mental health services in Australia: a longitudinal study.
Speaker: Professor Ian Hickie, The University of Sydney, Australia.
Objectives
Mental disorders typically emerge during adolescence and young adulthood and put young people at risk for prolonged socioeconomic difficulties.
Materials & Methods
Data were collected between January 2005 and August 2017 from a youth mental health service. Multi-state Markov models were used to examine demographic and clinical predictors of transition from earlier (sub-threshold) to later (full-threshold) stages of illness in >2000 individuals aged 12-32 years. In a subsample of 554 group-based trajectory modelling (GBTM) was used to identify distinct trajectories of social and occupational functioning over time.
Results
39% of participants transitioned from `non-specific’ to specific subthreshold conditions with lower social functioning (HR=0.77; CI 0.65-0.90), manic-like experiences (HR=3.06; CI 1.33-7.02), psychotic-like experiences (PLE; HR=2.55; CI 1.61-4.04) and depression (HR=1.98; CI 1.40-2.78) being predictors. Transitioned to full-threshold disorders (13%) was predicted by PLE (HR=1.96; 95% CI 1.33 – 2.88), prior receipt of psychotropic medications (HR=1.51; 95% CI 1.08 – 2.12) and older age (HR=1.25; 95% CI 1.05 – 1.47). Between first clinical contact and time last seen, 15% of young people had reliably deteriorated, 23% improved and 62% did not demonstrate substantive change in social functioning; not being in education, employment or training, previous hospitalization and a younger age at baseline emerged as significant predictors of GBTM functional trajectories.
ABSTRACTS OF SYMPOSIA

Actigraphy research in affective disorders: a global overview from the mMARCH consortium
Joanne S. Carpenter, Brain & Mind Centre, University of Sydney, Camperdown, NSW, Australia; Jennifer Glaus, University Service of Child and Adolescent Psychiatry, Lausanne University Hospital, Lausanne, Switzerland; Jihui Zhang, Department of Psychiatry, Faculty of Medicine, The Chinese University of Hong Kong, Shatin, N.T., Hong Kong SAR, China; Sonia Difrancesco, Department of Psychiatry, Amsterdam UMC, Vrije Universiteit, Amsterdam, The Netherlands; Kathleen R. Merikangas, Genetic Epidemiology Branch, Intramural Research Program, National Institute of Mental Health, Bethesda, MD, USA

Symposium proposal 1
Actigraphy is increasingly used in affective disorder research to obtain objective measures of physical activity, sleep and circadian rhythms. However, differences in design, procedures, and data analyses across studies can hamper comparison of results, cross-site analyses and cross-validation. Therefore, the Motor Activity Research Consortium for Health (mMARCH, http://mMarch.org), a collaborative international network, was created to facilitate the coordination of procedures, analyses, and data sharing among research groups collecting actigraphy data. A first step for mMARCH core members was to start using the same device (GENEActiv) and using similar protocols.
In this symposium, several international, young mMARCH investigators will present their latest results on actigraphy-based physical activity, sleep and circadian rhythms in relation to affective disorders from various study designs. The presented research utilizes variables traditionally used in research (e.g. minutes spend in moderate-to-vigorous activity, sleep duration), but also measures on patterns of activity, obtained with of state-of-the-art functional data analysis (FDA). Also, the advantage to couple actigraphy assessment with other ambulatory assessments such as Ecological Momentary Assessment (EMA) will be demonstrated. Dr. Carpenter (University of Sydney) will present data from the Brain and Mind Centre longitudinal cohort, on sleep-wake and circadian patterns in adolescents with emerging mood disorders. Dr. Zhang (Chinese University of Hong Kong) will present his work on sleep and circadian rhythm disturbances as prodromal stage in high-risk offspring using the Chinese Bipolar offspring study. Using data from a Swiss population-based cohort, Dr. Glaus will present the dynamic associations between sleep and EMA-based mood states in affective disorders, and lastly, Ms. Difrancesco (Amsterdam UMC) will present on associations between physical activity, sleep and circadian rhythm with affective disorders from the NESDAstudy. Dr. Lamers (Amsterdam UMC) will chair, while dr. Merikangas (NIMH, mMARCH Chief) will be discussant and will highlight recommendations for actigraphy studies in psychiatric research.

Symposium proposal 2
Adolescence and young adulthood are key periods of change in sleep-wake and circadian cycles, and are also periods of increased risk for onset of mood disorders. Previous research reports various disturbances in sleep-wake and circadian systems in those with mood disorders including disruptions in sleep, abnormal timing of sleep and wake, and abnormalities in circadian patterns of activity, hormone secretion, and temperature regulation. However, there is a large degree of heterogeneity in these sleep-wake and circadian disturbances, with some conflicting results and considerable individual variation. This variation may reflect the presence of multiple underlying circadian pathophysiology with differing effects on the development of mood disorders and potentially distinct treatment targets. Data will be presented from the Brain and Mind Centre longitudinal cohort, characterising sleep-wake and circadian patterns of activity in young people with emerging mood disorders in help-seeking youth. Further, those with emerging mental disorders have significant functional impairment at presentation for care, and for the majority, it persists over the course of clinical care.
Keywords: trajectories; mood disorders; precursors; impairment; functioning; longitudinal studies.
disorders, utilising ambulatory recordings of motor activity from wrist-worn actigraphy devices. Analyses will explore the presence of distinct sleep-wake and circadian profiles within the sample. The associations between these sleep-wake and circadian parameters and multidimensional outcome domains across the course of mental health care will also be reported, including illness type stage and trajectory, social and occupational functioning, deliberate self-harm and suicidal thoughts and behaviour, alcohol and substance use, and physical health comorbidities. Understanding the contribution of sleep-wake and circadian disturbance to the longitudinal course of mental illness in young people is important to inform personalised treatment approaches, to improve a range of outcomes, as well as inform the development of prevention and intervention efforts.

Symposium proposal 3
Bipolar disorders are highly familial with an estimated heritability of around 80%. The investigation on child and adolescent offspring of patients with bipolar disorders is able to delineate the progression of bipolar disorders. Recent studies have suggested that sleep and circadian rhythm are closely associated with mood regulation and may serve as preceding signs of the onset of mood disorders. Several offspring cohorts have been established to determine the emerging course of bipolar disorder. However, only some of these cohorts touched on sleep and circadian rhythm with self-reported questionnaires. These cohorts have suggested that sleep and circadian rhythm disturbances, such as late chronotype, decreasing sleep duration, may predict the onset of psychiatric disorders. These findings implied that preventive strategies targetting at sleep and circadian rhythm, such as cognitive behavioral therapy and light therapy, may be beneficial to this very high-risk population. However, self-reported sleep and circadian preference is one of the major limitations of these findings. In addition, there are some challenges in the reliable measures of sleep and circadian rhythms. Dr. Jihui Zhang will present some preliminary results by using objective measures on sleep and circadian rhythm, such as actigraphic data, diurnal patterns of saliva cortisol, and dim light melatonin onset, in a Chinese bipolar offspring cohort. Especially, he will focus on the 24-hour rest-activity pattern as measured by 7-day actigraphy and its associations with psychopathology in high-risk individuals.

Symposium proposal 4
Background: Our previous work has shown specificity of the atypical subtype of depression, characterized by increased appetite and sleep, and that there may be common familial factors underlying overweight and atypical depression. The aim of this presentation is to examine the inter-relationships between mood states and sleep characteristics, and to assess the association between atypical depression and sleep patterns and problems, particularly chronotype and sleep duration.

Methods: The sample consisted of 2500 participants from the population-based CoLaus/PsyCoLaus study, part of the Motor Activity, Research Consortium for Health (mMARCH), who underwent comprehensive somatic and psychiatric evaluations. Atypical depression was based on semi-structured diagnostic interviews and sleep characteristics were assessed using actigraphy (GeneActiv accelerometer) and Ecological Momentary Assessment (EMA) data over a 2-week period.

Results: Logistic regression models were applied to evaluate the associations between sleep characteristics and atypical depression. Generalized estimating equations (GEE) were used to test the conditional estimate of the dynamic association between sleep and mood state, incorporating the lagged effects of various systems and Granger’s Causality model (GCM) to accommodate within-person correlations. The first order autoregressive working correlation structure was chosen to account for the within-person correlation in the two-week observation period. Differences in the atypical and MDD in general were found in several indicators of sleep and daily motor activity patterns.

Conclusions: Using real time EMA and objective mobile technology, these findings will enable us to gain greater insight into the sleep characteristics of atypical depression and to examine the stability, variability and the inter-relationships of sleep and mood.

Symposium proposal 5
Background: actigraphy provides objective estimates of sleep, circadian rhythm (CR) and physical activity (PA), and is valuable in research in people with depression/anxiety whose self-reports may be biased. We examined the association between actigraphy measures of sleep, CR and PA with depression/anxiety, using traditional actigraphy variables and functional data analysis (FDA).

Methods: Fourteen-day actigraphy data of 359 participants with current (n=93), remitted (n=176) or no (n=90) DSM-IV depression/anxiety disorders was obtained from the Netherlands Study of Depression and Anxiety. Extracted measures were sleep duration, sleep efficiency, relative amplitude between day- and night-time activity (RA), sleep midpoint on free-days, gross motor activity (GMA), and moderate-to-vigorous PA (MVPA). We also applied FDA (i.e., Functional Principal Component Analysis (FPCA), Function-on-Scalar Regression [FoSR]) to extract activity patterns and examine timing of activity.

Results: Reduced RA and CR were consistently observed in the presence of current – but not remitted - depression/anxiety using traditional actigraphy measures.

Keywords: actigraphy, ecological momentary assessment, sleep, circadian rhythm, physical activity

Abstract:
Symposium title: Pharmacogenetics in unipolar and bipolar depression: review of the latest clinical evidence and new research directions
Symposium Chair: Simon Kung, MD

Dr. Fabbri presents a large study (n=1,300) comparing genome-wide variants) in responders and non-responders with MDD. Machine learning was used on these results, with the addition of clinical factors (such as chronic depression, number of previous episodes, suicide risk, depression severity, pessimism, and interest-activity scores), to try to predict treatment-resistant depression (TRD).
ABSTRACTS OF SYMPOSIA

Pathways and genes mediating neural plasticity and regulation of gene expression were found to be associated with the risk of TRD. These findings might guide development of pharmacotherapy targeting these genetic variations.

Speaker 1: Simon Kung, MD
Associate Professor of Psychiatry
Department of Psychiatry and Psychology, Mayo Clinic, Rochester, Minnesota, USA

Title: The evidence supporting pharmacogenetic panels: two steps forward and one step backward, or one step forward and two steps backward?

Abstract:
Purpose of review: Pharmacogenetic testing for antidepressant selection in major depressive disorder remains controversial. Many insurance companies still do not reimburse for the testing, and many clinicians do not find the testing helpful. However, the evidence supporting the benefits of these panels continues to grow. How can we better understand and accept the evidence and role of pharmacogenetics testing for antidepressants?

Recent findings: (1) A large randomized controlled trial (RCT) of 1,167 patients (Greden JF. J Psychiatric Research 2019;111:59–67) was negative, as the primary outcome of symptom improvement (Hamilton Depression Rating Scale HAM-D17) was not statistically significant (active 27.2% versus treatment as usual (TAU) 24.4%). However, improvement in response (26% versus 19.0%) and remission (15.3% versus 10.1%) rates were statistically significant. (2) A meta-analysis of 5 randomized controlled trials (Bousman CA. Pharmacogenomics 2019;20:37–47), which included the Greden RCT, found that of 1737 subjects, those who were in the active guided group (n=887) compared to TAU (n=850) were 1.71 times more likely to achieve symptom remission.

Discussion: In addition to reviewing the methodology and results of these studies, we will also present a critical analysis including the Cochrane Collaboration risk of bias categories of selection, performance, detection, attrition, reporting, and other biases. Industry bias was present in all the studies. There are few published negative studies, raising the question of whether negative studies exist and are not publishable, or whether there really are no negative studies. Study methodology and patient selection factors contributing to positive results will be discussed. Evidence-based clinical recommendations, balanced with real-world patient and provider expectations, will also be discussed.

Speaker 2: Alfredo B. Cuéllar Barboza, MD
Professor of Psychiatry, Department of Psychiatry of the Universidad Autonoma de Nuevo Leon, Monterrey, Mexico.
Adjunct Assistant Professor, Department of Psychiatry and Psychology, Mayo Clinic.

Title: Is there a role for pharmacogenetics testing in bipolar disorder?

Abstract: The clinical complexity and heterogeneity of bipolar disorder is paralleled by its extensive pharmacopoeia. Treatment with lithium, mood stabilizers, anticonvulsants, and so on, is most commonly applied as a multimodal therapy, and based on decision algorithms that lack the integration of molecular drug mechanisms. Pharmacogenetics and pharmacogenomics study the individual genetic variation associated with drug response. This field has grown from studies in drug metabolizing enzymes (i.e. pharmacokinetics), drug transporters (i.e. pharmacodynamics), to pharmacogenomics expanding untargeted investigation across the entire genome to identify genes associated with drug response, to now merging genomic data with additional biological information. This selective review of pharmacogenomics in bipolar disorder will focus on targeted candidate genes in pharmacokinetic drug metabolism and pharmacodynamic drug response / adverse events, genome wide association studies of drug response / adverse events, and most importantly, the potential role of decision support platforms that incorporate multiple genotype / phenotype drug recommendations. We also discuss peer-reviewed guidelines for the implementation of pharmacogenomics testing and illustrate early examples of clinical practice recommendations.

Speaker 3: Mark Frye, MD
Professor of Psychiatry and Chair
Department of Psychiatry and Psychology, Mayo Clinic, Rochester, Minnesota, USA

Title: Pharmacokinetic-Pharmacodynamics Interaction Associated with Venlafaxine-XR Remission with History of SSRI Treatment Failure

Abstract: The purpose of this study was to identify specific pharmacokinetic (PK) and pharmacodynamics (PD) factors that affect the likelihood of treatment remission with a serotonin norepinephrine reuptake inhibitor (SNRI) in depressed patients whose initial selective serotonin reuptake inhibitor (SSRI) failed. Multiple logistic regression modeling of PK and PD variation hypothesized to contribute to SNRI (i.e. duloxetine or venlafaxine) treatment remission in prior SSRI (i.e. citalopram or escitalopram) failure was conducted on 139 subjects from the Pharmacogenomics Research Network (PGRN) and Sequenced Treatment Alternatives to Relieve Depression (STAR*D) studies. Depressive symptoms were assessed with the Quick Inventory of Depressive Symptomatology Clinician-rated (QIDS-C16). Venlafaxine-XR remission was associated with a significant interaction between CYP2D6 ultra-rapid metabolizer (URM) phenotype and SLC6A4 5-HTTLPR L/L genotype. A similar significant interaction effect was observed between CYP2D6 URM and SLC6A2 G1287A GA genotype. Stratifying by transporter genotypes, venlafaxine-XR remission was associated with CYP2D6 URM in patients with SLC6A4 L/L (p<0.001) and SLC6A2 G1287A GA genotypes. The primary limitation of this post hoc study was small sample size. Our results suggest a PK-PD interaction with treatment remission associated with CYP2D6 URM phenotype and SLC6A4 5-HTTLPR L/L or SLC6A2 G1287A G/A genotype, respectively. These preliminary data are encouraging and support larger pharmacogenomics studies differentiating treatment response to mechanistically different antidepressants in addition to further PK-PD interactive analyses.

Speaker 4: Chiara Fabbrini, MD, PhD
Social, Genetic & Developmental Psychiatry Centre, Institute of Psychiatry, Psychology and Neuroscience, King's College London.

Title: Developing a predictor of treatment-resistant depression: contribution of rare and common genetic variants

Authors: Chiara Fabbrini1, Siegfried Kasper2, Alexander Kautzky2, Joseph Zohar3, Daniel Souery4, Stuart Montgomery5, Diego Albani6, Dimitris Dikeos7, Dan Rujescu8, Julien Mendlewicz9, Cathryn M. Lewis1, Alessandro Serretti10
1: Institute of Psychiatry, Psychology and Neuroscience, King’s College London
2: Department of Psychiatry and Psychotherapy, Medical University Vienna, Austria
3: Department of Psychiatry, Sheba Medical Center, Tel Hashomer, and Sackler School of Medicine, Tel Aviv University, Israel
4: Laboratoire de Psychologie Medica, Université Libre de Bruxelles and Psy Pluriel, Centre Européen de Psychologie Medica, Brussels
5: Imperial College School of Medicine, London, UK
6: Unità Genetica delle Malattie Neurodegenerative, Istituto di Ricerche Farmacologiche Mario Negri IRCCS, Milano, Italy
7: Department of Psychiatry, Athens University Medical School, Athens, Greece
8: University Clinic for Psychiatry, Psychotherapy and Psychosomatic, Martin-Luther-University Halle-Wittenberg, Germany
Emerging Mood Science

TREATMENT-RESISTANT DEPRESSION (TRD) AFFECTS 30% OF PATIENTS WITH MAJOR DEPRESSIVE DISORDER (MDD) AND A BETTER UNDERSTANDING OF THE GENETIC PATHWAYS INVOLVED CAN CONTRIBUTE TO PRECISION PSYCHIATRY AND THE IDENTIFICATION OF NEW PHARMACOLOGICAL TARGETS.

THIS STUDY PROVIDED A DEEP COVERAGE OF INTER-INDIVIDUAL GENETIC VARIABILITY BY COMBINING WHOLE EXOME SEQUENCING (RARE VARIANTS) AND GENOME-WIDE GENOTYPING (COMMON VARIANTS) IN A SAMPLE OF 1300 MDD SUBJECTS. TRD WAS DEFINED AS LACK OF RESPONSE TO AT LEAST TWO DRUGS FOR DEPRESSION OF ADEQUATE DURATION AND DOSE AND IT WAS COMPARED TO RESPONSE TO THE FIRST TREATMENT, DEFINED AS A MONTGOMERY-ASBERG RATING SCALE FOR DEPRESSION (MADRS) SCORE<22 AND A DECREASE OF AT LEAST 50% AFTER AT LEAST 4 WEEKS OF TREATMENT.

THE BURDEN OF RARE AND COMMON GENETIC VARIANTS IN FUNCTIONAL GENOMIC UNITS (GENES AND GROUPS OF RELATED GENES, I.E. PATHWAYS) WAS COMPARED BETWEEN TRD AND RESPONDERS. MACHINE LEARNING WAS USED TO DEVELOP MODELS PREDICTING TRD IN 70% OF THE SAMPLE (TRAINING SET) WHICH WERE TESTED IN THE REMAINING 30% (TESTING SET). THE ADDITION OF CLINICAL PREDICTORS OF TRD SELECTED IN THE TRAINING SET WAS EVALUATED.

PATHWAYS AND GENES MEDIATING NEURAL PLASTICITY AND REGULATION OF GENE EXPRESSION WERE ASSOCIATED WITH THE RISK OF TRD. THE PREDICTIVE MODELS DEVELOPED IN THE TRAINING SET SHOWED PROMISING PREDICTION OF TRD IN THE TESTING SET IN COMBINATION WITH CLINICAL RISK FACTORS (CHRONIC DEPRESSION, NUMBER OF PREVIOUS EPISODES, SUICIDE RISK, MADRS PESSIMISM AND INTEREST-ACTIVITY SCORES) (AUC 0.75, 95% CI 0.68-0.81). BETTER PREDICTION WAS ACHIEVED IN PATIENTS AT THE EXTREMES OF THE GENETIC SCORE DISTRIBUTION (<10 PERCENTILE AND >90 PERCENTILE) (AUC 0.80, 95% CI 0.66–0.93). THESE RESULTS SUGGESTED RELEVANT BIOLOGICAL MECHANISMS IMPLICATED IN TRD AND THE POSSIBILITY TO USE A PANEL OF GENETIC VARIANTS IN SELECTED GENES TO PREDICT THE RISK OF TRD IN COMBINATION WITH CLINICAL VARIABLES.

S-012 SUICIDALITY IN PEDIATRIC MOOD DISORDERS: IMPLICATIONS FOR CLINICAL PRACTICE

ANA UGÜETO (1), CRISTIAN PATRICK ZENI (2), GIOVANA ZUNTA-SOARES (1), JAN SOARES (1), ROBERT POLO (1), GABRIEL FRIES (1), CONSELHO WATTS-BASS (1), SILZA TRAMONTINA (2), MATIJSI F. G. LUCASSEN (3)

1 - Pediatric Mood Disorders Program, Department of Psychiatry and Behavioral Sciences, McGovern Medical School at the University of Texas Health Science Center, Houston, US.
2 - Programa para Crianças e Adolescentes com Transtorno Bipolar (ProCAB), Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil.
3 - The Open University, School of Health, Wellbeing and Social Care, UK.

Suicide is now the second leading cause of death for youth. The rates of adolescent suicide have increased by 24% in the past 20 years. Every year, over 2,000 adolescents die by suicide. Additionally, for every completed suicide there are 100-200 attempts made by desperate teens. Unfortunately, these teens are at an increased risk of attempting suicide again, especially within 3 months of their first attempt.

Enhancing our ability to predict and prevent suicidal ideation and suicide attempts remains a major national health goal. The strongest risk factor for suicidal ideation and suicide attempts in youth is a psychiatric diagnosis. Approximately 70% to 91% of youth in community settings who attempt or think about suicide are diagnosed with a psychiatric disorder. The most common diagnoses include mood disorders, specifically bipolar disorder, as well as anxiety, disruptive, and substance use disorders. Here, our group will look at the suicidality in some of the more vulnerable youth:

1. Do sexual and gender minority adolescents with complex mental health needs have higher rates of depression, anxiety, and suicidality than comparable heterosexual cisgender adolescents? Results from an inpatient psychiatric sample
2. DMDD and suicidality
3. Bipolar Disorder and Suicidality

Do sexual and gender minority adolescents with complex mental health needs have higher rates of depression, anxiety, and suicidality than comparable heterosexual cisgender adolescents? Results from an inpatient psychiatric sample

ANA M. UGÜETO, PHD 1 & MATIJSI F. G. LUCASSEN, PHD 2

1 The University of Texas Health Science Center at Houston, McGovern Medical School, Department of Psychiatry and Behavioral Sciences.
2 The Open University, School of Health, Wellbeing and Social Care.

Sexual (e.g., lesbian, gay and bisexual) and gender (e.g., transgender and non-binary) minority adolescents have higher rates of depression, anxiety, and suicidality compared to heterosexual, cisgender adolescents (Fergusson, Horwood, & Beautrais, 1999; Peterson, Matthews, Copps-Smith & Conard, 2017) in the general population, and are at heightened risk for a plethora of mental health disorders (Mustanski, Garofalo, & Emerson, 2010). Meyer’s minority stress model (2003) is widely cited to explain the high rates of mental health issues experienced by sexual and gender minority people. This model postulates prejudice and stigma from hostile environments increases risk for a range of mental health problems. However, to date, no study has compared sexual and gender minority adolescents to heterosexual, cisgender adolescents in an inpatient, psychiatric hospitalization setting, in which all youth are admitted for severe suicidality and/or imminent risk of harm to self. The current study aims to answer this question by surveying adolescents who are admitted to a child and adolescent inpatient unit. Adolescents (ages 13–17) will complete standardized measures examining symptoms of depression and anxiety and an assessment of their suicidality, as well as a brief demographic questionnaire which includes questions about natal sex, gender/gender identity, and sexuality (based on their sexual attractions) within the first 48 hours of admission. We hypothesize sexual and gender minority adolescents will have higher rates of depression, anxiety and suicidality (specifically suicide attempts), when compared to heterosexual cisgender adolescents. Additionally, it is expected a greater proportion of sexual and gender minority adolescents will be admitted to the unit than would be expected based on adolescent population-based data (i.e. up to 10.5%, Lucassen et al., 2017). T-tests, X2, and descriptive statistics will be used to compare the samples. Implications for clinical practice and future research with sexual and gender minority adolescents with complex needs will be discussed.

DMDD and suicidality

CRISTIAN PATRICK ZENI MD/PHD 1,2, IRAKAZIMI MD 1, GIOVANA ZUNTA-SOARES MD 1, JAIR SOARES MD/PHD 1, SILZA TRAMONTINA MD 2

1 – Pediatric Mood Disorders Program, Department of Psychiatry and Behavioral Sciences, McGovern Medical School, Houston, US.
2 – Programa para Crianças e Adolescentes com Transtorno Bipolar (ProCAB), Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil.

Disruptive Mood Dysregulation has been included in the Diagnostic and Statistical Manual – 5th version (DSM-5) as a new diagnostic category under the depressive disorders chapter. It provides a new home for classifying mood disorders where chronic irritability, and significant and frequent tantrums are present. Scarce investigations have approached suicidality in this new diagnostic classification. We aim to describe suicidality in a sample of children and adolescents from both Brazil and the USA, comparing them with groups of youth.
with bipolar disorder, and typically developing controls. We used the Columbia Suicidality Severity Rating Scale and the items of morbid ideation and suicidal ideation from the Childhood Depression Rating Scale to evaluate suicidality. Other sociodemographic and clinical characteristics were evaluated. We were able to include 202 subjects in our study. Around 28% of the subjects with bipolar disorder presented at least one suicide attempt, compared to 11% of the subjects with DMDD, and 0% of the controls.

**Bipolar Disorder and Suicidality**

Iram Kazimi MD 1, Christian Patrick  Zeni MD/PhD 1, Robert Polo 1, Giovana Zunta-Soares MD 1, Jair Soares MD PhD1, Gabriel Fries PhD 1, Consuelo Walss-Bass PhD 1

(1) – Pediatric Mood Disorders Program, Department of Psychiatry and Behavioral Sciences, McGovern Medical School, Houston, US.

Suicidality exhibits a sharp increase during adolescence. Completed suicide has been associated with bipolar disorder (BD) in particular. Due to greater illness severity, burden, and substantial behavioral disinhibition, pediatric-onset BD may be associated with even higher suicide attempt rates making it a significant focus in this population. Dependable strategies for predicting or preventing suicide are lacking; discovery of biological markers that can identify individuals who are at risk for suicide would aid in these efforts. In this regard, investigations of epigenetic modifications, specifically DNA methylation, have shown great promise in suicide studies, but are mostly limited to adult populations. In regards to youth, much of the data available is retrospective. One study found that SKA2 methylation was increased in subjects with a history of childhood trauma and correlated with increased adult psychopathology, including suicide risk. Therefore, extension of the investigation of epigenetic modifications to the adolescent population is important.

We plan to assess the relationship between DNA methylation in specific genes and suicide-relevant clinical correlates in adolescents with bipolar disorder. We will evaluate and compare three groups: youth with BD who were hospitalized after a suicide attempt, youth with BD who were hospitalized for reasons other than a suicide attempt, and youth who are typically-developing. Subjects will be matched for age, gender, and ethnicity and will come from the pediatric unit at Harris County Psychiatric Center. Results will be analyzed by comparing clinical and DNA methylation level differences between the groups of suicide attempters vs. non-attempters using t-tests or non-parametric Mann-Whitney tests according to data distribution. We will perform Pearson or Spearman correlation tests between differentially methylated positions (DMPs), and BIS scores between DMPs and CTQ scores and between DMPs and number of negative events. Bonferroni correction for multiple comparisons will be performed.

Keywords: Pediatric Mood Disorders, Suicidality
ABSTRACTS OF ORAL PRESENTATIONS
ABSTRACTS OF ORAL PRESENTATIONS

O-001
A Web-based Decision Aid Tool for Disclosure of a Mental Health Condition in the Workplace: a Randomised Controlled Trial

Elizabeth Stratton1, Isabella Choi2, Rafael A Calvo3, Ian Hickie4, Claire Henderson5, Samuel B Harvey6, Nicholas Glozier1

1Brain and Mind Centre, Sydney Medical School, University of Sydney, Sydney, Australia
2School of Psychiatry, University of Sydney, Sydney, Australia
3School of Psychiatry, University of New South Wales, Sydney, Australia
4Black Dog Institute, Sydney, Australia
5St George Hospital, Sydney, Australia
6School of Electrical and Information Engineering, University of Sydney, Sydney, Australia
7Health Service and Population Research Department, Institute of Psychiatry, Psychology & Neuroscience, King’s College London, London, United Kingdom

OBJECTIVE: Making decisions about disclosing a mental illness in the workplace is complicated. Decision aid tools are designed to help an individual make a specific and deliberate choice. We developed a web-based decision aid (READY) to help inform decisions about disclosure for employees. This study aimed to examine the efficacy of this tool, compared to the online information by a leading mental health charity.

MATERIAL-METHODS: A randomised controlled trial was conducted. Participants had access to the READY web-based decision aid tool or the active control for two weeks. Assessments occurred at baseline, post-intervention, and 6 weeks follow up.

RESULTS: A total of 107 adult employees, average age 34 years, were randomised to READY (n=53) or the control arm (n=54). The sample was predominantly female (83.2%). Participants in READY showed predominant comorbidity, relatively few studies have investigated how it influences characteristics and outcome of patients with depression. We investigated differences in clinical and sociodemographic characteristics and outcome of depression among psychiatric MDD patients with or without AUD.

MATERIAL-METHODS: In the Vantaa Depression Study (VDS), a five-year prospective study of psychiatric out- and inpatients (N=269) with DSM-IV MDD, 66 (25%) of the patients had comorbid alcohol dependence or abuse. We investigated the associations of clinical features of MDD, comorbid axis I and II disorders, psychosocial factors, long-term outcome regarding length of depressive episodes, recurrence, and suicidal behaviour among MDD patients with or without AUD.

RESULTS: Depressed patients with comorbid AUD differed from those without at baseline by being significantly more often males (OR=3.54, 95% CI 1.71 – 7.33, p=0.001); having more often significant suicidal ideation (OR=1.06, 95% CI 1.02 – 1.10, p=0.008), comorbid panic disorder (OR=3.42, 95% CI 1.47 – 8.00, p=0.004), more cluster A personality symptoms (OR=1.15, 95% CI 1.11 – 1.30, p=0.038) and daily smoking (OR=2.83, 95% CI 1.15 – 6.95, p=0.016). During the five-year follow-up they also spent a larger proportion of time depressed (mean 28.8, SD 26.6 vs. 19.1, SD 24.4, p=0.038) and had more often suicide attempts (15/60, 25.0% vs. 21/189, 11.1%, p=0.008).

CONCLUSION: Among psychiatric MDD patients, presence of a comorbid alcohol use disorder is associated with gender, several other types of psychiatric comorbidity, worse outcome of depression, and risk of suicidal behaviour.

Keywords: Major depressive disorder, alcohol use disorder, comorbidity, outcome.

O-003
Effects of aerobic exercise on gut microbiota in adolescents with subthreshold mood syndromes and clinically-well adolescents: a 12-week, randomized controlled trial

Runhua Wang1, Weicong Lu1, Yanling Gao1, Kun Chen2, Qingzhe Miao3, Yanxiong Huang1, Lijie Guan1, Guiyun Xu1, Kwok Fai So1, Kangquan Lin1

1Department of Affective Disorders, The Affiliated Brain Hospital of Guangzhou Medical University (Guangzhou Huai Hospital), Guangzhou, China
2Academician workstation of Mood and Brain Sciences, Guangzhou Medical University, China

OBJECTIVE: Some animal and a few human cross-sectional studies have suggested reciprocal associations between physical activity and the gut microbiota. However, there have been few randomized controlled trial (RCT) studies directly assessing the effects of aerobic exercise on gut microbiota. To fill this gap, we conducted this 12-week RCT of aerobic exercise in both adolescents who manifested sub-threshold mood syndromes, including depressive and hypomanic syndromes. Of these, 49 adolescents with subthreshold mood symptoms and 142 clinically-well adolescents provided the sample for microbiota assessment by metagenomic sequencing. Aerobic exercise intervention was running at the moderate-intensity (heart rate: 220-age X 60-70%) for 30 mins per day, 5 days a week, lasting for 12 weeks.

RESULTS: Adolescents with subthreshold mood symptoms had more often significant suicidal ideation (mean 28.8, SD 26.6 vs. 19.1, SD 24.4, p=0.038) and had more often suicide attempts (15/60, 25.0% vs. 21/189, 11.1%, p=0.008).

CONCLUSION: Among psychiatric MDD patients, presence of a comorbid alcohol use disorder is associated with gender, several other types of psychiatric comorbidity, worse outcome of depression, and risk of suicidal behaviour.

Keywords: Major depressive disorder, alcohol use disorder, comorbidity, outcome.

O-002
The significance of comorbid alcohol use disorder in psychiatric patients with major depressive disorder

Mikael Holma1, Mikael Holma2, Irina Holma3, Irina Holma4, Erkki Isometsä5, Erkki Isometsä6

1Department of Psychiatry, University of Helsinki and Helsinki University Hospital, Helsinki, Finland
2Mental Health Unit, National Institute for Health and Welfare Helsinki, Finland

OBJECTIVE: Major depressive disorder (MDD) and alcohol use disorders (AUD) are major public health problems, and often co-occur both epidemiologically and clinically. However, despite the presence of AUD in MDD patients, there have been few studies investigating the association of these disorders.
ABSTRACTS OF ORAL PRESENTATIONS

O-004 Are sleep disturbance and fatigue present in various mental and substance use disorders?

Sonia McCallum1, Philip Batterham1, Alison Calear1, Matthew Sunderland2, Natacha Carragher1, Dominique Kazan1

1Centre for Mental Health Research, The Australian National University, Canberra, Australia
2The Matilda Centre for Research in Mental Health and Substance Use, The University of Sydney, Sydney, Australia

OBJECTIVE: Fatigue and sleep disturbance are highly prevalent, a frequent reason for seeking medical care and are symptoms of mental disorders. Most studies have not simultaneously investigated fatigue and sleep disturbance in mental disorders. The aim of this study was to investigate the presence of sleep disturbance and fatigue in nine mental and substance use disorders. MATERIAL-METHODS: 3620 Australians aged 18 years or older recruited from the general community via Facebook during January-February 2016 completed an online survey assessing demographic characteristics, diagnosed medical conditions and nine mental disorders. Outcome measures were Patient Reported Outcomes Measurement Information System (PROMIS®) fatigue and PROMIS sleep disturbance. RESULTS: Overall, 56% of the sample met criteria for at least one mental disorder with over half experiencing more than one disorder. Linear regression models of sleep disturbance revealed all mental disorders except obsessive compulsive disorder had independent associations with sleep disturbance, with generalised anxiety disorder (GAD), major depressive disorder (MDD) and post-traumatic stress disorder (PTSD) making the greatest contributions. Inclusion of fatigue in the model attenuated the effects of panic disorder (PD), MDD and attention-deficit hyperactive disorder (ADHD) to non-significance. For the outcome of fatigue, GAD, MDD and PTSD made the greatest contributions, although all disorders had significant independent relationships. After adjusting for sleep disturbance, all mental disorders continued to make significant contributions except for alcohol use disorder and substance use disorder. CONCLUSION: Sleep disturbance and fatigue have independent associations with many mental disorders after correcting for comorbidity and known confounds. The disorders providing the greatest contributions to sleep disturbance and fatigue were GAD and MDD. Sleep disturbance and fatigue may be appropriate transdiagnostic targets for improving symptoms and global functioning for people with mental disorders. Keywords: fatigue, sleep disturbance, mental disorders, transdiagnostic

O-005 Positive mental health as a predictor of recovery from mental illness

Matthew Iasiello1, Joseph Van Agteren2, Corey Keyes3, Eimear Muir Cochrane4

1Wellbeing and Resilience Centre, South Australian Health and Medical Research Institute, Adelaide, Australia; College of Nursing and Health Science, Flinders University, Adelaide, Australia
2Wellbeing and Resilience Centre, South Australian Health and Medical Research Institute, Adelaide, Australia; College of Medicine and Public Health, Flinders University, Adelaide, Australia
3Department of Sociology, Emory University, Atlanta, USA
4College of Nursing and Health Science, Flinders University, Adelaide, Australia

OBJECTIVE: High levels of positive mental health protect individuals from mental illness and evidence suggests that positive mental health can be built in those with an affective disorder. This study investigates whether longitudinal change in positive mental health predicts recovery from depression, anxiety, or panic disorder in a cohort group. MATERIAL-METHODS: Using data from the 1995 and 2005 Midlife in the United States cross-sectional surveys (n=1,723), logistic regression was used to estimate the odds ratio that individuals diagnosed with an affective disorder in 1995 would have recovered in 2005 based on whether their level of positive mental health changed over the 10-year period. RESULTS: Individuals who maintained or gained the highest levels of positive mental health were more than 27.6 and 7.4 times, respectively, more likely to recover when compared to those who maintained the lowest level of positive mental health. Those who maintained or gained moderate levels of positive mental health had more moderate likelihood of recovery, and those whose positive mental health declined to the lowest levels had no significantly different likelihood of recovery compared to participants whose positive mental health remained low. This study was limited by the age of the data, and the inability to control for some predictors of recovery. CONCLUSION: This study suggests that positive mental health may be an important resource for individuals to recover from mental illness and stay mentally healthy. Results point to the need to include positive mental health assessment and interventions into mental health care systems. Keywords: Positive mental health, Recovery, Dual-contingua model of mental health, Mental health care reform

O-006 The role of early life stress in the clinical course and outcome of Bipolar Disorder

Bingqing Zhu, Allan Young, Anthony Cleare, Mario Juruena

Institution of Psychiatry, Psychology & Neuroscience, King’s College London, UK

OBJECTIVE: Early life stress (ELS) has demonstrated an association with a variety of psychiatric disorders, including Bipolar Disorders (BD). It is suggested that ELS is associated with BD in various ways.
ABSTRACTS OF ORAL PRESENTATIONS

This study aims to systematically review the role of any sub-type of ELS in the development of BD, the clinical features and outcomes of BD, including age onset, severity, comorbidities, suicidality, treatment response, etc.

MATERIAL-METHODS: A computer-based search was conducted in PubMed, EMBASE, MEDLINE, and PsycINFO database to identify related articles published in English or Mandarin language between 2005 and 2019. References from related published reviews were also manually examined. Articles investigating the association between ELS and treatment outcomes and/or clinical courses of bipolarity were eligible for filtering and participants must have a history of ELS such as abuse and/or neglect. Key terms used for search included: (“child* adversity” OR “early life stress”) AND (“bipolar”) AND (“treatment outcome” OR “clinical course”). All systematic reviews, meta-analyses and theoretical articles were excluded.

RESULTS: This review investigated the association between the sub-types of ELS and bipolarity in various perspectives. Preliminary results found a consistent association between ELS and BD. Childhood abuse and neglect are associated with greater severity of BD, earlier onset, higher risks of suicidal attempts and comorbidities such as substance misuse disorders, post-traumatic stress disorders and anxiety disorders. A history of ELS can potentially predict poorer response to long-term treatments. Among all types of ELS, emotional and physical abuse, as well as emotional neglect, seem to have the most effects on BD.

CONCLUSION: Our data suggest that ELS predicts worse clinical outcomes and unfavourable courses of BD. The results have important clinical implications that it can be useful to screen for ELS, especially certain types of trauma for more accurate diagnosis, prognosis and for improving treatments in individual cases.

Keywords: Bipolar, Early Life Stress, Childhood adversity, Clinical Course, Treatment Outcome

O-007 Impact of Early Life Stress on Affective Disorder Treatment Outcomes. [Systematic Review]

Elip Erro, Allan H. Young, Anthony J. Cleare, Mario F. Jurunea
Centre For Affective Disorders, Department Of Psychological Medicine, Institution Of Psychiatry, Psychology & Neuroscience, King’s College London, UK

Abstract

Background: Early life stress have a profound influence on many facets of an individual's life which can last into adulthood. Research shows that early life stress has negative impacts on psychological health, cognition and interpersonal relationships, and has been associated with increased risks of psychopathology and worsened treatment outcomes. Studies have suggested that in treatment of affective disorders, outcomes are differentially impacted in those with histories of early adversity.

Objectives: Currently no review has been done on the impact of early life stress on treatment outcomes of affective disorders as a whole. This review aims to systematically search the available literature and bridge this knowledge gap.

Method: PubMed, PsycINFO, Embase and Web of Science were systematically searched for original studies on this topic. Studies were identified, checked for eligibility and their findings reviewed. Treatment outcomes were defined as treatment response, remission, attrition, disorder chronicity and relapse/recurrence.

Results: After searching the selected databases and manual searching, 89 articles were assessed for eligibility and 23 were accepted for review. Disorders covered include depressive, anxiety, bipolar and post-traumatic stress disorders. Treatments included psychotherapy and pharmacological therapies and combinations of both. A wide range of different types of early life stress were included. Of the 23 articles reviewed, 20 suggested a differential impact of treatment outcomes in the presence of early life stress histories in study participants.

Conclusion: This review found wide evidence that supports the notion that early life stress has differential impacts on the treatment outcomes for affective disorders. Future research and clinical practice may consider more explicitly the influence of early life stress histories in patients and subjects with psychopathologies.

O-008 Severity of Suicide Attempt is Related to Epigenetic and Transcriptional Changes in the CYP2D6 Gene

Jussi Jokinen1, Adrian Bostrom2, Marie Asberg1, Helgi Schioth3
1Department of Clinical Science/School Psychiatry, Umeå University, Sweden
2Department of Neuroscience, Uppsala University, Sweden
3Department of Clinical Science, Karolinska Institutet, Sweden

OBJECTIVE: Suicide is a complex, heterogeneous phenotype and severity of suicidal behavior is often defined as a combination of the intent to die and the lethality of the suicide attempt. In this study, we aimed to investigate both epigenomics and transcriptomics in suicide severity in a cohort of suicide attempters.

MATERIAL-METHODS: We measured the genome-wide methylation pattern in whole blood using the Illumina Infinium Methylation EPIC BeadChip. Patients were stratified into high risk or low risk based on the severity of the suicidal behaviour. Having used a violent suicide attempt method, scoring greater than 6 points on the Freeman suicide intention scale, and later suicide completion were considered as high risk. On the association analysis between DNA methylation and severity of suicide attempt, we included CpG sites whose methylation levels have been shown by Hannon et al. to have a high correlation between blood and brain. A total of 12,931 CpG sites were included in the subsequent analysis. Next, we used open-access data (http://www.ebi.ac.uk/arrayexpress/experiments/E-GEOD-24095/) to investigate the expression profile of detected candidate genes in postmortem brain samples of 11 matched MDD suicide cases and controls sampled from both the dentate gyrus and the CA1 subregions of the hippocampus.

RESULTS: Cpg07016288 - located 163 bp upstream of the transcription start site of the cytochrome P450 2D6 (CYP2D6) gene - was significantly hypomethylated in the high-risk group (bonferroni corr.). CYP2D6 was further demonstrated to be significantly hyperexpressed in post-mortem brain samples from the dentate gyrus (p<10e-4) of MDD suicide cases compared to controls.

CONCLUSION: Our finding of epigenetic and transcriptional changes in CYP2D6 gene may be related to treatment resistant depression, a risk factor for suicide.

Keywords: Suicide attempt, epigenetics, treatment resistance, CYP2D6 gene

O-009 Suicide, Opioid Overdose, and the Gray Areas in Between

Rick K Ries
Department of Psychiatry, Addictions Division, University of Washington, Seattle, Washington, USA

OBJECTIVE: This paper will focus on the overlap of Opioid Overdose and Suicide, both of which are killing about the same number of US
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citizens each year (CDC 2019) – approximately 50,000 persons each. Both are leading causes of premature death in the USA. Overdose deaths and suicide are also increasing and of concern in the UK (Bogdanowicz KM: Drug Alcohol Dep 2016).

MATERIAL-METHODS:In pilot work related to a National Institute of Drug Abuse research grant, (Preventing Addiction Related Suicide R01 Comtois PI), as well as the author’s clinical experience in an opioid addiction treatment clinic over the last 20 years, we found that the majority of subjects had past suicide attempts, overdoses or both. Interviews and reviews of relevant literature are utilized to characterize these problems and their overlaps.

RESULTS:Many of these patients and subjects commented on the overlap of actual purposeful suicide, accidental but nearly lethal overdoses, and other overdoses, which ranged between ambivalently purposeful and fully accidental. A question to be addressed in this presentation is how important or valid is it to differentiate where in the spectrum of fully accidental to purposeful overdose, a particular incident falls. A recent review (“Understanding the Links among Opioid Use, Overdose and Suicide” Bohnert A. JAMA Psych 2019), has laid out many issues in this overlap, including demographic and clinical issues, which will be reviewed.

CONCLUSION:This presentation will evaluate and discuss both US and UK research related to the spectrum of overlap between fully accidental opioid overdoses to fully purposeful suicide attempt, as well as potential prevention and treatment strategies, including the roles of opioid substitution medication, and counseling for one or both disorders.

Keywords: Suicide, Opioid, Overdose

O-010
Comparison of Treatment Outcomes, Sociodemographic and Clinical Characteristics of Black and Minority Ethnic Service Users in a Southwark IAPT Service

Rebecca Tucker1, Janet Wingrove2, Mario Juruena3

1Institute of Psychiatry, Psychology and Neuroscience, King’s College London, London, United Kingdom; 2South London and Maudsley NHS Foundation Trust, London, United Kingdom; 3Institute of Psychiatry, Psychology and Neuroscience, King’s College London, London, United Kingdom

OBJECTIVE:Improving Access to Psychological Therapies (IAPT) services have been progressing towards national targets, however, Black and Minority (BME) individuals are underrepresented in these outcomes. The main objective was to compare sociodemographic, clinical and treatment characteristics in White British and BME service-users referred to the Southwark IAPT service. Elucidating factors that may influence treatment outcome could provide opportunities to tailor services to support service-users and improve the service-user experience.

MATERIAL-METHODS:Data from 4,028 service-users (2,119 White British individuals and 1,909 BME individuals) were analysed from pre-treatment and last treatment sessions. Independent t-tests and chi-square tests of association examined demographic, clinical and treatment characteristics and treatment outcome. Binary logistic regression analyses investigated factors associated with failure to reach recovery in White British versus BME service-users. RESULTS:BME service-users were less likely to be in employment (p <.001), more likely to report financial difficulties (p =.003) and less likely to be homeowners (p <.001), than White service-users. They were less likely to complete treatment than White British service-users (p <.05). BME service-users reported higher symptoms of depression (PHQ-9) and anxiety (GAD-7) at baseline and discharge (p <.001). Treatment dropout was the strongest factor of failure to reach reliable recovery in both White British (OR = 4.355) and BME service-users (OR = 4.773). BME service-users who self-referred were less likely to recover (OR = 1.522).

CONCLUSION:Treatment drop out was the strongest factor associated with failure to reach reliable recovery for both BME and White British service-users. Reasons why BME service-users who self-referred were less likely to recover are discussed, but require further investigation.

Keywords: ethnic minority, stressful life events, treatment effectiveness, therapy, IAPT

O-011
Reduced gray matter volume in the subgenual anterior cingulate correlates negative psychobehavioral outcomes in early-maturing girls

Naohiro Okada

International Research Center for Neurointelligence (WPI-IRCN), The University of Tokyo Institutes for Advanced Study (UTIAS), The University of Tokyo, Tokyo, Japan

OBJECTIVE:Early-maturing girls experience compromised psychobehavioral outcomes and some psychological mechanisms have been revealed to explain this phenomenon. In addition, some studies have explored the correlation between brain morphology in adolescents, while the results were non-specific for females or the method was a hypothesis-driven region-of-interest analysis. To our knowledge, no large-scale study has comprehensively explored the neur anatomical substrates of negative psychobehavioral outcomes in early-maturing girls.

MATERIAL-METHODS:We collected structural magnetic resonance imaging (MRI) data of a subsample (N = 203, mean age 11.6 years) from a large-scale population-based birth cohort. Tanner stage, a scale of physical maturation in adolescents, was rated almost simultaneously with MRI scan. The Strengths and Difficulties Questionnaire total difficulties (SDQ-TD) scores was determined some duration after MRI scan (mean age 12.1 years). In each sex group, we examined brain regions associated with Tanner stage using whole-brain analysis controlling for chronological age, followed by an exploration of brain regions also associated with the SDQ-TD scores. We also performed mediation analyses.

RESULTS:In girls, Tanner stage was significantly negatively correlated with gray matter volumes (GMVs) in the anterior/middle cingulate cortex (ACC/MCC), of which the subgenual ACC (sgACC) showed a negative correlation between GMVs and SDQ-TD scores. Reduced GMVs in the sgACC mediated the association between higher Tanner stages and higher SDQ-TD scores. We found no significant results in boys.

CONCLUSION:Our results from a minimally biased, large-scale sample provide new insights into neuroanatomical correlates of the effect of pubertal timing on developmental psychopathology emerging in adolescence.

Keywords: adolescence, MRI, population neuroscience, early-maturing girls, psychological difficulties
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**O-012**

A double-blind dose-response study of casein glycomacropeptide (Lacprodan CGMP-20). Possible new treatments for mania

Erik Roj Larsen1, Gregers Wegener2, Erik Jensen2

1Mental Health Department Odense – University Clinic, Mental Health Service, Region of Southern Denmark
2Translational Neuropsychiatry Unit, Department of Clinical Medicine, Aarhus, Denmark

**OBJECTIVE:** To investigate changes in the peripheral blood amino acid profile in healthy male subjects when ingesting drinks containing casein glycomacropeptide (CGMP). Our pre-clinical studies have demonstrated that ingestion of CGMP lowers tyrosine and phenylalanine in the blood and the brain and showed further anti-angiogenic effects.

**MATERIAL-METHODS:** Three different doses of CGMP were given to 15 healthy men with one week intervals. The participants received 20, 40 and 60 g CGMP as well as supplementation of tryptophan and leucine.

**RESULTS:** An ingested dose of 60 g CGMP with tryptophan and leucine produced the most pronounced reduction in the plasma amino acids tyrosine and phenylalanine. The participants experienced no side effect.

**CONCLUSION:** The study showed that a dose of 60 g CGMP with leucine and tryptophan produced a significant effect sufficiently enough to recommend further studies with CGMP among bipolar patients with mania.

Keywords: bipolar disorder, mania, amino acids

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**O-013**

Mineralocorticoid Receptor Agonist as a Predictor of Treatment Outcome in Treatment Resistant Depression with Early Life Stress

Maria F. Jurujuna1, Anthony J Cleare1, Margaret Castro2, Allan H Young3, Frederico G Graeff4

1Dept. Psychological Medicine, Institute of Psychiatry, Psychology and Neuroscience - King's College London
2University of Sao Paulo, Sao Paulo, Brazil;

**OBJECTIVE:** This study compares the HPA axis responses to GR and MR agonists in treatment resistant depression and their association with early life stress (ELS) and response to treatment.

**MATERIAL-METHODS:** HPA axis response to placebo, fludrocortisone (MR agonist), prednisolone (mixed MR/GR agonist) and dexamethasone (GR agonist) were evaluated by salivary cortisol in patients with depression assessed as resistant to two or more antidepressants and controls. We also assessed clinical severity of depression and history of abuse/neglect by the Childhood Trauma Questionnaire on admission and after 60 days of multimodal in-patient treatment. We divided patients with and without ELS and responders and non-responders to treatment.

**RESULTS:** Awakening salivary cortisol (CAR) showed differences regarding time, challenge and its interaction. On placebo and mixed MR/GR agonist treatments, patients showed lower awakening cortisol than controls; on MR agonist treatment, patients showed lower cortisol at 22h, 30 and 60 minutes; There was no difference on GR agonist treatment. Salivary cortisol AUC (nmol x h/L) was significant lower after mixed MR/GR agonist (p=0.03) in ELS patients, and after MR agonist in patients without ELS than controls; there was no differences on GR agonist or placebo. Salivary cortisol AUC in treatment responders was lower after MR agonist and after mixed MR/GR agonist than in controls; without differences on GR agonist or placebo.

**CONCLUSION:** Depressive patients showed impaired HPA feedback response to mixed MR/GR agonists, suggesting a hypoactivity of the HPA axis. Depressive patients without ELS and/or treatment responders suppressed the HPA more effectively with a predominant selective MR agonist. These data suggest a role of MR function in the neurobiology of depression, as a predictor for good prognosis.

Keywords: mineralocorticoid receptor agonist, treatment outcome, treatment resistant depression, early life stress

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**O-014**

The Neuroactive Steroid and GABA Receptor Positive Allosteric Modulators Brexanolone Injection and SAGE-217 in the Treatment of Mood Disorders: Results from Recent Placebo-controlled Studies

Son Mi Park1, Stephen J. Kanes2, Samantha Meltzer Brody2, Handan Gunduz Bruce2, Abdul Sankoh2, Haihong Li2, Elia LP2, Helen Colquhoun1, David Rubinow2, Charles Zorumski3, James Doherty2, Jeff Jonas2

1Sage Therapeutics, Inc., Dammstrasse 19, 6300 Zug, Switzerland
2Sage Therapeutics, Inc., 215 First Street, Cambridge MA 02142
3University of North Carolina, Chapel Hill, Chapel Hill, NC 27541
4Washington University of St. Louis, 660 S Euclid Ave #8125, St. Louis, MO 63110

**OBJECTIVE:** Dysregulation of gamma-aminobutyric acid (GABA) signaling is thought to be associated with mood disorders such as postpartum depression (PPD) and major depressive disorder (MDD). The objective was to assess the efficacy and tolerability of the GABAAR positive allosteric modulators (PAMs) brexanolone injection (BRX) and oral SAGE-217 in double-blind, randomized, placebo-controlled trials (RCT) in patients with PPD and MDD, respectively.

**MATERIAL-METHODS:** BRX: In three RCT of women diagnosed with moderate-to-severe PPD (HAM-D ≥26 in Studies A/B; HAM-D score 20-25 in Study C), patients were treated with 60-hour infusion of placebo, BRX 90 μg/kg/hour (BRX90), or BRX 60 μg/kg/hour (BRX60, Study B only). SAGE-217: An RCT evaluated investigational, oral SAGE-217 in 89 patients (45 SAGE-217, 44 placebo) with moderate-to-severe PPD (HAM-D ≥26). Patients received either SAGE-217 30 mg or placebo daily for 14 days.

**RESULTS:** BRX: In a pooled analysis 102, 38, and 107 patients were included in Studies A/B/C (primary endpoint), significantly greater least square mean (LSM) HAM-D reductions were achieved with BRX90 (-17.0) and BRX60 (-19.1) vs. placebo (-12.8; both p<0.001). Significant differences from placebo were seen by Hour 24 (BRX90, p=0.001; BRX60, p=0.009) and maintained through Day 30 (BRX90, p=0.021; BRX60, p=0.004). The most common adverse events (≥10%) with BRX were headache, nausea, dizziness, tremor, and increased heart rate. The most common adverse events (≥10%) with BRX were headache, nausea, dizziness, tremor, and increased heart rate. The most common adverse events (≥10%) with BRX were headache, nausea, dizziness, tremor, and increased heart rate. The most common adverse events (≥10%) with BRX were headache, nausea, dizziness, tremor, and increased heart rate.
dizziness, and somnolence. SAGE-217: At Day 15 (primary endpoint), a significantly greater LSM HAM-D reduction was achieved with SAGE-217 (-17.4) vs. placebo (-10.3; p<0.001). Significant differences from placebo were observed by Day 2 (p=0.022) and maintained through Day 28 (p=0.024). The most common adverse events (≥5%) with SAGE-217 were headache, nausea, dizziness, and somnolence. CONCLUSION:BRX and SAGE-217 are neuroactive steroid GABAAR-PAMs that showed rapid (≤2 days) and sustained reductions (over the study period) in depressive symptoms, supporting a novel approach in the development of therapeutic agents for depression.

Keywords: major depressive disorder, postpartum depression, GABA, PAMs that showed rapid (≤2 days) and sustained reductions (over the study period) in depressive symptoms, supporting a novel approach in the development of therapeutic agents for depression.

OBJECTIVE: There is ambiguity about the relevance of omega-3 polyunsaturated fatty acids (n-3 PUFA) in the pathophysiology of depression, as n-3 PUFA supplements are not always found to be effective. It is unknown whether n-3 PUFA levels impact on depression, or the other way around. Causality can be further investigated using longitudinal data. This study examined the bidirectional longitudinal associations of n-3 PUFA plasma levels with (presence, onset and course of) depressive disorders and symptoms.

MATERIAL-METHODS: Data were sourced from baseline (n=2912, 28.6% with current depressive disorder) and the 6-year follow-up (n=1966, 13.0% with current depressive disorder) of the Netherlands Study of Depression and Anxiety (NESDA). Depression diagnoses and symptoms were based on psychiatric interviews and self-report questionnaires. N-3 PUFA levels (ratio of total fatty acids (mmol%)), were assessed using nuclear magnetic resonance.

RESULTS: Although n-3 PUFA levels at baseline were lower among depressed persons, linear and Cox regression analyses showed these levels were not consistently associated with subsequent change in depressive symptoms, onset or remission of depressive disorders over 6 years. Generalized Estimating Equations (GEE) showed that having a depressive disorder at baseline was associated with overall lower n-3 PUFA (main effect depression: β=−0.204, SE=0.047, p<0.001) over 6 years, although these associations weakened over time (depression-by-time: p=0.011). GEE showed that over six years, change in depressive disorders was not consistently accompanied by change in n-3 PUFA levels over time.

CONCLUSION: Despite significant cross-sectional associations between n-3 PUFA plasma levels and depression, this 6-year longitudinal study could not confirm a uni- or bidirectional association over time. The association between depression and n-3 PUFA plasma levels may not be due to a direct causal relationship, which might explain the lack of treatment effect found by some n-3 PUFA supplementation studies.

Keywords: depressive disorder, omega-3, docosahexaenoic acid, fatty acids, polyunsaturated fatty acids.
sertraline plus placebo or sertraline plus the COX-2 inhibitor celecoxib. Immune outcomes were compared to those of healthy controls (HC). Before therapy, the subset profile of circulating B and Th17 cells (via FACS) was studied and related to therapy outcomes.

**RESULTS:** Overall, MDD patients did respond significantly better to the add-on therapy. The group that did not respond to sertraline plus placebo showed the lowest serum Th17 cells levels and highest serum B cells levels. This group did respond to the combination of sertraline plus celecoxib. The group who did not respond to the add-on therapy was characterized by the highest levels of circulating Th17 cells and lowest levels of circulating B cells.

**CONCLUSION:** Our study indicates that a COX-2 add-on treatment might be superior to an SSRI alone and that a pre-therapy immune paradigm of a Th17 cell deficit and a B cell surplus might herald responsiveness to the add-on therapy.

**Keywords:** major depressive disorder, response prediction, T cells, B cells

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**O-017**

Help seeking attitudes and intentions for anxiety in adolescents: The role of anxiety literacy and stigma

**Alison Caleb**, Philip Batterham, Michelle Torok, Sonia McCallum

1Centre for Mental Health Research, The Australian National University, Canberra, Australia
2Black Dog Institute, University of New South Wales, Sydney, Australia

**OBJECTIVE:** Help-seeking rates for anxiety are low among adolescents and as such, it is important to identify modifiable factors that may help to promote help seeking in this population. The aim of the current study was to assess levels of generalised anxiety literacy and personal and perceived stigma in an adolescent population and to test the association between generalised anxiety literacy, stigma (personal and perceived), and attitudes to professional help seeking and intentions to seek help from key accessible adult sources and nobody.

**MATERIAL-METHODS:** 1,767 adolescents aged between 12 and 18 years participated in the current Australian study as part of the pre-intervention survey of the Y-Worri Project. Participants completed measures of anxiety literacy, personal and perceived generalised anxiety stigma, professional help seeking attitudes, and intentions to seek help from mother, father, school counsellor, general practitioner (GP) and nobody.

**RESULTS:** Participants reported low to moderate levels of anxiety literacy, personal and perceived stigma and professional help seeking attitudes, and greater intentions to seek help from their mother and father than from their GP or school counsellor. More positive help seeking attitudes were associated with higher levels of anxiety literacy and personal stigma. Lower perceived stigma was associated with increased intentions to seek help from mother or father, while lower personal stigma was also associated with help-seeking intentions from mother. Higher perceived stigma was associated with intentions to seek help from nobody.

**CONCLUSION:** Parents can play an important role in the help seeking process for young people, with parents often the most accessible source of help for this population. Improving parent and adolescent knowledge and attitudes towards generalised anxiety disorder through public education campaigns may assist in improving rates of early help seeking for anxiety in young people.

**Keywords:** anxiety, help seeking, adolescent, stigma, literacy, attitudes

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**O-018**

The association of antihypertensive use and depressive symptoms in a large older population with uncomplicated hypertension living in Australia and the United States: A cross-sectional study


1Deakin University, School of Medicine, IMPACT Strategic Research Centre, Barwon Health, Geelong, VIC, Australia
2Deakin University, Biostatistics Unit, Geelong, VIC, Australia
3School of Public Health and Preventive Medicine, Monash University, Melbourne, VIC, Australia
4Menzies Institute for Medical Research, University of Tasmania, Hobart, TAS, Australia
5Department of Family Medicine and Rush Alzheimer’s Disease Center, Rush University Medical Center, Chicago, IL, U.S.
6Berman Center for Outcomes and Clinical Research, Hennepin Healthcare Research Institute, Hennepin Healthcare, Minneapolis, MN, U.S.
7Department of Pharmacy Practice and Science, College of Pharmacy, and, Department of Family Medicine, Carver College of Medicine, The University of Iowa, Iowa, IO, US.
8School of Public Health, Curtin University, Perth, WA, Australia
9Oruyen, the National Centre of Excellence in Youth Health, the Department of Psychiatry and the Florey Institute for Neuroscience and Mental Health, University of Melbourne, Melbourne, VIC, Australia

**OBJECTIVE:** Cardiovascular drugs impact many pathways involved in depression pathophysiology and treatment. However, the impact of these drugs on mood is underrecognized and the literature is conflicting. Therefore, using a large and very well-characterized sample of healthy older adults with uncomplicated hypertension, we aimed to investigate the prevalence of depressive symptoms in users of different antihypertensive classes.

**MATERIAL-METHODS:** We analysed baseline data from 14,195 older individuals with hypertension enrolled in a large clinical trial. Mean age was 75 years old. The association of antihypertensive use by class and depression prevalence, as measured by a validated depression scale, was determined using logistic regression models.
Multivariable logistic models were implemented to account for important confounding factors, such as gender, age, living status, education, smoking history, diabetes, history of depression and use of benzodiazepines.

RESULTS: Multivariate analyses showed a positive association between depressive symptoms and the use of beta-blockers (OR: 1.37; 95% CI: 1.17 – 1.60, p <0.01), compared to users of other antihypertensive classes. All other classes of antihypertensives (including angiotensin converting enzyme inhibitors, angiotensin receptor blockers and calcium channel blockers) were not significantly associated with depressive symptoms. In secondary analysis, the prevalence of clinically relevant depressive symptoms in beta-blocker users were greater for lipophilic (39%) and non-selective compounds (52%) compared to hydrophilic (26%) and selective medications (31%) respectively, although the association was significant in all groups.

CONCLUSION: This study adds further evidence for a possible association of beta-blockers and depression in a large sample of older adults with uncomplicated hypertension and no history of cardiovascular disease or heart failure. Other classes of antihypertensives had no association with depressive symptoms. These findings might inform clinicians, guidelines and policy makers about the possible adverse effects of this class of drugs in this otherwise healthy older population.

Keywords: Late-life depression, hypertension, antihypertensives, beta-blockers.

O-019 Cognitive Remediation Therapy confers broad benefits to euthymic patients with bipolar disorder

Rebecca Strawbridge1, Dimosthenis Tsapekos1, John Hodsoll2, Tim Mantingh3, Netzhe Yalin3, Karine Macritchie1, Matteo Cellai1, Clare Reeder4, Jessica Fish1, Til Wykes1, Allan H Young1

1Department of Psychological Medicine, Institute of Psychiatry, Psychology & Neuroscience, King’s College London, London, UK
2Department of Biostatistics, Institute of Psychiatry, Psychology & Neuroscience, King’s College London, London, UK
3Department of Psychology, Institute of Psychiatry, Psychology & Neuroscience, King’s College London, London, UK

OBJECTIVE: A significant proportion of people with bipolar disorder experience cognitive impairments which hinder functioning and may increase susceptibility to relapses (Miskowiak et al., 2018). Bipolar disorder has been referred to as a “neuroprogressive” condition (Passos et al., 2016), but preliminary research suggests that cognitive function can be restored and even enhanced.

MATERIAL-METHODS: We present findings from a pilot randomised controlled trial of cognitive remediation therapy (CRT) for patients with bipolar disorder in euthymic state (the “CRiB” trial; Strawbridge et al., 2016). Patients were randomly allocated to receive a 12-week course of individual CRT in addition to treatment-as-usual (TAU), or to TAU alone.

RESULTS: 60 patients participated in the CRiB trial (CRT+TAU n=29; TAU n=31). Fewer patients withdrew from the CRT than TAU arm (7% vs 16% respectively) and CRT satisfaction ratings were high, indicating that this therapy is both feasible and acceptable. Intention-to-treat analyses demonstrated improvements after the intervention period that were maintained 3 months later. Participants randomised to CRT improved more than the TAU group in domains of intellectual function (Hotel test: SES=0.93, 95% CI [0.33, 1.54], p=0.003), everyday functioning (FAST: SES=0.49, 95% CI [0.18, 0.80], p=0.002) and goal attainment (GAS: SES=2.02, 95% CI [0.89 to 3.14]; p<0.001).

CONCLUSION: Cognitive remediation offers promising effects for enhancing cognition and functioning. Effect sizes support the undertaking for a future, more definitive trial.

Keywords: bipolar; cognition; cognitive remediation therapy; randomised controlled trial

O-020 Enhancing the clinical effectiveness of depression screening using patient-targeted feedback in general practices: The GET. FEEDBACK.GP multicentre randomized controlled trial

Sebastian Kohlmann1, Marco Lehmann2, Marion Eisele3, Lea Elena Braunschneider1, Gabriella Marx2, Karl Wegscheider3, Antonia Zap3, Martin Härter3, Hans Helmut König5, Jürgen Gallinat6, Martin Scherer2, Bernd Löwe4

1Department of Psychosomatic Medicine and Psychotherapy, University Medical Center Hamburg-Eppendorf, Hamburg, Germany
2Department of Primary Care, University Medical Center Hamburg-Eppendorf, Hamburg, Germany
3Department of Biostatistics and Epidemiology, University Medical Center Hamburg-Eppendorf, Hamburg, Germany
4Department of Medical Psychology, University Medical Center Hamburg-Eppendorf, Hamburg, Germany
5Department of Health Economics and Health Services Research, University Medical Center Hamburg-Eppendorf, Hamburg, Germany
6Department of Dept. of Psychiatry & Psychotherapy, University Medical Center Hamburg-Eppendorf, Hamburg, Germany

OBJECTIVE: In primary care, every sixth patient suffers from increased depression severity, which is associated with higher risk of suicide, increased risk of onset and the progression of chronic physical conditions. Evidence regarding the efficacy of depression screening in primary care, however, is insufficient to draw clear conclusions. Our previous mono-centre randomized controlled trial (RCT) in cardiac patients, the DEPSCREEN-INFO RCT, provides first evidence that written feedback to patients after a positive depression screening result improves depression severity and encourages greater patient engagement in mental health. To amplify these effects, the multi-centre GET.FEEDBACK.GP randomized controlled trial is now designed based on patients’ needs and preferences.

MATERIAL-METHODS: The multi-centre GET.FEEDBACK.GP aims to recruit a total of 1076 primary care patients from North, East and South Germany. Patients with increased depression severity (PHQ-9 score ≥ 10) will be randomized into three groups who either receive a) patient-targeted and physician-targeted feedback of depression screening results, b) a physician-targeted feedback of depression screening results only, or c) no feedback of screening results. The primary outcome is depression severity 6 months after depression screening. Secondary outcomes include patients’ engagement in mental health, depression care according to German guideline recommendations and cost-efficiency. A specialised clinical trial company will ensure data safety, monitoring and supervision. RESULTS: According to a pre-defined data analysis plan, the primary endpoint of all randomised patients will be analysed regarding the intention-to-treat principle via an analysis of covariance (ANCOVA). A data handling plan is going to be published beforehand and ensures data availability, transparency and repeatability.

CONCLUSION: GET.FEEDBACK.GP is worldwide the first multi-centre RCT in primary care that tests whether patient-targeted feedback in addition to depression screening reduces depression severity, improves clinical outcomes and is cost-efficient. The results will impact national and international depression screening guidelines.

Keywords: Depression Screening, Feedback, Primary Care, Patient participation
ABSTRACTS OF ORAL PRESENTATIONS

0-021 Symptoms overlap in ADHD and Bipolar Disorder in paediatric population: An overlooked issue?

Krzysztof Maria Wilczyński, Lena Cichoń, Ireneusz Jelonek, Małgorzata Janas Kozik
Medical University of Silesia, Department of Psychiatry and Psychotherapy of Developmental Age, Katowice, Poland

OBJECTIVE: Differences in differentiation between Bipolar Disorder and ADHD has been matter of much discussion lately, mainly due to the considerable symptoms overlap and high rate of co-occurrence between manic episode and ADHD. Therefore, it was of interest how similar is presentation of manic episode in course of the Bipolar Disorder to clinical picture of ADHD in pediatric population.

MATERIAL-METHODS: Retrospective review of the medical records of 90 patients with first episode of the Bipolar Disorder admitted to the Department of Psychiatry and Psychotherapy of Developmental Age in 2018 was conducted. Analyzed group consisted of 75 females (83%) and 15 males (17%) and average age equaled 15,05 (95%CI: 14,71-15,39) years. 38% (n=34) patients presented with the depressive episode and therefore were excluded from further analysis. Diagnostic criteria for manic episode and ADHD were collected and divided into two groups:
1) symptoms that may suggest diagnosis of both ADHD and manic episode (n=5);
2) symptoms distinctive for manic episode (n=5).

Ratio of number of group 1 symptoms to group 2 symptoms was calculated to evaluate similarity of clinical presentation to ADHD in each patient.

RESULTS: The average ratio value was 1,25 (95%CI: 0,95-1,54). There was statistically significant correlation between age of included patients and the average ratio value (r=-0.32; p<0.05) as well as between age of included patients and amount of group 2 symptoms (r=0.27; p<0.05). Correlation with amount of group 1 symptoms was not significant (r=-0.08; p=0.05)

CONCLUSION: Obtained results point out that clinical presentation of manic episode in juvenile may bear a close resemblance to ADHD and thus may be the cause of misdiagnosis. Furthermore, with increasing age there seem to be a significant rise in group 2 symptoms rather than decrease in group 1 symptoms, what may lead to false comorbidity instead of verification of the first diagnosis.

Keywords: attention deficit hyperactivity disorder, bipolar disorder, paediatric bipolar disorder, comorbidity

0-022 Extensive blood-brain barrier leakage is a biomarker of neuroprogression in bipolar disorder

Cynthia Calkin1, Lyna Kamintsky2, Kathleen Cairns2, Chris Bowen3, Alon Friedman

1Department of Psychiatry, Dalhousie University, Halifax, Canada; 2Department of Medical Neuroscience, Dalhousie University, Halifax, Canada
2Department of Medical Neuroscience, Dalhousie University, Halifax, Canada
3Nova Scotia Health Authority, Halifax, Canada

OBJECTIVE: Insulin-resistance and type-2-diabetes are associated with a more chronic course of bipolar disorder, poor response to mood-stabilizing treatment and cognitive/functional impairment referred to as “neuroprogression”. As damaged vasculature is a common feature of insulin-resistance, dysfunction of the brain’s microvasculature is a plausible mechanism by which insulin-resistance may promote neuroprogression in bipolar disorder. We aim to highlight the potential of BBB-imaging as a diagnostic biomarker for neuroprogression and to prompt further investigation into strategies targeting BBB integrity as a preventive intervention.

MATERIAL-METHODS: We employed a novel contrast-enhanced MRI-based scanning technique, that allows the imaging and quantification of blood-brain barrier (BBB) permeability in living patients. Having scanned 36 bipolar patients and 14 controls, I will present the first direct evidence of BBB dysfunction in a sub-group of bipolar patients with neuroprogression.

RESULTS: Using blinded-clustering we found a two–group division within our participants, with nominal- or extensive- degrees of brain volume with BBB pathology (P<0.0001). While the ‘nominal-BBB-pathology’ group included all control subjects and 26 bipolar patients, the ‘extensive-BBB-pathology’ group consisted exclusively of bipolar patients with insulin-resistance (n=10, 28% of all BD patients, and 45% of bipolar patients with insulin-resistance). All patients within the ‘extensive-BBB-pathology’ group were also found to have higher body-mass-indices and elevated risk of cardiovascular disease (P<0.05). Importantly, the ‘extensive-BBB-pathology’ group also had a more chronic course of illness and scored significantly worse on cognitive tests and scales of depression, anxiety and global functioning. Further, we found depression to be associated with region-specific BBB-leakage, with the nucleus accumbens best predicting depression severity (ROC area=0.77)

CONCLUSION: Our findings support the role of BBB impairment in bipolar neuroprogression and highlight the potential for BBB imaging as a neuroprogression biomarker. We further demonstrate the capacity of this biomarker to identify region-specific BBB damage predictive of depression severity.

Keywords: bipolar disorder, blood-brain-barrier, neuroprogression, biomarker, insulin resistance, neuroimaging

ISAD 2019 Fig

Figure 1. Correlates of BBB leakage in bipolar patients. A. The accumulation rate of the magnetic tracer gadoteridol was calculated for each brain voxel allowing the visualization of BBB leakage. B. The percent of brain voxels with elevated leakage was quantified in 36 bipolar patients and 14 controls (matched for sex and age). A comparison between bipolar patients to controls revealed a high variability of values among the bipolar group. C. Blinded K-means clustering of all subjects has identified a sub-group of 10 bipolar patients with “extensive BBB leakage”; compared to the other 40 subjects (“nominal BBB leakage”, p<0.0001). D. An examination of subject characteristics within each group has revealed that while the nominal group is heterogeneous (consisting of healthy controls, patients with bipolar disorder, bipolar patients with insulin resistance and controls with insulin resistance), the extensive BBB leakage group is comprised exclusively of bipolar patients with insulin

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ABSTRACTS OF ORAL PRESENTATIONS

O-023

Electrodermal hyporeactivity as biopsychological marker for suicidal vulnerability in depression indicating Hippocampal Dysorienting

Lars H Thorell

Department of Research and Development Emotra AB, Gothenburg, Sweden; Department of Clinical and Experimental Medicine, Linkoping University, Linkoping, Sweden

OBJECTIVE: The purpose is to investigate the relationship between dysplasticity of hippocampal subregions and loss of specific electrodermal orienting responses in depression. In addition, differences between blind compared to open, naturalistic studies are investigated.

MATERIAL-METHODS: The material comprises more than 2500 patients at several psychiatric clinics in Europe with a diagnosis of depression, with or without attempted or committed suicide, tested in experiments of habituation of electrodermal responses to repeated neutral acoustic stimuli. Diagnoses according to the ICD-10 diagnostic system and symptomatology according to Montgomery-Asberg Depression Scale and the Beck Depression Inventory. Data from blind or naturalistic studies are compared.

RESULTS: In three small blind pioneer studies taken together, the odds ratio for suicide in hyporeactive patients was found to be 25.38 and the sensitivity 100% and negative predictive value 100%. In one mainly blind study, the sensitivity was 83% and negative predictive value 97.6 for suicide. In a naturalistic study, in which the clinical staff was free to use the test results in clinical suicide risk assessment, the statistics behaved totally different. In all studies there were moderate to highly significant relationships between hyporeactivity and suicide attempts.

CONCLUSION: The analyses of the data strongly supports the thesis that the time-extended electrodermal hyporeactivity is strongly related to vulnerability to suicide in the sense that neuronal dysplasticity in hippocampal, particularly dentate gyrus and CA3 regions, affects vital neuropsychological functions regarding cognitive and emotional interpretation of events in the everyday life, in turn leading to preparadness to leave the perceived insipid everyday life and to loss of emotions, for example loss of fear of imminent pain. The consequence of that dysfunctions is that they together enables the depressive suicide for extended time (years).

Keywords: Depressed suicide, Biopsychological marker, Electrodermal hyporeactivity, Suicide risk assessment, Hippocampal Dysorienting, Suicide enabling

O-024

Altered spatiotemporal dynamics of stimulus-evoked neural responses in clinical depression: a Magnetoencephalography (MEG) study in Saudi Arabia

Maha Mesfer Alqahtany¹, Fahad Aldosary²

¹Alamal Mental Health Complex, Riyadh, Saudi Arabia
²Department of Mental Health, National Neurosciences Institute, King Fahad Medical City, Riyadh, Saudi Arabia

OBJECTIVE: Neurobiological underpinnings of major depressive disorder (MDD) are not yet well understood. We have no clinical biomarkers that predict remission after a particular therapeutic intervention. This is very important aspect to identify pre-treatment neuronal processing and activity that contribute to the prediction of remission, response and non-response to treatment.

MATERIAL-METHODS: In this ongoing exploratory study, we use magnetoencephalography (MEG) to address this issue. We report initial results from 15 drug-free patients with MDD and 15 matched healthy controls. MEG signals were recorded using 306-channel MEGIN system, while subjects viewed pleasant, unpleasant and neutral pictures, presented in random order. Data were analyzed based on Brainstorm (http://neuroimage.usc.edu/brainstorm), using advanced source analysis tools and rigorous statistical methods.

RESULTS: Between-group comparison of valence-independent event-related neural activity identified an MDD-affected network of brain regions, involving predominantly right hemisphere frontal, parietal and mesial temporal areas (fig. 1). The earliest and largest change was identified within right intraparietal sulcus (IPS), as a profound hypoactivity in patients, with an onset at 55 ms (fig. 2). Table 1 shows latencies and sequence of affected regions within the identified network. Valence-related neural activity in MDD is described elsewhere (see the abstract by Aldosary et al. “Altered emotional neural processing in major depressive disorder; a Magnetoencephalography (MEG) study in Saudi Arabia”).

CONCLUSION: The present report provides evidence of altered neural processing in MDD, affecting predominantly right hemisphere frontal, parietal and mesial temporal areas, largely consistent with earlier fMRI findings. Our results add the crucial timing information for these regions and reveal the precise dynamics and sequence of aberrant brain responses in MDD. Further, they stress the pivotal role of right IPS in MDD. These pre-treatment neuronal processing data will be utilized to identify potential candidate biomarkers that predict post-pharmacotherapy remission, response and non-response in the same group of patients.

Keywords: biomarkers, depression, MEG, neuroimaging,
MDD-affected network of brain regions and right parietal (IPS) activation time course

Figure 1 shows key right hemispheric cortical regions showing differences between patients and controls. Figure 2 shows right parietal IPS activation course in response to visual stimuli in both patients and controls; the inset showing the localization of depression-affected hypoactivation from which the region of interest was defined.

Key brain regions of interest (ROI) showing differential activity between patients with MDD and healthy controls in valence-independent visual stimulus processing.

<table>
<thead>
<tr>
<th>ROI name</th>
<th>Direction of group differences</th>
<th>Start time (ms)</th>
<th>End time (ms)</th>
<th>Direction of group differences</th>
<th>Start time (ms)</th>
<th>End time (ms)</th>
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</thead>
<tbody>
<tr>
<td>R IPS (BA7)</td>
<td>C &gt; P</td>
<td>55</td>
<td>560</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R inf. preCG</td>
<td>C &gt; P</td>
<td>115</td>
<td>600</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R CS</td>
<td>C &gt; P</td>
<td>125</td>
<td>560</td>
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</tr>
<tr>
<td>R postCG</td>
<td>C &gt; P</td>
<td>170</td>
<td>550</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R MTC</td>
<td>P &gt; C</td>
<td>65</td>
<td>800</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>R rACC</td>
<td>P &gt; C</td>
<td>100</td>
<td>650</td>
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<tr>
<td>L MTC</td>
<td>C &gt; P</td>
<td>145</td>
<td>P &gt; C</td>
<td>230</td>
<td>575</td>
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<tr>
<td>L rACC</td>
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<td>100</td>
<td>620</td>
<td>C &gt; P</td>
<td>620</td>
<td>1000</td>
</tr>
</tbody>
</table>

The direction of group differences, and the start and end latencies of differential activities are shown. C > P, stronger activity in controls (hypoactivity in patients); P > C, stronger activity in patients (hyperactivity in patients); R, right hemisphere; L, left hemisphere; IPS, intraparietal sulcus; postCG, postcentral gyrus; CS, central sulcus; preCG, precenral gyrus; rACC, rostral anterior cingulate cortex; MTC, mesial temporal cortex ROI name (entorhinal cortex, parahippocampal gyrus etc.).

O-025
Food craving in bipolar disorder

Martina Platzer¹, Frederike Tabea Fellendorf¹, Susanne Astrid Bengesser¹, Armin Birner¹, Nina Daikner¹, Carla Hamm¹, Melanie Lenger¹, Robert Queissner¹, Sieglinde Zelzer², Harald Mangge¹, Hans Peter Kapfhammer¹, Eva Z Reininghaus¹

¹Department of Psychiatry and Psychotherapeutic Medicine, Medical University Graz, Graz, Austria
²Clinical Institute of Medical and Chemical Laboratory Diagnostics, Medical University Graz, Graz, Austria

OBJECTIVE: Food craving in general and the craving for carbohydrates in particular is often associated with psychopharmacological medication used in bipolar disorder (BD) but may also be a symptom of atypical depression in itself.

MATERIAL-METHODS: In this investigation, 153 individuals with BD and 93 healthy controls completed the Food Craving Inventory (FCI). In addition, blood samples (including leptin and ghrelin levels) were analysed and sociodemographic and anthropometric data were collected.

RESULTS: Individuals with BD reported higher frequencies of total FC and had higher scores on all four subscales of the FCI: fat, sweets, carbohydrates and fast food. Controlling for age, craving for fast food was significantly positively correlated with Beck Depression Inventory (r = .22, p = .008) and Hamilton Depression Rating Scale (r = .19, p = .023) scores, respectively. Female patients (n = 38; M = 2.9, SD = 0.9) taking second-generation antipsychotics with an especially high risk of weight gain (olanzapine, quetiapine) reported higher frequencies of craving for sweet food items than those (n= 30; M= 2.4, SD = 0.8) without such types of medication (t (1, 66) = - 2.23, p = .029), although BMI did not differ between the two groups. In female patients, we found a significant negative correlation between ghrelin serum levels and frequencies of total FC (r = -.40, p = .006), craving for fat (r = -.32, p = .027), craving for carbohydrates (r = -.33, p = .022) and craving for fast food (r = -.46, p = .016), respectively.

CONCLUSION: The phenomenon of FC appears to be of clinical relevance in individuals with bipolar disorder.

Keywords: bipolar disorder, food craving, adipokines, ghrelin, obesity
ABSTRACTS OF ORAL PRESENTATIONS

O-026
Metabolic parameters as predictors of bipolarity in first-episode psychosis: a retrospective cohort study

Pedro Oliveira1, Nuno Madeira2, Manuel Coroa3, Joana Ribeiro4, Sofia Morais1, Miguel Bajouco1, Vítor Santos1, Bruno Manadas3, António Macedo2

1Department of Psychiatry, Centro Hospitalar e Universitário de Coimbra, Coimbra, Portugal; Institute of Psychological Medicine, Faculty of Medicine - University of Coimbra, Coimbra, Portugal
2Department of Psychiatry, Centro Hospitalar e Universitário de Coimbra, Coimbra, Portugal; Institute of Psychological Medicine, Faculty of Medicine - University of Coimbra, Coimbra, Portugal; Coimbra Institute for Biomedical Imaging and Translational Research (CIBIT), University of Coimbra, Portugal
3Center for Neuroscience and Cell Biology, University of Coimbra, Coimbra, Portugal

OBJECTIVE: Patients in early phases of schizophrenia (SZ) or bipolar disorder (BD) have a wide array of metabolic abnormalities, many of them when drug-naïve. Additionally, there are no well-established biomarkers to predict the risk of conversion to BP in patients with first-episode psychosis (FEP). Given recent findings about higher uric acid (UA) levels as a risk factor to BP conversion, we aimed to assess if UA and other metabolic parameters in FEP patients could be associated with subsequent evolution to BP or non-affective psychosis.

MATERIAL-METHODS: We retrospectively reviewed the records of all patients referred to a FEP unit (n=149) between 2012 and 2017 who had available UA levels at admission, besides other metabolic parameters: glycaemia, cholesterol and triglycerides. Patients with a follow-up diagnosis of BP (n=10) were compared with non-affective psychosis patients (SZ, n =27; and ‘other psychotic disorders’ (OPD), n=19) regarding sociodemographic data and metabolic parameters of interest.

RESULTS: FEP patients that were later diagnosed with BP had higher UA levels (6.24±1.64 mg/dL) than patients in SZ (5.47±1.02 mg/dL) or OPD (5.58±0.69 mg/dL) groups; however, without statistical significance. Glycaemia levels were significantly lower (p=.017) in the BP-converters group (79.4±6.64 mg/dL) compared with non-BP FEP patients (SZ 90.16±20.29 mg/dL; OPD 88.72±7.28 mg/dL). There were no differences between groups regarding lipid metabolic parameters (cholesterol and triglycerides).

CONCLUSION: The purinergic system has shown promising results in searching for risk biomarkers of BP, and differences in UA levels in our sample were congruent with previous findings, particularly in female patients; differences failed to meet statistical significance, probably due to the small subsample size. Nonetheless, glycemic dysfunction is apparently more characteristically of non-affective psychosis: at early referral to a FEP unit, lower blood glucose levels were found in patients who converted to BP during follow-up. Further studies, preferably prospective and multicentric, with larger samples, could detail the clinical relevance of our findings.

Keywords: uric acid, glycaemia, first-episode psychosis, bipolar disorder, schizophrenia
ABSTRACTS OF POSTER PRESENTATIONS
ABSTRACTS OF POSTER PRESENTATIONS

P-001
Effectiveness and cost-utility of a Mediterranean Lifestyle program in the prevention and treatment of subclinical, mild and moderate depression in Primary Care: Randomized Clinical Trial

Alejandra Aguilar Latorre1, Catalina Calafat Villalonga2, Maris Seguí Ipalo2, Capilla Navarro Guzman3, Bárbara Oliván Blázquez4, Mª Jesús Serrano Ripoll1

1Aragon Institute of Health Research, Zaragoza, Spain
2Psychology Department, University of the Balearic Islands (UIB), Mallorca, Spain
3Applied Pedagogy and Educational Psychology Department, University of the Balearic Islands (UIB), Mallorca, Spain
4Psychology and Sociology Department, University of Zaragoza, Aragon Institute of Health Research, Zaragoza, Spain

OBJECTIVE: To analyze the effectiveness and cost-utility of a Mediterranean lifestyle program as a coadjuvant treatment for depression. The effectiveness of a monitoring by information and communications technology (ICT) and the effectiveness of the intervention in chronic comorbid pathology will also be analyzed.

MATERIAL-METHODS: Design: Randomized, multicenter pragmatic clinical trial in 3 parallel groups.

Subjects: Primary care patients with subclinical, mild or moderate depression.

Sample Size: 240 patients will be recruited. Up to now 70 patients have been recruited.

Interventions: Three interventions will be carried out: 1) Usual antidepressant treatment with psychological advice and/or psychotropic drugs by the primary care physician (TAU); 2) TAU + Mediterranean lifestyle (ML): program that will work weekly in 6 sessions (1 per week) of 2 hours in a group to improve the following aspects: behavioral activation, daily physical activity, adherence to the Mediterranean diet, sleep hygiene, careful exposure to the ambient light; 3) TAU + Mediterranean lifestyle (previous point) adding a monitoring using ICT.

Measurements: The main variable will be the depressive symptomatology evaluated by the BDI II. The secondary variables will be the quality of life, chronic comorbid pathology, the use of health and social resources, and personal variables related to adherence to the program (self-efficacy, activation, sense of coherence, literacy in health and procrastination).

RESULTS: The patients that have received the intervention based on a lifestyle modification have improved their depression symptomatology. Furthermore, the patients assigned to ICT group had obtained better results.

CONCLUSION: The intervention may be considered cost-effective, and the group format makes its implementation feasible.

Keywords: Mediterranean Lifestyle, depression, Primary Care

P-002
Gender differences related to comorbidity and the pharmacological treatment in the depressive episodes in primary care

Alejandra Aguilar Latorre1, Mª Antonia Sanchez Calavera2, Marimar Martinez Pecharronan1, Rosa Magallón Botaya1, Bárbara Oliván Blázquez3

1Aragon Institute for Health Research, Zaragoza, Spain
2Medicine-Psychiatry and Dermatology Department, University of Zaragoza, Aragon Institute for Health Research, Zaragoza, Spain
3Psychology and Sociology Department, University of Zaragoza, Aragon Institute for Health Research, Zaragoza, Spain

OBJECTIVE: To analyze the gender differences related to comorbidity and the pharmacological treatment in the depressive episodes in primary care.

MATERIAL-METHODS: Design: Cross-sectional descriptive study. The sample of this study consists of individuals having open electronic medical records in the autonomous community of Aragon (Spain), for at least two years during the time of entry into the study, including patients with an active diagnosis of depression during the year 2016. The total number of people was 103,890, of whom 70,000 people (26.9%) were men and 75,910 (73.1%) were women. Other analyzed variables were: age, comorbidity and pharmacological treatment.

RESULTS: The average age of men was 57.64 (SD: 17.53) years old and of women 61.54 (SD: 17.56) years old and of women 61.54 (SD: 17.56) years old and of women 61.54 (SD: 17.56) years old and of women 61.54 (SD: 17.56) years old and of women 61.54 (SD: 17.56) years old. There were significant differences in comorbidity with malignant colon / rectal neoplasm (p value: 0.001) and neoplasms of the urinary system (p value: 0.039), being more frequent in men. Regarding pharmacological treatment, there were significant differences in the prescription of citalopram (p value: <0.001), venlafaxine (p value: 0.001), duloxetine (p value: 0.001), escitalopram (p value: <0.001), fluoxetine (p value: <0.001), mianserin (p value: 0.014), paroxetine (p value: <0.001), being more prescribed in women. There were significant differences in the prescription of vortioxetine (p value: 0.001), being more prescribed in men.

CONCLUSION: There are significant differences between genders respecting neoplasm, cancer, alcohol and tobacco abuse and affective psychoses and drugs prescription.

Keywords: Gender differences, comorbidity, pharmacology, depression, primary care.

P-003
Heart rate variability associated with suicidality in depressed patients

Amelie Sauter1, Catharina Wurst1, Felix Nitschke1, Jürgen Deckert1, Katharina Domschke1, Andreas Menke1

1Department of Psychiatry, Psychosomatics and Psychotherapy, University Hospital of Wuerzburg, Wuerzburg, Germany
2Department of Psychiatry and Psychotherapy, Medical Center - University of Freiburg, Freiburg, Germany

OBJECTIVE: Depression is a common psychiatric disease that is associated with a high risk of suicidality. Although there are effective treatment options with antidepressants, in a small subgroup there is an emergence or an increase in suicidial ideation
ABSTRACTS OF POSTER PRESENTATIONS

P-004 Depression, anxiety, and somatic symptoms in older age: associations with cognition
Anton Heretik1, Andrea Marsalova – Heretikova1, Eva Smolejova1, Miroslava Abrahámová1, Viera Cviková1, Michal Hajdúk1
1Department of Psychology, Faculty of Arts, Comenius University in Bratislava
1Private psychiatric ambulance, Rhea, Bratislava, Slovakia

OBJECTIVE: Symptoms of affective and anxiety disorder often co-occur with cognitive impairment in the older age. Clinical presentation of depression in older age is characterized by a lot of somatic complaints. The aim of the research was to evaluate how negative affectivity and somatic symptoms are associated with cognitive functioning in older age.

MATERIAL-METHOD: The present sample consisted of 223 participants with mean age M=74.90 and SD=6.81. 60% of samples were females. GAD-7, PHQ-9, and PHQ – 15 were used for measuring anxiety, depression and somatic symptoms respectively. For evaluation of the cognitive functioning MMSE, MoCA, Frontal Assessment Battery, Digit span, Symbol Coding, Story recall, Verbal Fluency and Trail Making Test were used.

RESULTS: Measures of negative affect and somatic symptoms were moderately to strongly intercorrelated. MMSE and MoCA scores were not related to negative affectivity nor somatic symptoms. We found small negative relationship between severity of anxiety symptoms (rs=-0.212, p=0.002), somatic symptoms (rs=-0.239, p=0.006), and Frontal Assessment Battery. Severity of depression measured by PHQ-9 was related to Digit Span Forward (rs=-0.138, p=0.048). Severity of somatic symptoms was related to better performance in Symbol Coding (rs=-0.236, p=0.007), TMT – A, and Digit Span Forward (rs from 0.216 -0.267).

CONCLUSION: Results of research supported weak association between somatic symptoms and cognitive functioning in older healthy controls. Somatic symptoms in older age seem to be more strongly related to cognition than negative affectivity.

Keywords: major depression, suicide, antidepressants, HRV, childhood trauma

P-005 Towards a new CNS biology based in the unsuspected bioenergetic role of Neuromelanin
Arturo Solis Herrero, Maria Del Carmen Arias Esparza, Paola Eugenia Solis Arias
Human Photosynthesis(tm) Research Centre, R & D & I department; Aguascalientes 20000, Mexico.

OBJECTIVE: The pathophysiology of affective diseases is based on glucose, both as a source of energy as well as a source of biomass (carbon chains). On the other hand, neuromelanin is assigned a biological role of a secondary metabolic product. The purpose of this work is to demonstrate that glucose is only the universal precursor to any organic matter in the body, but it cannot provide the energy that its own metabolism requires. Also, neuromelanin is by no means a secondary product of neuron metabolism, as it possesses the unsuspected intrinsic ability to transform light into chemical energy by dissociation of the molecule from water, such as chlorophyll in plants.

MATERIAL-METHODS: During a descriptive observational study, on the morphological characteristics of the tiny blood vessels entering and leaving the optic nerve and their possible correlation with the three main causes of blindness in the world (Glaucoma, diabetes, macular degeneration) we detected the ever presence of melanin nearby the optic nerve.

RESULTS: The study lasted 12 years and included flour-angiographic studies of 6000 patients. The results were surprising, as we found that melanin in the eye, which is indistinguishable from neuro-melanin, can transform light into chemical energy by dissociating the molecule from water, such as chlorophyll in plants.

CONCLUSION: The unexpected bioenergetic role of neuro-melanin breaks into a thousand pieces the sacrosanct double role of glucose as a source of energy and at the same time as a universal precursor of biomass. Glucose cannot provide the energy that your own metabolism requires.

Keywords: Neuro-melanin, energy, glucose, water dissociation, energy.

P-006 Genetic Studies in Mood Disorders and Psychiatry in a Genetic Isolate
Carlos López Jaramillo, Ana M. Díaz Zuluaga, Cristian Vargas, Juan David Palacio
Research Group in Psychiatry, Department of Psychiatry, Faculty of Medicine, Universidad de Antioquia, Medellin, Colombia

OBJECTIVE: To present and discuss the genetic studies in mood disorders and psychosis in a genetic isolate from Colombia.

MATERIAL-METHODS: The "Paisa Population" is a genetically and culturally homogeneous population of Colombia which has been the focus of genetics studies in mood and psychotic disorders over the past decade. This special population is highly affected by severe mental illness, such as bipolar disorder, depression and schizophrenia. Different studies have been performed trying to understand the genetic architecture of these diseases. Here we will show the ongoing genetic studies (endophenotypes in extended pedigrees, GWAS and pharmacogenetics) in the Paisa Population in the field of mood disorders and psychosis.

RESULTS: We will discuss the value of psychiatric genetics studies in a genetically isolated and how this potentially more homogeneous population may help to detect common and rare genetic variants associated with different phenotypes in mood disorders and psychosis.
CONCLUSION: Genetics studies in isolated populations represent an important strategy in the mapping and understanding of the genetic basis of complex traits. We will show and discuss the current psychiatric genetics studies in the Paisa Population.

Keywords: Bipolar Disorder, Major Depressive Disorder, Psychosis, Genetics, Genetic Isolate, Pharmacogenetics

**P-007**

rTMS in Major Depressive Disorder: treatment duration is a key element in treatment success

Chris Bervoets, Choi Deblieck

UPC KULEUVEN, Adult Psychiatry, Herestraat 49, 3000 Leuven, Belgium

OBJECTIVE: to assess the magnitude of the effect of rTMS treatment paradigms in randomized controlled trials and to determine which clinical or therapeutic variables contribute to a net active treatment effect

MATERIAL-METHODS: We included all reports selected in the paper by Lefaucheur and added all articles until 2018 using the same selection criteria as Lefaucheur et al. Two meta-analyses were conducted on the basis of the available studies. A first analysis was performed to examine the effect of rTMS on depression compared to sham. In addition, a second meta-analysis was performed to obtain an optimal estimate of the proportion of patients who showed response under sham versus rTMS treatment.

RESULTS: Effect of TMS compared to sham on depression: Results of this analysis indicates that part of the heterogeneity among studies can be explained by treatment duration, $F(1,15.4)=8.78$, $p=0.009$, with studies in which patients were treated longer showing a larger ES. Effect of TMS compared to sham on response: Based on a meta-analysis involving 13 studies with 267 unique patients in the sham condition and 318 unique patients in the TMS condition, an estimated weighted OR of 2.71 [95% CI: 1.71–4.28] was found, indicating that the odds of response are 2.71 times higher for patients receiving TMS compared to those in the sham condition.

CONCLUSION: In patients with depressive disorder, treated with rTMS studies in which patients were treated longer showed a significant larger effect size.

Keywords: rTMS, depression, meta-analysis

These are the graphs from the meta analysis on the papers included in the Lefaucheur review on rTMS for depressive disorders
P-008
The risk of incident dementia according to the categorization of depression: preliminary findings from the prospective cohort study

Dae-Jong Oh1, Ji Won Han2, Ki Woong Kim3

1Department of Neuropsychiatry, Seoul National University Bundang Hospital, Seongnam, Korea; Department of Psychiatry, Seoul National University College of Medicine, Seoul, Korea
2Department of Neuropsychiatry, Seoul National University Bundang Hospital, Seongnam, Korea
3Department of Neuropsychiatry, Seoul National University Bundang Hospital, Seongnam, Korea; Department of Psychiatry, Seoul National University College of Medicine, Seoul, Korea; Department of Brain and Cognitive Science, Seoul National University College of Natural Sciences, Seoul, Korea

OBJECTIVE: To identify whether the both subsyndromal and syndromal depression could increase the risk of developing dementia in the community-dwelling elderly population.

MATERIAL-METHODS: This was a part of the nationwide cohort study of randomly sampled Korean elderly aged 60 years or older. Standardized diagnostic interviews were performed to diagnose depressions at the baseline surveys. We diagnosed syndromal depression (SynD) which consisted of major and minor depressive disorders by DSM-IV criteria, and subsyndromal depression (SSD) by the operational criteria. Totally 4,635 elderly without any major psychiatric illness other than depression, dementia, and prior history of depression were followed. Cox proportional hazard regression analyses was used to identify the dementia risks during the 4-year follow-up interval.

RESULTS: During the mean follow-up period of 40.4 months, totally 154 (3.3%) incident cases of dementia were occurred. Whereas 2.8% (118 out of 4182) of non-depressed participants developed dementia, 7.1% (25 out of 353) of participants with SSD and 11.0% (11 out of 100) of participants with SynD developed dementia during the follow-up interval. Our multivariate analyses revealed that the late-life SSD and SynD posed 2.4-fold (HR = 2.39, 95% CI = 1.19 - 4.80) and 3.4-fold (HR = 3.35, 95% CI = 1.25 - 9.03) risks of dementia compared to the non-depressed, respectively.

CONCLUSION: The late life depression could significantly increase the risk of dementia, regardless of its severity.

Keywords: Depression, Dementia, Geriatric Psychiatry

P-009
Sleep-wake rhythm in bipolar disorder measured by a smartphone app

Frederike T. Fellendorf, Carlo Hamm, Martina Platzer, Melanie Lenger, Susanne A. Bengesser, Eva Z. Reinlinghaus

Department of Psychiatry and Psychotherapeutic Medicine, Medical University Graz, Austria

OBJECTIVE: Currently, numerous new products such as applications (apps) for smartphones are being marketed in the electronic (e-) health sector. Bipolar disorder (BD) is characterized by mood fluctuations, which are often recognized late by those who are affected. Symptom monitoring via smartphone seems to be an inexpensive and feasible method to detect these fluctuations earlier. One aim amongst others of our trial is to record objective data about sleep-wake rhythm via an app for smartphones (NCT032175714). MATERIAL-METHODS: We developed the UP! app for Android smartphones which collects subjective mood daily and objective continuous data about sleep duration, movement, exercise and intensity of digital communication via GPS and sensors. The main aim of this study is to assess the app's sleeping data validity in comparison to a clinical psychiatric interview, validated questionnaires and a fitness tracker. A second aim is to determine whether changes in the sleep-wake rhythm, measured with the app, can detect early warning symptoms of depressive and/or manic episodes.

RESULTS: The recruitment of participants (planned n=48) is still ongoing. Results will therefore be presented at the congress.

CONCLUSION: Behavior patterns as sleep-wake rhythm recognition via smartphone could present an innovative, technological tool for the early detection of BD episodes and could be valuable for long-term research. Diverse free apps with potentially favorable effects on mood stabilization are available for people suffering from BD. As currently only a very small number of them have been scientifically evaluated, there is an urgent need for research in the mobile e-health sector.

Keywords: bipolar disorder, sleep-wake rhythm, m-health, application, smartphone, early episode detection

P-010
Emotional support and white matter hyperintensities in depressed older adults

Grace Eun Kim1, Subin Lee2, Jun Sung Kim1, Jong Bin Bae2, Ji Won Han3, Jae Hyoung Kim3, Ki Woong Kim4

1Department of Brain and Cognitive Sciences, Seoul National University College of Natural Sciences, Seoul, Republic of Korea
2Department of Neuropsychiatry, Seoul National University Bundang Hospital, Seongnam, Republic of Korea
3Department of Radiology, Seoul National University Bundang Hospital, Seongnam, Republic of Korea
4Department of Brain and Cognitive Sciences, Seoul National University College of Natural Sciences, Seoul, Republic of Korea

OBJECTIVE: In previous studies, perceived emotional support was negatively associated with depressive symptoms and increase in white matter hyperintensities (WMH) has been associated with depression in older adults. However, the association between emotional support and WMH is unknown. We investigated the association between emotional support and total volume of white matter hyperintensities (TWMH).

MATERIAL-METHODS: Ninety depressed mild cognitive impairment (MCI) patients from Seoul National University Bundang Hospital (mean age ± SD: 74.79 ± 7.07 years) were included in the study. We assessed perceived emotional support of the participants using the Medical Outcomes Study Social Support Survey (MOS-SSS). We obtained 3T MRI scans and used a fully automated segmentation to quantify TWMH. We log-transformed TWMH (logTWMH) due to the skewness of the distribution of TWMH. To examine the effect of emotional support on logTWMH, we conducted a linear regression analysis adjusting for sex, age, education, Cumulative Illness Rating Scale (CIRS) total scores, and estimated total intracranial volume (eTIV).

RESULTS: Emotional support was negatively associated with logTWMH (adjusted R² = 0.344, β = -0.193, p = 0.033). As emotional support increased, logTWMH decreased by 0.429 mm³. Emotional support significantly predicted logTWMH.

CONCLUSION: Emotional support may decrease logTWMH in depressed MCI patients, but further analyses with a larger sample size will need to be conducted to confirm this effect.

Keywords: emotional support, white matter hyperintensities, depression.
ABSTRACTS OF POSTER PRESENTATIONS

P-011
Risk of readmission in patients with schizophrenia and schizoaffective disorder newly prescribed clozapine

Jad Kesservani1, Giouliana Kadri2, Johnny Downs3, Hitesh Shetty1, James Maccabe1, David Taylor1, Robert Stewart1, Chin Kuo Chang1, Richard Hayes1

1King’s College London, Institute of Psychiatry Psychology and Neuroscience, London, UK
2National Institute for Health Research (NIHR) Maudsley Biomedical Research Centre, London, UK
3South London and Maudsley National Health Service (NHS) Foundation Trust, London, UK

OBJECTIVE: Insight into the effect of clozapine is limited by a lack of controlling for confounding variables in current research. Our objective was to investigate the association between clozapine prescribed at discharge, following an inpatient episode, and risk of readmission into secondary mental health services in patients with schizophrenia and schizoaffective disorder, controlling extensively for confounding variables.

MATERIAL-METHODS: Clinical records from 3651 patients were analysed in a retrospective observational cohort study. Cox proportional-hazards regression models were used to assess the risk of hospital readmission. A series of sensitivity analyses were also conducted. Propensity score methods were used to address confounding-by-indication.

RESULTS: Patients on clozapine (n=202) had a reduced risk of readmission compared with patients on other antipsychotics (adjusted hazard ratio=0.79; 95% confidence interval: 0.64–0.99; p=0.043). Clozapine also had a protective effect on risk of readmission when compared with olanzapine (adjusted hazard ratio 0.76; 95% confidence interval: 0.60–0.96; p=0.021). The effect size remained consistent after adjusting for an array of possible confounders, as well as using propensity scores to address confounding-by-indication. A statistically significant result was also noted in all but two sensitivity analyses.

CONCLUSION: Our findings suggest that clozapine is associated with a reduced risk of readmission into secondary mental health services. Keywords: Clozapine, readmission, atypical antipsychotics, schizophrenia, schizoaffective disorder.

P-012
The influences of white matter hyperintensities volume on depression, gait and quality of life patients with Alzheimer’s disease

Joon Hyuk Park, Hyun Joo Yang

Department of Psychiatry, Jeju National University Hospital, Jeju, Republic of Korea

OBJECTIVE: Cerebral small vessel disease (SVD) has been identified as a possible risk factor of depression and quality of life. Possibly, the underlying microstructural integrity of the white matter, which can be assessed by white matter hyperintensities (WMHs) on T2-weighted magnetic resonance images (MRI) of the brain, so the purpose of this study is to identify the association of WMHs with depression and quality of life in patients with Alzheimer’s disease.

MATERIAL-METHODS: Quantitative magnetic resonance imaging was performed in 72 Alzheimer’s diseases. The volume of WMHs was quantified using LST which allows the performance of accurate brain tissue volume measurements without any kind of manual intervention. After then, for the volume of WMHs we used a logarithmic transformation to produce normally distributed data. For the assessment of gait and balance, Asian Working Group of Sarcopenia (AWGS), as well as a timed up and go test, and both were performed twice. Quality of life was evaluated by the 36-Item Short Form Health Survey (SF-36). Depression was evaluated by geriatric depression scale (GDS) RESULTS: In 72 subjects, the mean age was 80.46±16.78 years, and mean white matter hyperintensities volume was 20.45±15.87mL. WMHs volume was significantly associated with high scores of GDS (p=0.004), slow gait speed (p=0.001), increased timed up and go score (p=0.002) and low scores of SF-36 (physical function, p=0.047; social function, p=0.031; mental health, p=0.029).

CONCLUSION: White matter hyperintensities volume was related to depression, gait, balance impairment and various aspects of the quality of life in patients with Alzheimer’s disease.

Keywords: White matter hyperintensities, depression.

P-013
Semantic Measures Based on Open-ended Word Responses analyzed with Artificial Intelligence Predict Individual Rating Scale Items for Depression, Anxiety and Worry Well

Katarina Kjell, Oscar Kjell, Sverker Sikström

Department of Psychology, Lund University

OBJECTIVE: Semantic measures allow for open-ended answers that are analyzed with artificial intelligence; and has demonstrated higher, or competitive, validity and reliability as compared with traditional closed-ended rating scales (Kjell, Kjell, Garcia & Sikström, 2018, Psychological Methods). Semantic measures correlate with state of the art rating scales’ total scores and thus show a potential utility in clinical settings; however, it has not been examined what aspects of the rating scales that is captured. To truly facilitate clinical practices the semantic measures approach needs to capture cognitive, behavioral and physiological aspects associated with mental health problems. This study uses item-level analyses to investigate to what extent semantic measures capture various items in traditional depression and anxiety rating scales.

MATERIAL-METHODS: Participants (N=411) answered open-ended, semantic measures and rating scales relating to depression (the Patient Health Questionnaire-9) and anxiety as well as worry (the Generalized Anxiety Scale-7, the Penn State Worry Questionnaire Abbreviated - 8). Word responses were quantified and analyzed using natural language processing (Latent Semantic Analyses and machine learning (multiple regression, cross-validation).

RESULTS: The semantic measures for depression (Pearson’s r=0.21-0.54, p<0.001) and worry (GAD-7: Pearson’s r=0.27-0.47, p<0.001; PSWQ-8: Pearson’s r=0.35-0.46, p<0.001) significantly correlated with the individual items of respective rating scales.

CONCLUSION: Semantic measures cover all aspects of the rating scale items that are designed to cover the DSM criteria; although with strengths varying from weak to strong. Semantic measures appear specifically suited to capture individual’s experience of depression, worry or anxiety.

Keywords: Depression, Anxiety, Measurement, Worry, Artificial Intelligence.
ABSTRACTS OF POSTER PRESENTATIONS

P-014
Polygenic risk and hazard of converting to affective or non-affective psychotic disorders in hospital-treated depression patients

Katharine L. Maximen1, Bjarni Vilhjalmsson1, Clara Albinanana1, Esben Algerbo1, Preben B. Mortensen1, Søren D Østergaard1
1Department of Economics and Business Economics, Aarhus University, Aarhus, Denmark; 2Department of Clinical Medicine, Aarhus University, Aarhus, Denmark

OBJECTIVE: To examine associations between polygenic risk scores (PRS) for depression, bipolar disorder and schizophrenia and risk of converting to an affective or non-affective psychotic disorder among individuals treated for depression in Danish psychiatric hospitals.

MATERIAL-METHODS: Participants included 26,003 individuals (70% female, ages 10–35) from the iPSYCH2004 sample who were diagnosed with depression without psychotic features (ICD-10 codes: F32–F33) and followed up to 7 years. Patients were followed from their first depression diagnosis until first diagnosis with an affective psychotic disorder (bipolar with psychotic symptoms [F30.2, F31.2, F31.5]) or depression with psychotic symptoms ([F31.3]) or a non-affective psychotic disorder (schizophrenia and related disorders [F20–F29]), death, migration, or December 31, 2016, whichever came first. Hazard ratios were estimated using Cox regressions with death as a competing event. All models were adjusted for the first 5 ancestral principal components and birth year. PRS variables were trained on the most recent results from the PGC and 23andME.

RESULTS: During follow-up, 267 (1.9%) and 1,156 (8.1%) individuals were diagnosed with an affective or non-affective psychotic disorder, respectively. PRS-SZ was significantly associated with hazard of converting to non-affective psychotic disorders (HR=1.20, [1.06–1.36]; p = .004), PRS-MD was not associated with converting to psychotic disorders (Figure). Compared to the bottom quartiles, individuals in the top quartiles of PRS-BD and PRS-SZ were 55% (p = .01) and 31% (p = .001) more likely to convert to an affective or non-affective psychotic disorder, respectively. PRS-SZ was significantly associated with converting to non-affective psychotic disorders (HR=1.11, [1.06–1.16]; p = .001). PRS-MD was not associated with death as a competing event. All models were adjusted for the top 5 principal components and birth year. PRS variables were trained on the most recent results from the PGC and 23andME.

RESULTS: During follow-up, 267 (1.9%) and 1,156 (8.1%) individuals were diagnosed with an affective or non-affective psychotic disorder, respectively. PRS-SZ was significantly associated with hazard of converting to non-affective psychotic disorders (HR=1.20, [1.06–1.36]; p = .004), PRS-MD was not associated with converting to psychotic disorders (Figure). Compared to the bottom quartiles, individuals in the top quartiles of PRS-BD and PRS-SZ were 55% (p = .01) and 31% (p = .001) more likely to convert to an affective or non-affective psychotic disorder, respectively. PRS-SZ was significantly associated with converting to non-affective psychotic disorders (HR=1.11, [1.06–1.16]; p = .001). PRS-MD was not associated with death as a competing event. All models were adjusted for the top 5 principal components and birth year. PRS variables were trained on the most recent results from the PGC and 23andME.

CONCLUSION: Polygenic risk scores may prove useful for identifying individuals at high risk of converting to affective and non-affective psychotic disorders, respectively.

P-015
Association between erythrocyte indices and depressive symptoms in the community-dwelling elderly

Ki Woong Kim1, Dae Jong Oh2, Ji Won Han2
1Department of Neuropsychiatry, Seoul National University Bundang Hospital, Seongnam, Korea; 2Department of Psychiatry, Seoul National University College of Medicine, Seoul, Korea; 3Department of Brain and Cognitive Science, Seoul National University College of Natural Sciences, Seoul, Korea

OBJECTIVE: To identify an association between erythrocyte indices and depressive symptom severity in late life.

MATERIAL-METHODS: From a nationwide community-based study of Korean elderly aged 60 years or older, we excluded participants with major psychiatric illnesses other than depression, dementia, liver diseases, thyroid diseases, renal failure, malignancies, history of gastrointestinal resection or inflammatory bowel diseases, hematological disorders, and consumption of any iron supplements. Totally 4,451 elderly (mean age = 60.3 years, female = 56.9%) who agreed to the collection of blood were finally included in the analyses. The complete blood count including erythrocyte indices such as mean corpuscular volume (MCV), mean corpuscular hemoglobin (MCH), and mean corpuscular hemoglobin concentration (MCHC) were measured. The severity of depression was assessed by the Geriatric Depression Scale (GDS). The hierarchical linear regression analyses were performed adjusting multiple covariates.

RESULTS: The MCH (t = 4.533, p < .001) and the MCHC (t = 3.919, p = .001) were positively associated with the GDS score even after full adjustment of covariates such as age, sex, estimated glomerular filtration rate, body mass index, comorbidities, antidepressant usage, economic disadvantage, social support, and life styles. Although the MCV had no significant association with the GDS score in univariate analysis, there was significant positive association (t = 2.397, p = .017) after adjustment of covariates. In contrast, the hemoglobin level or the presence of anemia were not associated with depressive symptom severity after controlling covariates.

CONCLUSION: Our findings from cross-sectional analyses raise the possibility of using erythrocyte indices as the candidate biomarker of late life depression.

Keywords: Depression, Biomarker, Geriatric Psychiatry

P-016
Vitamin D and affective disorders: A systematic review

Krzysztof Maria Wilczyński1, Lena Cichoń1, Katarzyna Checińska2, Krzysztof Kulczyk2, Ireneusz Jelonek1, Malgorzata Janas Kozik1
1Medical University of Silesia, Department of Psychiatry and Psychotherapy of Developmental Age, Katowice, Poland; 2Adamed Group sp. z o.o.

OBJECTIVE: Low vitamin D level has been implicated as a potential factor contributing to the development of affective disorders – especially depression. Although numerous studies have been performed on different clinical groups to verify this association, results remain inconsistent. This literature review aimed to identify studies examining vitamin D levels in course of affective disorders across different clinical groups, as well as influence of vitamin D supplementation on clinical presentation and risk of the development.

Keywords: Depression, Biomarker, Geriatric Psychiatry
RESULTS: We identified recurrent non-silent mutations in 24 MDD patients. We selected P-values < 0.001 in a case-control association test. We measured cortical thickness of the whole-brain in MDD and HC groups. The SNPs with significant association with MDD and 82 HCs. We then explored the association between risk variants determined from the WES and genome architecture in the initial discovery stage. We then explored the association between risk variants determined from the WES and genome architecture in the initial discovery stage.

MATERIAL-METHODS: We initially investigated genetic variants related genes including FASN, MYH13, UNC13D, LILRA1, CACNA1B, CDH23, cortical thickness, anterior cingulate cortex.

CONCLUSION: The present study identified that non-synonymous rare mutations were significantly associated with risk of MDD and found that genetic contributions to the development of MDD may be mediated by alterations in cortical thickness of emotion-processing neural circuits.

Keywords: Major depressive disorder, Whole-exome sequencing, CDH23, cortical thickness, anterior cingulate cortex.

P-018
Drug use/resistant pathology in adolescence as a risk mark for affective disorders

Laura Carpino, Elias Garcia, Javier Dominguez, Cristina Garcia, Paloma Barredo, Maria Garcia

Department of Psychiatry, Transition to Adulthood/First drugs use program, Toledo University Hospital, Toledo, Spain

OBJECTIVE: Drugs use/transition program is a selective poblational screening which focus in late adolescence/early adulthood, and tries to reduce de delay to treatment, that is usually associated to mental illness at this stage. It makes it by modifying classic clinical evaluation, adopting an open access/multicentro model in which many mental dissorders start, however treatment delays are associated to mental illness at this stage.

MATERIAL-METHODS: We have arranged a prospective descriptive study over our first 124 users along two years. The idea was to test a first sample which let us check the viability of our project. We adopted a qualitative approach as it is the most similar to clinical one, linking practice and research, which have implied to perform a structured clinical process based in a dinamic reevaluation performed for different professionals in various stages using Rodman´s model.

RESULTS: As it was supposed (open acces model), families were the main users who asked for evaluation (87%), but as far as 62% of our sample had a previous treatment history (two thirds more than two years ago and 17,7% neuroleptic history) as drug use was a mark to ease clinical consultation, males were the predominant users (two thirds) and average age was 16.9 years. The clinical approach detected affective risk factors such as: -more than 50% of patients had interpersonal problems. -36,2% had family history (affective disorders, drug use...). -37% had trauma events past or recent. And we detected: -16% had a mood/anxiety disorder. -11% had a psychotic condition (mostly associated to drug use).

CONCLUSION: Late adolescence and early adulthood are two stages in which many mental disorders start, however treatment delays some years. One solution could be poblational screening but it usually fails to accomplish this objective. Focus in marks as drugs use or non responders could be a better approach.

Keywords: prevention, screening, mark factors.
ABSTRACTS OF POSTER PRESENTATIONS

P-019
Biological Condition for Anorexia of Female Adolescents: Different Blood Types Mother/Daughter with Traumatic Contact Between Mother/Daughter Blood During Pregnancy and/or Birth
Lorenzo Bracco
Private Practice: Medical Doctor, Psychotherapist, Torino, Italy

OBJECTIVE: To reduce the mortality rate and the consequences of Anorexia of the Female Adolescent by providing a theory that allows us to have an early or even predictive diagnosis. MATERIAL-METHODS: 25 years ago, I came upon the blood type difference between a patient with Anorexia of the Female Adolescent and her mother. Pregnancy had been with placental detachment and birth was traumatic, which was the presumed cause of mother/daughter blood contact. From that day on, I regularly checked, in the cases of anorexia of female adolescents, the blood types of the daughter suffering from Anorexia and her mother. RESULTS: In my collection of data (more than 100 cases in 25 years): only the girls who have a different blood type (O, A, B, AB) from the mother are suffering from Anorexia of the Female Adolescent and from their details I determined a mother/daughter blood contact. There are no exceptions in my data. CONCLUSION: Anorexia of the Female Adolescent recognizes that there are some psychological causes, but also requires the biological condition: Different mother/daughter blood types (O, A, B, AB) + traumatic contact between the two blood types during pregnancy and/or birth. These two dynamics together create the development of Anorexia of the Female Adolescent. Recognizing this condition allows an early diagnosis, a predictive hypothesis and a new understanding and even a reframing of the mother/daughter relationship, that is not primarily about emotional conflict but is simply the reflection of a relationship disturbed by an immunological alarm.

Keywords: Fetal Trauma, Anorexia, Female Adolescent, Blood Types, Early Diagnosis

P-020
Personalised goal attainment after a switch to vortioxetine in adults with major depressive disorder: results of a phase 4 open-label clinical trial
Maggie Mccue¹, Sagar V. Parikh², Lisa Mucha³, Sara Sarkey⁴, Anna Eramo⁵, Clément François⁶
¹Takeda Pharmaceuticals, U.S.A., Inc., Deerfield, IL, USA
²Department of Psychiatry, University of Michigan, Ann Arbor, MI, USA
³Lundbeck LLC, Deerfield, IL, USA

OBJECTIVE: This phase 4 open-label trial evaluated real-world effectiveness of the antidepressant vortioxetine on the ability of patients with major depressive disorder (MDD) to achieve pre-identified treatment goals. MATERIAL-METHODS: Patients with MDD, requiring a switch in antidepressant treatment for inadequate response/tolerability issues, received flexible-dose vortioxetine (10–20 mg) for 12 weeks. Achievement of pre-identified treatment goals (primary outcome) was indicated by a Goal Attainment Scale (GAS-D) score ≥50 at week 12. Total GAS-D scores, patient/clinician-reported outcome measures, response/remission rates, and safety were also assessed. RESULTS: Approximately 86% (106/123) of enrolled patients completed treatment (mean age 45 years; 82.8% women; 69.2% white). 57.8% of patients achieved a GAS-D score ≥50 at week 12, with significant changes from baseline in total score (p<0.001). Significant improvements (p<0.001) were observed in depression severity (Patient Health Questionnaire 9 [PHQ-9]), cognitive functioning and performance (Perceived Deficits Questionnaire for Depression [PDQ-D]), Digit Symbol Substitution Test [DSS]), well-being (World Health Organization-Five Well-Being Index [WHO-S]) and clinical global impression of severity (Clinical Global Impression-Severity [CGI-S]). Numerical improvement was observed in assessments of functional capacity (Virtual Reality Functional Capacity Assessment Tool [VRFCAT]) and clinical impression of improvement (CGI-I). Treatment response (≥50% total score reduction on PHQ-9) was reported by 64.2% of patients and remission (PHQ-9 ≤5) by 38.7%. Most adverse events were mild to moderately severe. Clinical outcomes are presented; the functional impact on patients and health outcomes are presented in a separate abstract. CONCLUSION: The majority of patients treated with vortioxetine achieved their personalised treatment goals after 12 weeks. In patients requiring an antidepressant switch due to inadequate efficacy, vortioxetine was effective in helping them reach personalised, meaningful treatment goals. These findings support using this novel, patient-centric approach to assess outcomes of MDD treatment. The vortioxetine safety profile during this study was consistent with prescribing information.

Keywords: goal attainment, major depressive disorder, real-world, personalised treatment goals, vortioxetine

P-021
Altered emotional neural processing in major depressive disorder; a Magnetoencephalography (MEG) study in Saudi Arabia
Fahad Aldosary, Faisal Awd Albalawi, Maha Mesfer Alqahtany, Mona Saeed Almutairi, Sharifa Binkhunain, Bayan Khalid Alqadheeb
National Neurosciences Institute, King Fahad Medical City, Riyadh, Saudi Arabia

OBJECTIVE: Major depressive disorder (MDD) is characterized by distorted emotional processing, typically expressed as a bias for negative information. Large number of neuroimaging studies have inconsistent and non-comprehensive findings. Here we used magnetoencephalography (MEG) to examine neural correlates of emotional processing and its variations in MDD. MATERIAL-METHODS: 15 drug-free patients and 15 matched healthy controls were MEG-scanned using 306-channel MEGIN system, while subjects viewed pleasant, unpleasant and neutral pictures, presented in random order. Data were analyzed based on Brainstorm, using advanced source analysis tools and rigorous statistical methods. RESULTS: Differences in valence-related patterns of neural responses between patients and controls were identified in a network of brain regions, involving bilateral prefrontal cortex, anterior temporal cortex, insular cortex, posterior lateral sulcus and amygdala (fig. 1 and table 1). The earliest MDD-affected change was evident in amygdala starting at around 90 ms post-stimulus (fig. 2a). The pattern of valence-related activity in right amygdala is the most notable: In patients, it differentiated emotional and neutral pictures in 90–140 ms and 250–450 ms time ranges, with significantly stronger response to emotional pictures. Later, from 450 ms onward, right amygdala distinguished negative from positive and neutral pictures, exhibiting sustained elevated activity in response to negative pictures. Such late-latency, negative valence-related, sustained activity in patients was found also in right orbitofrontal, ventrolateral prefrontal and insular cortices. No such effects were evident in controls: negative pictures elicited comparably stronger response in right amygdala only from 450 to 630 ms (fig. 2b). Direct group-level comparison of negative valence-related responses in amygdala revealed MDD-affected hypoactivity in 75–140 ms and 380–530 ms
ABSTRACTS OF POSTER PRESENTATIONS

ranges, and sustained hyperactivity from 550 ms onwards (fig. 3).

CONCLUSION: The present report provides evidence of altered emotional neural processing in MDD, revealing the precise temporal dynamics of key brain regions often implicated in emotional processing, in healthy and depressed subjects.

Keywords: MEG, Depression, MDD, Neuroimaging, emotional processing

**MDD affected regions in emotional processing**

<table>
<thead>
<tr>
<th>ROI name</th>
<th>Onset of differential pattern of activity (ms)</th>
</tr>
</thead>
<tbody>
<tr>
<td>R amygdala</td>
<td>90</td>
</tr>
<tr>
<td>R insula</td>
<td>95</td>
</tr>
<tr>
<td>R OFC</td>
<td>95</td>
</tr>
<tr>
<td>R MCC</td>
<td>105</td>
</tr>
<tr>
<td>R inf. PFC</td>
<td>160</td>
</tr>
<tr>
<td>L ant. DLPFC (MFG)</td>
<td>90</td>
</tr>
<tr>
<td>10SL MCC</td>
<td>105</td>
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<tr>
<td>L insula</td>
<td>115</td>
</tr>
</tbody>
</table>

The onset latencies of the first differential patterns are shown: OFC, orbitofrontal cortex; MCC, middle cingulate cortex; PFC, prefrontal cortex; DLPFC, dorsolateral prefrontal cortex; MFG, middle frontal gyrus.

P-022 Between network analyses in Bipolar Disorder revealed increased resting state network activity: First evidence from the Mandrake Study

Marcella Bellani1, Pietro Bontempi2, Cinzia Perlini1, Maria Gloria Rossetti1, Niccolò Zovetti1, Giada Zoccatelli1, Franco Alessandrini1, Elisa Francesca Maria Ciceri1, Paolo Brambilla1

1Department of Neurosciences, Biomedicine and Movement Sciences, University of Verona, Verona, Italy
2Department of Computer Science, University of Verona, Verona, Italy
3Department of Neurosciences, Biomedicine and Movement Sciences, University of Verona, Verona, Italy; Department of Neuroscience and Mental Health, IRCCS Ca’ Granda Ospedale Maggiore Policlinico, University of Milan, Milan, Italy
4Neuroradiology Department, Azienda Ospedaliera Universitaria Integrata Verona, Ospedale Civile Maggiore, Borgo Trento, Verona, Italy
5Department of Neuroscience and Mental Health, IRCCS Ca’ Granda Ospedale Maggiore Policlinico, University of Milan, Milan, Italy; Department of Psychiatry and Behavioural Sciences, University of Texas at Houston Medical School, Houston, TX, USA

OBJECTIVE: Bipolar Disorder (BD) is a heterogeneous mental illness characterized by alternating episodes of mania/hypomania and depression, often accompanied by functional and cognitive disabilities. The exact resting-state brain networks associated with BD are still unknown limiting future research and cure development. Existing evidence suggest a key role of the default mode network (DMN) and a normalization of the DMN activity during clinical remission. A better understanding of the resting state networks (RSNs) activity could prove useful in characterizing solely disease-specific patterns of neural activations rather than processes that might also depend on specific functional tasks.

MATERIAL-METHODS: Fifteen euthymic BD-I patients (7 females; mean age 39.35, range 20-62) and 27 Healthy Controls (18 females; mean age 36.43, range 22-60 ) underwent a functional MRI scan at rest. RSNs activity was extracted through independent component analysis (ICA) run with automatic dimensionality estimation.

RESULTS: After cleanup of the data with FIX, analysis revealed 22 RSNs. Within networks analysis revealed a decreased connectivity in BD patients in four RSNs, namely: visual, temporal, motor and cerebellar. There were no clusters of increased connectivity in BD patients compared to HC. Between networks analysis revealed a node with increased connectivity in BD versus HC between motor area and fronto-parietal network.

CONCLUSION: Within networks analysis revealed a decreased connectivity in BD patients in four RSNs, namely: visual, temporal, motor and cerebellar. There were no clusters of increased connectivity in BD patients compared to HC. Between networks analysis revealed a node with increased connectivity in BD versus HC between motor area and fronto-parietal network.

Furthermore, within networks analysis showed no abnormal DMN activations in BD patients supporting thus the theory that DMN activity is a resting state functional marker of euthymia. Further studies should also investigate the exact role of the visual network in the disease.

Keywords: Bipolar Disorder, resting-state fMRI, Default Mode Network, network analysis
P-023
Low Dose Ketamine Infusions for Suicidal Ideation among Patients with Bipolar and Unipolar Treatment Refractory Depression. An Open Label Clinical Study

Maria Eugenia Kulcer1, Melody-Jy Kang2, Ranjith Chandrasena1, Mah Ruhi Anjum3, Jonathan Fairbairn4, Gustavo Hector Vazquez4
1Moyano Psychiatric Hospital, Buenos Aires, Argentina.
2Centre for Neuroscience, Queen’s University, Kingston, Ontario, Canada
3Chatham–Kent Health Alliance, Chatham, Ontario, Canada
4Department of Psychiatry, Queen’s University Medical School, Kingston, Ontario, Canada

OBJECTIVE: Repeated infusions of low doses of ketamine have demonstrated rapid antidepressant effects in patients with treatment-resistant unipolar and bipolar depression. The main objective of this study was to evaluate the effects of a series of repeated ketamine infusions on suicide ideation in patients with major depression.

MATERIAL-METHODS: Eighty subjects with treatment-resistant unipolar and bipolar (61 and 19, respectively) depression completed a two sites open label study of multiple infusions of low doses (0.5mg/kg) ketamine. All participants received a course of repeated open-label ketamine infusions administered for up to four weeks.

RESULTS: Multiple infusions of low doses ketamine produced a significant reduction in suicidal ideation as early as 1 hour (71.1%) and up to 1 week post infusion (60.4%) accompanied by a reduction on the overall depressive symptoms. The antidepressant effects were maintained from the 1st hour until the endpoint (4th week). 48.3% and 37.9% percent of participants met response criteria after one hour and after one week of repeated infusions, respectively. Participants had no further change in MADRS total scores at the endpoint. BPRS and YMRS baseline and final total scores were similar.

CONCLUSION: Repeated low dose ketamine infusions rapidly reduce suicidal ideation and produced sustained antidepressant effects over 4 weeks of open label treatment. Low dose ketamine repetitive infusions seem to be an efficacious and safe pharmacologic option for the management and treatment of patients suffering from suicidal ideation and severe depression.

Keywords: bipolar disorder, major depression, ketamine, treatment refractory, suicide

P-025
Depressive disorders: comparative between adults and the elderly

Maria Pilar Calvo Rivera1, Carmen Maura Carrillo De Albornoz Calahorro1, Alejandro Porras Segovia1, Jorge Antonio Cervilla Ballesteros1
1Department of Psychiatry, University Hospital Virgen de las Nieves, Granada, Spain
2Department of Psychiatry, University Hospital Jimenez Diaz Foundation, Madrid, Spain
3Department of Psychiatry, University Hospital San Cecilio, Granada, Spain

OBJECTIVE: The objective is to compare the prevalence and profile of depressive symptoms between two age groups: 18 - 65 years and older than 65 years.

MATERIAL-METHODS: The GRANADEP is a cross-sectional population-based study conducted in the province of Granada. Participated in the study eight hundred and eight (n = 808) subjects of the community medium with ages between 18 and 80 years. The data collection was carried out between October 2011 and September 2012, through face-to-face interviews conducted by trained psychologists. A neuropsychological examination and a psychiatric evaluation were carried out.

The neuropsychological examination was carried out through the SCIP interview (Screen for Cognitive Impairment in Psychiatry). For the psychiatric evaluation, the MINI (Mini International Neuropsychiatric Interview) structured diagnostic interview was used, which explores the main psychiatric disorders of Axis I of DSM-IV and ICD-10.

RESULTS: The prevalence was higher in the adult population than in the elderly population for all anxiety disorders, except for generalized anxiety disorder. The results were not statistically significant.

CONCLUSION: Based on the results obtained, it can be concluded that anxiety disorders in the elderly occur less frequently than in the young adult. These results may be due to several causes. One of them is the association of anxiety in this age group with various medical pathologies. Another is the diversity in clinical expression.

Keywords: Anxiety, Adult, Elderly

P-024
Anxiety Disorders: comparative psychopathology between adults and the elderly

Maria Pilar Calvo Rivera1, Carmen Maura Carrillo De Albornoz Calahorro1, Jorge Antonio Cervilla Ballesteros1
1Department of Psychiatry, University Hospital Virgen de las Nieves, Granada, Spain
2Department of Psychiatry, University Hospital San Cecilio, Granada, Spain

OBJECTIVE: The aim of our study was to determine the epidemiological and psychopathological differences of anxiety disorders between the adult population and the elderly population.

MATERIAL-METHODS: The GRANADEP is a cross-sectional population-based study conducted in the province of Granada. The study included eight hundred and eight (n = 808) subjects from the community environment aged between 18 and 80 years. Data were collected between October 2011 and September 2012, through face-to-face interviews conducted by trained psychologists. A neuropsychological examination and a psychiatric
ABSTRACTS OF POSTER PRESENTATIONS

P-026
cognitive impairment in bipolar disorder or dementia: in the case of a clinical case in the elderly

Maria Suárez Gómez1, Sheyla Sofia Sánchez Rus2
1Department of Psychiatry at Jose Joaquim Fernandes Hospital, Beja, Portugal
2Department of Psychiatry at Traumatologic Hospital, Jaén, Spain

OBJECTIVE: To describe a clinical case of an old age patient with bipolar disorder with more of 20 years of evolution that presents recently cognitive impairment, and analyse if cognitive deterioration is due to the affective disorder or to a dementia variant.

MATERIAL-METHODS: It was done a descriptive study of the clinical case of the patient with long-standing bipolar disorder who started with symptoms compatible with dementia. It was done a review of the literature of the last five years related to the topic.

RESULTS: A representative clinical case is presented, in which the first manifestation of a demential picture consists of a picture of manic characteristics. Patients with bipolar affective disorder may present cognitive alterations that in some cases have a progressive course, for which reason it has been questioned whether the evolution of this disease is associated with dementia, particularly those belonging to the frontotemporal lobar degeneration spectrum. In this context, discriminating whether a patient has a dementia secondary to the underlying psychiatric illness or if he or she is suffering from a neurodegenerative disease in addition to bipolar affective disorder, is a challenge for the differential diagnosis.

CONCLUSION: According to the literature, there is a high comorbidity rate between dementia and bipolar disorder. It is important to make a correct differential diagnosis between incipient dementia and the decompensation of a bipolar affective disorder, as well as to differentiate the cognitive deterioration associated with bipolar disorder or with the long-term psychopharmacological treatment of bipolar disease. Likewise, it is important to perform the complementary explorations that may be useful for this purpose.

Keywords: Dementia, bipolar disorder, degenerative neurological disorder.

P-027
The ENLIGHTEN-Early Study: Current Baseline Demographics of Adults With Recent-Onset Schizophrenia, Schizophreniform, or Bipolar I Disorder

Mark Berry1, Adam Simmons1, David McDonnell1, Yansong Cheng2, John M Kane3, Rene S Kahn4
1Alkermes, Inc., Waltham, MA, USA
2Alkermes Pharma Ireland Ltd., Dublin, Ireland
3Department of Psychiatry, Hofstra Northwell School of Medicine, Hempstead, NY, USA
4Department of Psychiatry, Zucker Hillside Hospital, Glen Oaks, NY, USA

OBJECTIVE: ALKS 3831, currently under development for the treatment of schizophrenia, is a combination of olanzapine and the opioid antagonist samidorphan (OLZ/SAM). OLZ/SAM is intended to provide the antipsychotic efficacy of olanzapine while limiting olanzapine-associated weight gain. ALK3831-A307 (ENLIGHTEN-Early) is an ongoing double-blind randomized study (NCT03187769) evaluating effects of OLZ/SAM vs olanzapine on body weight in young adults who are early in their illness. We present the study design and current baseline demographics and clinical characteristics of patients in the ongoing study.

MATERIAL-METHODS: Eligible patients receive treatment in Austria, Germany, Ireland, Israel, Italy, Poland, Spain, the United Kingdom, or the United States, are aged 16–40 years with a body mass index of <30.0 kg/m², a DSM-5 diagnosis of schizophrenia, schizophreniform, or bipolar I disorder, and <16 weeks' lifetime antipsychotic exposure. Patients are randomized 1:1 to OLZ/SAM (5/10, 10/10, 15/15, or 20/10 mg) or olanzapine (5, 10, 15, or 20 mg) once daily for 12 weeks. The primary endpoint is percent change from baseline body weight at the end of the treatment period. Key secondary endpoints are proportions of patients with ≥10% and ≥7% weight gain at the end of the treatment period. Additional endpoints include change from baseline in fasting lipids, fasting glucose, HbA1c, body composition, Clinical Global Impression-Severity score, and Impact of Weight on Quality of Life-Lite score, as well as time to relapse. Patients are offered a supportive clinical care program during the treatment period and receive daily medication-adherence monitoring and a smartphone reminder system. Current demographics were analyzed using descriptive statistics.

RESULTS: Data on the currently enrolled study population demographics will be presented.

CONCLUSION: This ongoing study will provide information on body weight and tolerability associated with OLZ/SAM vs olanzapine in patients with first- and early-episode schizophrenia, schizophreniform, and bipolar I disorder.

Keywords: schizophrenia, bipolar disorder, olanzapine, samidorphan, young adults

P-028
Improvements in workplace productivity in working patients with major depressive disorder: results from the AtWoRC study

Pratap Chokka1, Anders Holmegaard Tvistholm2, Joanna Bougie1, Guerline Clerzius3, Mayavira Deshpande4, Anders Ettstrup2
1Grey Nuns Community Hospital, Edmonton, Canada
2H. Lundbeck A/S, Valby, Denmark
3Lundbeck Canada Inc., Montreal, Canada
4Lundbeck Ltd., Herts, UK

OBJECTIVE: The Assessment in Work productivity and the Relationship with Cognitve symptoms (AtWoRC) study (NCT02332954) analysed the association between improvements in cognitive symptoms and workplace productivity in working patients with major depressive disorder (MDD).

MATERIAL-METHODS: AtWoRC was a 52-week, open-label study in gainfully employed patients with MDD receiving vortioxetine (10–20 mg/day) at routine care visits, emulating a Canadian real-world setting. Self-reported workplace functioning assessments were: 4-domain Work Limitations Questionnaire (WLPQ); 3-subscale Sheehan Disability Scale (SDS); Work Productivity and Activity Impairment (WPAI) questionnaire (absenteeism and presenteeism items). Student’s t tests assessed changes from baseline to weeks 12 and 52 for workplace productivity parameters.

RESULTS: Work functioning measures improved significantly from baseline after 12 weeks of vortioxetine treatment, with improvements maintained at week 52 (mean dose standard deviation at week 52: 15.2±5.1 mg/day). The most pronounced percentage-point improvements (baseline to week 52) on the WLPQ were for time management, mental-interpersonal demands, and output demands (-38.4, -35.4, and -37.6, respectively, all p<0.0001 vs baseline); these were greater than those in the WLPQ physical-dominant demands (-16.2, p<0.0001). After vortioxetine treatment, improvements in WLPQ mental work functioning domains showed stronger correlations with improvement in WPAI presenteeism and SDS work/school item, than in the WLPQ physical domain. WPAI presenteeism consistently showed stronger correlations...
with other measures of workplace productivity than WPAI absenteeism. No new safety signals were observed during the study.

CONCLUSION: In gainfully employed patients with MDD, significant improvements were observed in different aspects of workplace productivity after 12 and 52 weeks of vortioxetine treatment. At week 52, the most pronounced improvements were in domains related to mental rather than physical work functioning, reflecting the baseline profile of impairments. These results highlight that antidepressant treatments should not only aim to enable patients with MDD to return to work, but also restore their workplace functioning.

Keywords: functioning, major depressive disorder, real world, vortioxetine, work productivity

P-029
A functional magnetic resonance imaging study of manic patients versus healthy controls using the CMET Task

Merce Madre, Pol Palau, Naia Sáez Francàs, Noemí Moro, Antonia Alomar, Savador Sarró, Raymond Salvador, Peter J. Mckenna, Paola Fuentes Claramonte, Edith Pomarol Clotet

FIDMAG Germans Hospitalàries Research Foundation, Barcelona, Spain

OBJECTIVE: Brain functional activity has been only studied marginally in bipolar disorder during manic episodes. This study uses a new functional magnetic resonance imaging (fMRI) paradigm, the computerised multiple elements test (CMET, see Figure 1), which is an adapted executive/multitasking task developed by Cullen et al, 2016 (1).

MATERIAL-METHODS: 16 patients during a manic episode (Young >18) meeting DSM-V Bipolar or Schizoaffective disorder DSM-V criteria, and 16 sex-and age-matched healthy controls (HC) participated in the study (see table 1). Subjects underwent fMRI scanning in a 3T scanner while performing the CMET task.

RESULTS: HC showed activation in fronto-parietal executive regions, the anterior cingulate cortex (ACC) and the anterior insula, bilaterally. Manic patients showed activation in similar regions but with reduced intensity. The manic patients showed significantly reduced activation compared to HC, in 3 clusters: the right dorsal ACC, extending to the dorsolateral prefrontal cortex (DLPFC) and frontal pole, the right inferior parietal cortex and the left postcentral cortex (see Fig 2). No regions showed increased activity in manic patients compared to HC. Linear models were used to obtain maps of activation and de-activation between groups for the experimental and the control conditions comparison.

CONCLUSION:- Findings add to the currently scarce knowledge about fMRI abnormalities during manic episodes using a new executive task (CMET).
- Manic patients showed reduced activation compared to HC in the prefrontal areas (DLPFC), and in the right parietal cortex, described previously in manic patients using a working memory task (n-back task) [Pomarol-Clotet E et al, 2012].

Keywords: bipolar disorder, neuroimaging, fMRI

Figure 1

CMET task: During each task block subjects were required to play four easy games. In the control condition the transition between games was automatically done by the computer and game duration was always the same, whereas in the experimental condition the subject had to switch voluntarily between the four games by pressing a button. They were instructed to divide their time equally between the four games.

Figure 2

Brain regions showing significantly more activation in voluntary switching than in automatic switching blocks in HC compared with 16 manic patients. The right side of the image indicates the left side of the brain.
ABSTRACTS OF POSTER PRESENTATIONS

P-030
An update on adjunctive agents for unipolar treatment resistant depression: A network meta-analysis
Nicolas Nunez1, Mark Frye1, Boney Joseph1, Francisco Romo Nava2, Marin Veldic1, Alfredo Cuellar Barbosa2, Alejandra Cabello Arreola2, Susan Mcelroy2, Joanna Biernacka3, Zhen Wang3, Balwinder Singh1
1Department of Psychiatry & Psychology, Mayo Clinic, Rochester, Minnesota USA
2Lindner Center of HOPE/University of Cincinnati, Cincinnati, Ohio USA
3Department of Health Sciences Research, Mayo Clinic, Rochester, Minnesota USA
4Department of Psychiatry, Universidad Autónoma de Nuevo León, Monterrey, MEXICO

OBJECTIVE: To compare the efficacy and safety of augmentation agents in adult patients (18 to 65 years of age) with unipolar treatment-resistant depression.

MATERIAL-METHODS: A comprehensive search of major electronic databases was conducted to identify relevant studies from each database’s inception to February 12th, 2019. Adjunctive treatment agents included in this review are stimulants, atypical antipsychotics, thyroid hormones, tricyclic-antidepressants, mood stabilizers (lithium) and olanzapine-fluoxetine combination (OFC). We included randomized, placebo-controlled trials comparing an adjunctive drug with a control or placebo following a treatment course from 2 to 16 weeks to assess the change in severity of depressive symptoms. Data for response/remission and all cause discontinuation rate were analyzed. We pooled odds ratio (OR) using pairwise and network meta-analysis with random effects models.

RESULTS: We identified 6292 records of which 150 full text articles were screened for eligibility. A total of 63 clinical trials (N=10,675) were included for our quantitative analysis of 20 augmentation agents. Our preliminary data of pairwise analysis for remission rates showed significant findings for aripiprazole (OR=2.10; 95% CI 1.59-2.77), OFC (OR=1.63; 95% CI 1.01-2.62), quetiapine (OR=1.83; 95% CI 1.24-2.69) and risperidone (OR=2.10; 95% CI 1.17-3.76). For response rates significant findings were found for quetiapine (OR=1.63; 95% CI 1.21-2.19), brexipiprazole (OR=1.72; 95% CI 1.15-2.58), aripiprazole (OR=1.90; 95% CI 1.5-2.41), lisdexamfetamine (OR=1.37; 95% CI 1.03-1.83) and modafinil (OR=1.72; 95% CI 1.15-2.58) as compared to placebo. Examining all cause discontinuation significant differences were found only for buspirone (OR=1.62; 95% CI 1.02-2.58) and mirtazapine (OR=3.69; 95% CI=1.96-6.94) when compared to placebo.

CONCLUSION: Our preliminary data examining the efficacy and discontinuation rates of 20 major augmentation agents for unipolar treatment resistant depression highlights the efficacy of atypical antipsychotics as evidence-based augmentation strategies.

P-031
First manic episode after corticosteroid treatment of an olanzapine-induced DRESS syndrome
Mário Carneiro1, Daniela Pereira1, Pedro Oliveira1, Nuno Madeira2, Sandra Neves1
1Department of Psychiatry, Centro Hospitalar e Universitário de Coimbra, Coimbra, Portugal
2Department of Psychiatry, Centro Hospitalar e Universitário de Coimbra, Coimbra, Portugal; Institute of Psychological Medicine, Faculty of Medicine – University of Coimbra, Coimbra, Portugal; Coimbra Institute for Biomedical Imaging and Translational Research (CIBIT), University of Coimbra, Portugal

OBJECTIVE: Drug-induced hypersensitivity/DRESS Syndrome is an uncommon but serious cutaneous and systemic reaction, with multiple complications and a mortality rate of up to 10%. Management of this syndrome includes withdrawal of the causative drug and corticosteroid administration. It is known that corticosteroids can induce a range of psychiatric adverse effects including delirium, depression, mania and psychosis, as well as cognitive impairments, all of which can be severely debilitating for patients. We present a case of a woman, diagnosed with psychiatric depression, that developed a generalized maculopapular rash following treatment with olanzapine, switching to a manic-like episode after prednisolone intake.

MATERIAL-METHODS: Description of a clinical case supported by a literature review using the PubMed database.

RESULTS: M., a 66-year-old woman, with a background of recurrent depressive disorder, went to an emergency department with an history of anhedonia, asthenia, social isolation and apathy for the last three months. More recently, olfactive and elementary hallucinations developed, leading to high levels of anxiety and, ultimately, persecutory delusions. M. was admitted as an inpatient with a diagnosis of psychotic depression. On the fifth day of hospitalization, M. developed a generalized maculopapular rash associated with anasarca, resembling a DRESS-syndrome pattern. A thorough scrutiny of her previous and current medication led to assume olanzapine as the etiological factor. M. suspended this drug and initiated oral prednisolone, 30mg id. Soon after, M. developed mood elation, intermediate/terminal insomnia and behavioral changes with disinhibition, requiring consecutive adjustments of antipsychotics. M. was discharged 55 days later, with stable mood, behavior and sleep pattern.

CONCLUSION: This case report illustrates a severe and rare adverse reaction to a commonly used psychiatric drug. Furthermore, serious hypersensitivity reactions frequently demand corticosteroids, which can delay psychopathological recovery, worsening or inducing psychiatric symptoms such as a manic switch. Keywords: dress syndrome, manic episode, corticosteroid therapy

P-032
Differential Therapeutic Effects Of Add-on Group V/S Individual Yoga Therapy In Unipolar Depression: A Single Blinded Randomized Controlled Study
Pratham Dua, Bangalore N. Gangadhar, Shivarama Varambally, Naren P. Rao, Urvakhsh M. Mehta
Department of Psychiatry, National Institute of Mental Health And Neurosciences (NIMHANS), Bengaluru, India

OBJECTIVE: Depression is a major neuropsychiatric illness with current estimates exceeding 300 million people worldwide. Reviews have documented a moderate effect size for yoga
in treating depression, but have not compared the efficacy of individual and group sessions. Moreover, reporting of attrition rates has been inadequate. This study aimed to:

• Assess efficacy of individual yoga sessions in comparison to group yoga sessions as an add-on treatment in patients with unipolar depression.
• Assess differential reduction in anxiety symptoms and attrition between the two yoga arms.

MATERIAL-METHODS:34 patients diagnosed with unipolar depression on pharmacotherapy or psychotherapy or both were recruited into individual (n=18) and group (n=16) yoga using block randomization after obtaining informed consent. Hamilton Rating Scale for Depression (HAM-D) and Anxiety (HAM-A) were administered at baseline and after the end of 12 yoga sessions. Attrition rates and reduction in HAM-D and HAM-A scores within each yoga arm were analysed and compared post-intervention. The rater was blinded to randomization.

RESULTS:Attrition rates of 33.33% (n=6) and 62.5% (n=10) were found in individual and group yoga respectively. Patients in both the individual (n=12; p=0.0025) and group (n=6; p=0.0314) yoga arms obtained significant reductions in depression scores but there was no significant difference between the arms (p=0.541). Patients in the individual yoga arm also obtained significant reductions in anxiety, (n=12; p <0.0025) but not those in the group yoga arm (n=6; p=0.115). Again, the difference across groups did not reach statistical significance (p=0.189).

CONCLUSION: The findings in the study should be cautiously interpreted due to the limited sample size and high attrition rate. Yet, demonstration of comparable effectiveness for group yoga and individual yoga sessions may favour its use in resource-poor settings. However, high attrition rates especially in group yoga may indicate the need for innovative delivery services.

Keywords: Yoga, Individual, Group, Depression, Anxiety, Attrition

P-034 Prediction of outcome in patients with treatment resistant depression receiving multimodal inpatient treatment

Rachael Taylor1, Andrew J Lawrence1, Roland Zahn2, Anthony J Cleare1

1Department of Psychological Medicine, Institute of Psychiatry, Psychology and Neuroscience, King’s College London, London, UK; NIHR Maudsley Biomedical Research Centre
2Department of Psychological Medicine, Institute of Psychiatry, Psychology and Neuroscience; South London and Maudsley NHS Foundation Trust

OBJECTIVE: To assess whether clinical admission data can be used to predict response to multimodal inpatient treatment in patients diagnosed with a treatment resistant affective disorder.

MATERIAL-METHODS:175 participants in two naturalistic observational studies conducted at the Affective Disorders Unit at the Bethlem Royal Hospital between 2001 and 2012 were included. Patients had a HAMD-21 ≥16 at admission and received either intensive treatment, or treatment during a six-week assessment period. Care was administered according to the unit’s usual protocol and included an individualised combination of pharmacotherapy and specialist psychological therapies. 41 clinical and sociodemographic variables were entered into an elastic-net logistic regression model predicting treatment outcome at discharge. 10-fold nested cross validation was used for internal validation of prediction performance.

RESULTS:82 patients (47%) responded to treatment (50% reduction in HAM-D and HAM-A scores) at discharge. Clinical characteristics associated with better outcome included: (i) age ≥ 65 years; (ii) current antidepressant; (iii) number of previous manic episodes ≥ 4; (iv) major depressive episode by DSM or ICD criteria.

CONCLUSION: Although a range of variables were retained by the model, it demonstrates that clinical characteristics may not be predictors of treatment outcome.
ABSTRACTS OF POSTER PRESENTATIONS

P-035 Using IV Ketamine More Effectively: Safety and Efficacy of 100-minute versus 40-minute infusions for Refractory Depression

Sagar Parikh1, William Bobo2, Jennifer Vande Voort2, Daniela Lopez2, Jose Rico2, Fernando Goes3, Balwinder Singh4, John Greden1, Bio K Team1, Bio K Team4, Bio K Team1

1University of Michigan Department of Psychiatry and Depression Center, Ann Arbor, United States of America
2Mayo Clinic, Rochester, United States of America
3John Hopkins University, Baltimore, United States of America
4Pine Rest Christian Mental Health Services, Grand Rapids, United States of America

OBJECTIVE: Meta-analytic data demonstrate that IV ketamine is effective for treatment-refractory depression (TRD), usually using 40-minute infusions. Biological or clinical predictors of response have not been identified. The mammalian target of rapamycin (mTOR) signaling pathway serves as a central regulator of cell metabolism, growth, proliferation and survival, and is implicated in ketamine treatment.

MATERIAL-METHODS: To examine mTOR response and evaluate other biomarkers, we are conducting a multi-site clinical trial of IV ketamine for TRD, administering 3 acute infusions. We use remission (MADRS ≤ 9) to define remitters and non-remitters to ketamine. Both 100-minute and 40-minute infusions have been administered, providing an opportunity to compare side effects, safety, and tolerability. In addition, preliminary comparison of efficacy between the infusions is also possible.

RESULTS: To date, 55 of a proposed 100 subjects have completed the 3 acute phase infusions and some have had additional maintenance infusions, yielding 153 individual infusions of 100-minutes and 90 individual infusions of 40 minutes. Participants have a mean age of 44.12 years (SD 13.42) and most are female (69%). Comparison of side effects between the two infusion types reveals noted differences, with the 100-minute infusion appearing more tolerable. In a subsample of 30 infusions, rates of cardiac and psychotomimetic side effects were 8% and 13.8%, respectively.

CONCLUSION: Preliminary efficacy data suggests lower response after a single 100-minute infusion compared to a single 40-minute infusion, but similar response after 3 infusions. These unique data on side effects and overall safety and tolerability, along with preliminary efficacy data, provide an opportunity to consider the merits of 100-minute infusions as an alternative treatment which may be safer and easier to use by psychiatrists.

Keywords: treatment-refractory depression, ketamine, infusion, safety, efficacy

P-036 Early administration of aripiprazole long-acting injectable in acute psychotic inpatients reduce hospitalization stay

Santiago Ovejero1, Raquel Alvarez3, Laura Mata1, Sergio Sanchez Alonso1

1Hospital Universitario Fundacion Jimenez Diaz, Madrid, Spain
2Hospital Universitario Rey Juan Carlos, Mostoles, Spain

OBJECTIVE: A naturalistic study on the use of aripiprazole long-acting injectable (LAI) in acute psychotic inpatients of two hospitals is presented.

MATERIAL-METHODS: In this study, 132 inpatients (59 men, 73 women) were treated with aripiprazole LAI; in 5 patients this treatment was removed before discharge because of lack of efficacy (n=3) or secondary effects (n=2). 36.6% of patients are diagnosed of schizophrenia (n = 51), 11.4% schizoaffective disorder (n = 15), 6.8% disorder delusions (n=9), 21.2% psychosis not otherwise specified (NOS) (n=28) and 22% of manic episode with psychotic symptoms (n=29). 48% of patients have a damaging drug consumption (71.4% of them consume cannabis).

RESULTS: The average hospital stay (HS) was 17.3 days. The HS was smaller when the dose of aripiprazole LAI was administered earlier (linear regression; r<.0001). When the dose of aripiprazole LAI was administered in the first week of admission the HS was 13.7 days, in comparison when administered over a week, 23.9 days (t-test; p<.0001). Further, when aripiprazole LAI was administered in the first week of admission, the rate of antipsychotic monotherapy was increased (t-test; p<.001). At discharge, mean dose of aripiprazole LAI was 398.4 mg.

CONCLUSION: In this sample, aripiprazole LAI was administered earlier, being a effective treatment for acute psychotic inpatients and a short average HS is observed. The early use of aripiprazole LAI, in the first week of admission, reduced HS and increased antipsychotic monotherapy at discharge.

Keywords: psychotic, long-acting injectable antipsychotics, inpatients, aripiprazole

P-037 Do We Always Choose What Is Right for Us? Individuals Differ in the Ability to Employ and Benefit From Different Emotion Regulation Strategies

Shilat Haim Nachum1, Rotem Vered2, Einat Levy Gigi2

1The School of Education, Bar-Ilan University, Ramat-Gan, Israel
2Department of Psychology, University of Haifa, Haifa, Israel; The Institute for the Study of Affective Neuroscience, University of Haifa, Haifa, Israel
3The School of Education, Bar-Ilan University, Ramat-Gan, Israel; The Gonda Multidisciplinary Brain Research Center, Ramat-Gan, Israel

OBJECTIVE: Studies have shown that in high intensity conditions people prefer disengagement regulatory strategies such as distraction, while in low intensity conditions individuals prefer more engaging strategies, such as reappraisal. However, it is not yet clear whether these preferences are indeed adaptive and more effective in reducing emotional distress when facing aversive conditions. The current study aimed to assess whether there is a discrepancy between regulatory preferences and their efficacy in lowering distress.

MATERIAL-METHODS: A total of 109 volunteers (37 males, 72 females; Meanage=25.58; SD=3.72; years participated in two experiments) utilized a performance-based paradigm to assess the effectiveness of emotion regulation. In addition, participants completed self-report questionnaires to assess depression, anxiety and alexithymia. In Experiment 1, we evaluated the efficacy of implementing engagement and disengagement regulatory strategies when
ABSTRACTS OF POSTER PRESENTATIONS

P-038 White matter hyperintensity shape and depressive symptoms in Alzheimer’s disease patients

Subin Lee1, Ji Won Han2, Jae Hyoung Kim3, Ki Woong Kim4

1Department of Brain & Cognitive Sciences, Seoul National University, Seoul, S. Korea
2Department of Neuropsychiatry, Seoul National University Bundang Hospital, Seongnam, Korea
3Department of Radiology, Seoul National University Bundang Hospital, Seongnam, Korea
4Department of Brain & Cognitive Sciences, Seoul National University, Seoul, S. Korea, Department of Neuropsychiatry, Seoul National University Bundang Hospital, Seongnam, Korea; Department of Psychiatry, Seoul National University College of Medicine, Seoul, Korea

OBJECTIVE: Comorbid depression is common in patients with Alzheimer’s disease (AD). An increase in white matter hyperintensities (WMH) has been associated with depression in both normal elderly and in patients with AD. In this study, we investigated the association between the volume and shape of WMH with depressive symptoms in AD patients.

MATERIAL-METHODS: We obtained MRI scans of 83 AD patients from Seoul National University Bundang Hospital. To quantify volumes of WMH, we used a fully automated segmentation algorithm. We obtained total WMH volume as well as subsegments of WMH divided into periventricular WMH and deep WMH depending on the continuity of the WMH cluster with the ventricle. We calculated several surface-based and voxel-based shape features that quantify various aspects of the structural irregularity of each WMH cluster. Weighted means of the shape features were calculated for each subject. We evaluated the severity of depressive symptoms using the Korean version of the Geriatric Depression Scale (GDS-K). We conducted linear regression to see which of the following predictors explain the variance in the AD patients’ GDS-K scores better than age, sex and education: (1) addition of log-transformed WMH volume controlling for intracranial volume; (2) addition of WMH shape features that were derived in advance from a feature selection process using stepwise linear regression.

RESULTS: None of the log-transformed WMH volumes were associated with GDS-K scores and did not add significant value to the age-sex-education model. However, two shape features that were selected from stepwise regression (Surface Area-to-Volume ratio and Curvedness) showed marginal and significant associations with GDS-K score, respectively, and the addition of these to the model marginally increased the model’s explainability of the GDS-K score (R-squared change = 0.069, p = 0.061).

CONCLUSION: The results suggest that WMH shape may be a more sensitive index of depressive symptoms in AD patients compared to WMH volume.

Keywords: White matter hyperintensities, shape, depression, Alzheimer’s disease

P-039 Association between Protein Intake and Depression in the United States and South Korea: Analysis of the National Health and Nutrition Examination Survey

Jinho Oh1, Kyongsuk Yoon2, Jeong Ho Chae3, Tae Suk Kim4

1Department of Psychiatry, Seoul St. Mary’s Hospital, The Catholic University of Korea, College of Medicine, Seoul, South Korea
2Computation and Neural Systems, California Institute of Technology, Pasadena, CA 91125, USA

OBJECTIVE: It is well known that dietary patterns are associated with the development and prevention of many chronic illnesses, such as a coronary heart disease and diabetes. Although the risk for depression appears to be related to daily dietary habits, how the proportion of major macronutrients affects the occurrence of depression remains largely unknown. This study aims to estimate the association between macronutrients (i.e., carbohydrate, protein, fat) and depression through national survey datasets from the United States and South Korea.

MATERIAL-METHODS: Prevalence of depression as the proportion of each macronutrient increased by 10% of the daily calorie intake was measured from 60,935 participants from the National Health and Nutrition Examination Survey (NHANES, 2005 to 2016) and 15,700 participants from the South Korea NHANES (K-NHANES, 2014 and 2016) databases. RESULTS: When the proportion of calories intake by protein increased by 10%, the prevalence of depression was significantly reduced both in the United States (Odds Ratio, OR [95% CI], 0.621 [0.530-0.728]) and South Korea (0.703 [0.397-0.994]). An association between carbohydrate intake and the prevalence of depression was seen in the United States (1.094 [1.116-1.277]), but not in South Korea. Fat intake was not significantly associated with depression in either country. Subsequent analysis showed that the low protein intake groups had significantly higher risk for depression than the normal protein intake groups in both the United States (1.648 [1.179-2.304]) and South Korea (3.169 [1.598-6.286]). CONCLUSION: In the daily diet of macronutrients, the proportion of protein intake is significantly associated with the prevalence of depression in both the United States and South Korea. These associations were more prominent in adults with insufficient protein intake, and the pattern of association between macronutrients and depression in Asian American and South Korean populations were similar.

Keywords: Depression, Protein intake, Nutritional Psychiatry, NHANES, National survey
ABSTRACTS OF POSTER PRESENTATIONS

P-040
Analysis of the variables related to the recurrence of episodes of major depression in primary care

Alejandra Anulier Latorre1, 2, Shayss Nuggester Galea2, Begea Valie Salazar1, Rosa Magallón Botaya3, Bárbara Olíván Blázquez2

1Health Research Institute of Aragon, Zaragoza, Spain
2Psychiatry and Dermatology Department, University of Zaragoza, Health Research Institute of Aragon, Zaragoza, Spain
3Psychology and Sociology Department, Health Research Institute of Aragon, Zaragoza, Spain

OBJECTIVE:To analyze the prevalence of episodes of major depression in Aragon (Spain) in relation to gender, comorbid diseases and the pharmacological treatment.

MATERIAL-METHODS: Transversal descriptive study. The sample of this study consisted of all individuals having open electronic medical records in the autonomous community of Aragon (Spain), for at least two years during the time of entry into the study, including patients with an active diagnosis of depression during the year. The total number of people diagnosed with depression in Aragon in 2016 was 103,890 people. Other variables analyzed were: Sex, age, comorbidity, and pharmaceutical treatment.

RESULTS:26.9% of the people diagnosed with depression were male and 73.1% were female. The average age was 60.49 years (SD: 17.64). 5.45% had a diagnosis of neoplasia associated. 2.3% of the patients were under treatment with tricyclic antidepressants, 13.1% with selective serotonin reuptake inhibitors. Of the patients on treatment, 23.2% were treated with monoamine oxidase inhibitors, 62.4% with Selective Serotonin Reuptake Inhibitors, 7.9% with mirtazapine and duloxetine, 2.1% with trazodone, 3.9% with venlafaxine, and 7.2% with other drugs. The most used drugs were Trazodone, Escitalopram, Mirtazapine and Duloxetine.

CONCLUSION:The depression is a high prevalent mental disorder in primary care.

Keywords: depressive episodes, primary health care

P-041
Analysis of the variables related to the recurrence of episodes of major depression in primary care

Alejandra Anulier Latorre1, 2, Shayss Nuggester Galea2, Begea Valie Salazar1, Rosa Magallón Botaya3, Bárbara Olíván Blázquez2

1Health Research Institute of Aragon, Zaragoza, Spain
2Psychiatry and Dermatology Department, University of Zaragoza, Health Research Institute of Aragon, Zaragoza, Spain
3Psychiatry and Dermatology Department, University of Zaragoza, Health Research Institute of Aragon, Zaragoza, Spain

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CONCLUSION:The depression is a high prevalent mental disorder in primary care.

Keywords: depressive episodes, primary health care

P-042
A study of the quality of life and personality traits of NEO five factors concerning bipolar patients in remission, most recent episode mania

Alexandra Ioana Mihiulescu1, Iulia Viruotsu1, Adela Magdalena Ciobanu2, Ovidiu Popa Veilea3, Damian Ana Claudia4

1Department of Medical Psychology, UMF “Carol Davila”, Bucharest, Romania
2Department of Psychiatry UMF “Carol Davila”, Bucharest, Romania

OBJECTIVE:The present research aims to consider the relationship between quality of life and personality traits in remitted bipolar patients, most recent episode mania. Personality traits consists of five components of NEO five factors questionnaire including Neuroticism, Openness, Agreeableness, Extraversion and Conscientiousness, respectively.

MATERIAL-METHODS:After signing informed consent, 44 consecutive bipolar patients admitted during 2 months into an important hospital of psychiatry in Bucharest were included into the study. 80 general population subjects were selected as controls. Quality of life scales from WHO (WHOQOL — BREF, 1996) was used to assess the quality of life of the subjects, and the Neo—short form questionnaire of Costa and Mckery was used to assess the subject’s personality traits, and, DSM—5 Self—Rated Level 2—Depression, Anxiety and Anger—Adult measures, were used to assess the subject’s negative affectivity. The linear regression was used to statistically analyze the research data.

RESULTS:Multiple linear regression was calculated to predict each domain of quality of life based on the Big Five personality factors. Thus, a significant regression equation was found for physical domain (F(5,104) = 22.444, p<0.000), with an R2 of 49%, and with significant correlation between quality of life and personality traits in remitted bipolar patients. Personality traits consists of five components of NEO five factors questionnaire including Neuroticism, Openness, Agreeableness, Extraversion and Conscientiousness, respectively.

MATERIAL-METHODS:After signing informed consent, 44 consecutive bipolar patients admitted during 2 months into an important hospital of psychiatry in Bucharest were included into the study. 80 general population subjects were selected as controls. Quality of life scales from WHO (WHOQOL — BREF, 1996) was used to assess the quality of life of the subjects, and the Neo—short form questionnaire of Costa and Mckery was used to assess the subject’s personality traits, and, DSM—5 Self—Rated Level 2—Depression, Anxiety and Anger—Adult measures, were used to assess the subject’s negative affectivity. The linear regression was used to statistically analyze the research data. RESULTS:Multiple linear regression was calculated to predict each domain of quality of life based on the Big Five personality factors. Thus, a significant regression equation was found for physical domain (F(5,104) = 15.503, p<0.000), with an R2 of 42%, and with a significant negative correlation with depression. Neuroticism, Openness, Agreeableness, Extraversion and Conscientiousness, respectively.

CONCLUSION:The obtained results showed that there is a positive and significant correlation between quality of life and personality traits and a significant negative correlation with Neurotic personality traits. Additionally, there is a significant negative correlation with depression.

Keywords: quality of life, mania remission, big five personality factors
Emerging Mood Science during treatment with selective serotonin reuptake inhibitors (SSRIs), around 50% and therefore represents the greatest subgroup of severity, higher suicidality and worse treatment response compared to non-anxious depression: a study design

Ana Teresa D. Delia1, Mario F. Jurueña2, Bruno M. Coimbra1, Thauana Oliveira Watanabe1, Marianna R. Maciel1, Cecilia R. Proença1, Mary Yeh1, Cecilia ZyIterstajn1, Marcelo F. Mello1, Andrea F. Mello1

1Department of Psychiatry, Federal University of São Paulo, Brazil 2Department of Psychological Medicine, Institute of Psychiatry, Psychology and Neuroscience, King’s College London, UK

OBJECTIVE: Major Depressive Disorder is present in almost 50% of PTSD patients. Our aim was to investigate ACTH and cortisol levels related to depressive symptoms in a PTSD sample. MATERIAL-METHODS: 58 female with PTSD were compared to 44 controls. We used the following instruments: Mini International Neuropsychiatric Interview, the Association of Methodology and Documentation in Psychiatry (AMDP) scale. ACTH levels were also associated to CAPS-5 score, demonstrating increased ACTH levels related to severe PTSD symptoms (p=0.026) and also associated to subscale D of CAPS-5 (p=0.045), which refers to depressive symptoms linked to PTSD diagnosis. CONCLUSION: A specific PTSD profile with depressive symptoms should be considered as a PTSD phenotype and therefore, depression would not constitute a distinct diagnosis. To avoid this overlapping, the diagnosis instruments must be used with caution. Future researches regarding the way the depressive symptoms in PTSD influences the HPA axis response, including ACTH and if it actually generates a new PTSD biological profile, are important to clarify the PTSD neurobiology.

Keywords: PTSD, Major Depressive Disorder, ACTH, HPA axis, neurobiology

Serotonin transporter availability in patients with anxious and non-anxious depression: a study design

Andreas Menke1, Felix Nitschke1, Michael Weiss1, Catherina Wurst1, Katherina Domshke1, Jürgen Deckert1, Andreas Buck1, Constantin Lapa1, Samuel Sannick1

1Department of Psychiatry, Psychosomatics and Psychotherapy, University Hospital of Wuerzburg, Wuerzburg, Germany 2Department of Psychiatry and Psychotherapy, Medical Center – University of Freiburg, Freiburg, Germany 3Department of Nuclear Medicine, University Hospital of Wuerzburg, Wuerzburg, Germany

OBJECTIVE: Anxious depression is associated with greater symptom severity, higher suicidality and worse treatment response compared to non-anxious depression. However, anxious depression occurs around 50% and therefore represents the greatest subgroup of depressive disorders. Impaired serotonergic pathways are supposed to substantially influence the development of depressive and anxiety disorder. Patients with anxious depression are less likely to respond during treatment with selective serotonin reuptake inhibitors (SSRIs), i.e. drugs inhibiting the serotonin transporter (SERT), while there is evidence for an equal or even better response during treatment with serotonin and norepinephrine reuptake inhibitors (SNRIs). MATERIAL-METHODS: Polymorphisms as 5-HTTLPR within the SERT coding gene SCLI6A4 cause a reduced SERT expression and were associated with anxious behavior and with an increased risk to develop depressive episode in dependence of childhood trauma. These polymorphisms were also associated with impaired treatment response and a hypomethylation of SERT indicated a worse treatment response.

RESULTS: Previous studies using positron emission tomography (PET) observed a reduced SERT availability in unmedicated depressed patients. Actually, an increased SERT availability before treatment with SSRIs predicted a successful response in these studies. CONCLUSION: This study combines genetic (SERT polymorphisms and methylation, plus RNA expression) with imaging data (central SERT availability) to reveal if patients with anxious depression exhibit a reduced SERT availability.

Keywords: PET, anxious depression, SERT, SCLI6A4

Illness insight and medication adherence among psycho-educated bipolar disorder patients

Carmen Maura Carrillo De Albornoz Calahorrano1, Luis Gutiérrez Rojas2, Manuel Gurpegui Fernández De Legaria1

1Hospital Universitario Virgen de las Nieves, Granada, Spain 2Hospital Universitario San Cecilio, Granada, Spain

OBJECTIVE: To determine illness insight and medication adherence, and their associated factors in bipolar disorder (BD), socio-demographics, clinical features, course-of-illness variables, and functional status.

MATERIAL-METHODS: The patient sample included 108 outpatients of a catchment area who had benefit from psycho-education programs (age 48.2±14.1 years, 69% women, 74% BD type I, 33% euthymic at the time of assessment). Insight was measured with 3 items of the Association of Methodology and Documentation in Psychiatry (AMDP) scale. Adherence was assessed through patients’ and caregivers’ reports and serum levels, when available. Multivariate logistic regression analyses were used to identify the variables showing cross-sectional association with insight and adherence.

RESULTS: Patients with full illness insight attained significantly higher medication adherence than those with partial or no insight [92% vs. 61%, crude OR=7.5 (95% CI:2.5–22.5); p<0.001]. Full insight, present in 71 per cent of patients, was independently and directly associated with adherence [adjusted OR=3.79 (95% CI:1.5–8.2); p<0.001], a history of suicide attempts, and a social support score; and inversely associated with intensity of current manic symptoms, ever problems with alcohol, and age at onset of the first symptoms. Medication adherence, in 83 per cent of patients, was independently and directly associated with insight [adjusted OR=16.0 (95% CI:3.6–79.5); p<0.001], being married and have had a psychiatric hospitalization; and inversely with having suffered high number of depressive episodes, intensity of current manic symptoms and heavy tobacco smoking. CONCLUSION: Interventions aimed at increasing illness insight and medication adherence, perhaps by modifying variables identified in the present study as possible mediators, including social support, may be cost-effective. According to Colom et al., groups receiving psycho-education focused on treatment adherence, early detection of prodromal symptoms and reducing lack of insight may be particularly useful to accomplish this objective.

Keywords: Adherence. Bipolar disorder. Compliance. Illness insight. Psychoeducation. Social support
ABSTRACTS OF POSTER PRESENTATIONS

P-046
Caffeine consumption among Bipolar Disorder
Carmen Maura Carrillo De Albornoz Calahorra1, Luis Gutiérrez Rojas2, Manuel Gurpegui Fernández De Legaria3
1Unidad de Salud Mental y Comunitaria de Atarfe, Hospital Universitario Virgen de las Nieves, Granada (Spain)
2Unidad de Hospitalización de Salud Mental, Hospital Universitario San Cecilio, Granada (Spain)
3Departamento de Psiquiatría, Facultad de Medicina, Universidad de Granada, Spain

OBJECTIVE: To evaluate caffeine consumption in bipolar disorder (BD) patients and relate it to sociodemographic, clinical, and evolution variables, determining which is associated with greater caffeine consumption (> 200 mg per day). To compare the prevalence of caffeine consumption with a control group of healthy subjects.

MATERIAL-METHODS: A descriptive, retrospective, longitudinal study was conducted by interviewing a sample of 108 outpatients diagnosed with BD. Sociodemographic data and clinical variables on the patient’s current condition were collected, in addition to variables on how the disorder had evolved, treatment subtype, adherence to treatment, caffeine consumption and smoking habit. The control group comprised 290 subjects not diagnosed with psychiatric disorders.

RESULTS: Most of the patients were female, married, had children and were diagnosed with type I BD; 48% regularly consumed caffeine. High caffeine consumption (> 200 mg per day) was associated with smoking (OR 9.1, 95%CI: 2.2-37.7) and a university education level (OR 1.6, 95%CI: 1.6-40.0). In comparison to the control group, high caffeine consumption was associated both with moderate (1-20 cigarettes/day) (OR 5.8, 95%CI: 2.4-14.0) and heavy (> 20 cigarettes/day) smoking (OR 15.5, 95%CI: 5.0-47.5) and alcohol consumption (OR 2.2, 95%CI: 1.0-4.8). The interaction between alcohol and smoking was significant, with a lower percentage of high caffeine consumers among the patients who consumed alcohol.

CONCLUSION: There is a tendency among BD patients to smoke and consume caffeine. High caffeine consumption is associated with smoking and vice versa. Caffeine consumption does not appear to have clinical or prognostic implications in BD evolution.

Keywords: caffeine, bipolar disorder, smoking, alcohol

P-047
Affective disorder following psychosis: a diverse nosological entity?
Carmen Maura Carrillo De Albornoz Calahorra, Pilar Calvo Rivera, Margarita Guerrero Jiménez
Hospital Universitario Virgen de las Nieves, Granada, Spain

OBJECTIVE: The objective of this research is to review the published literature on Post-Psychotic Depression and to indicate its importance, either comorbidly or as an entity of its own. For this, a historical review of the term will be made and a valid definition of PPD will be stated.

MATERIAL-METHODS: For the present work, the international recommendations were followed according to the Preferred Items for Reporting of Systematic Reviews and Meta-Analyses (PRISMA). The databases used were Web of Science and PubMed, with deadline for the inclusion of articles on February 1, 2017.

RESULTS: The search resulted in 60 articles, eliminating writings in languages other than Spanish or English, duplicates or those that did not match the search terms, 13 articles were finally included in the review. Following the results obtained in the review we see that despite its high prevalence, about 30% in different samples there is little research on the term post-psychotic depression.

CONCLUSION: There is enough data to affirm that it is not a secondary effect to antipsychotics since it exists previously to the use of these for the treatment of psychosis, as well as that a nosological entity is treated different from the negative symptoms of psychosis and other entities. Clinics such as bipolar disorder, schizoaffective disorder or depression with psychotic symptoms. They also have differential characteristics with respect to the rest of depressions.

Keywords: Depression, psychosis

P-048
Cognitive enhancing interventions for people with bipolar disorder: a systematic review
Dimosthenis Tsanekis1, Benedetta Seccomandi2, Tim Mantingh2, Matteo Cella3, Tim Wykes1, Allan H Young1
1Department of Psychological Medicine, Institute of Psychiatry, Psychology and Neuroscience, King’s College London, London, UK
2Department of Psychology, Institute of Psychiatry, Psychology and Neuroscience, King’s College London, London, UK
3Department of Psychology, Institute of Psychiatry, Psychology and Neuroscience, King’s College London, London, UK; South London & Maudsley NHS Foundation Trust, Maudsley Hospital, London, UK

OBJECTIVE: This study reviews the existing literature on cognitive enhancing interventions for people with BD, emphasizing a comparison between different treatment approaches and an evaluation of the included studies methodological quality.

MATERIAL-METHODS: We conducted a systematic search using relevant terms on PubMed, Embase, PsycINFO, and Web of Science following the PRISMA guidelines. Search returned 766 articles to be screened for eligibility. Information on the main results of each study and the primary components of each treatment approach were extracted and summarized. The methodological quality of all randomized studies was assessed using the Clinical Trials Assessment Measure (CTAM) and Cochrane Collaboration’s Risk of Bias tool.

RESULTS: Eleven eligible articles reporting data from seven original studies were identified, including 471 participants in total. Studies examined two intervention approaches, cognitive remediation (CR) and functional remediation (FR). Both approaches presented a similar adherence profile (28.5% discontinuation rate). For controlled studies, the overall methodological quality was rated as modest (CTAM score: 60.3), while the overall risk of bias was considered moderate for randomized trials. Key limitations of methodological quality were poor description of randomization process, high attrition rates, and exclusion of participants from the analysis. Positive findings in cognitive or functional outcomes were reported in the majority of studies (63%).

CONCLUSION: Current evidence for CR and FR are promising but only preliminary since any significant improvements were isolated and have not been replicated across studies. Quality trials were small in number and mostly under-powered which significantly limits any potential to detect beneficial effects. Heterogeneity in sample characteristics, selection of outcome measures, and treatment approaches further limits the robustness and the ability to generalize any reported evidence. Future trials should validate these initial findings. It is also important to explore the factors associated with better response to these interventions and the transfer of cognitive changes into functional improvement.

Keywords: bipolar disorder, cognition, functioning, psychological interventions
have found a high prevalence of psychiatric disorders. CONCLUSION: Failure to diagnose disorders can prevent a rehabilitation program from a young offender and lead to recurrence of criminal behavior. This research had the pretense of alerting the society about the prevalence of Mood Disorders in this population and its relationship with some violent crimes. Keywords: young offenders, mood disorders

P-050
Can I count on you? Social support, depression and suicide risk

Eleanor Beale1, James Overholser1, Josephine Ridley2, Silvia Hernandez3, Liliana Varman1

1Case Western Reserve University
2Cleveland VA Medical Center

OBJECTIVE: The present study was designed to examine various sources of social support as related to the severity of depressive symptoms, hopeless expectations, and suicide risk in adult psychiatric outpatients.

MATERIAL-METHODS: Participants were recruited through the mental health clinics at a Veterans Administration Medical Center. A total of 113 depressed psychiatric patients were assessed using a structured diagnostic interview and self-report measures of depression severity, hopelessness, and various sources of social support. Among these depressed adults, 42.5% had attempted suicide at least once in their lifetime.

RESULTS: Depression severity was significantly associated with deficient support from family (r = -0.24, p < 0.01), friends (r = -0.27, p < 0.01), and a romantic partner (r = -0.34, p < 0.01). However, hopelessness was only related to a lack of support from family members (r = -0.27, p < 0.01). Compared to nonsuicidal depressed patients, suicide attempters reported significantly lower levels of support from family members (t(107) = 3.94, p < 0.001), and romantic partners (t(108) = 3.46, p < 0.01), significant others (t(110) = 2.06, p < 0.05), and total social support (t(103) = 3.16, p < 0.02). Suicide attempters reported a lack of emotional support from family, and feeling unable to discuss their problems with family members.

CONCLUSION: Results show the impact of disturbed social relationships on suicide risk, exceeding their impact on depression alone. Disturbed interpersonal relationships may play a vital role in the isolation and hopelessness underlying a suicidal crisis. Psychosocial treatment may be able to strengthen social support and repair interpersonal relationships. Keywords: depression, suicide, social support

P-051
Exploring the experiences of individuals with bipolar disorder diagnosed with borderline personality disorder

Emma Tickell1, Lisa Jones1, Katherine Gordon Smith1, Ian Jones2, Eleanor Bradley1

1School of Allied Health and Community, University of Worcester, Worcester, UK
2National Centre for Mental Health, Cardiff University, UK

OBJECTIVE: Current estimates for a diagnosis of borderline personality disorder in individuals who have bipolar disorder are as high as 20%. Despite this, there is a lack of research into the experiences of individuals who have received both diagnoses. This study will explore the experiences of individuals who have both a bipolar disorder and a borderline personality disorder diagnosis,
either at the same time or following changes in diagnosis.

**MATERIAL-METHODS:** Data were collected from 15 individuals with a DSM-IV main lifetime research diagnosis of bipolar I or II disorder or schizoaffective bipolar type, recruited through the UK Bipolar Disorder Research Network. The participants all reported receiving a clinical diagnosis of both bipolar disorder and borderline or emotionally unstable personality disorder at some point during their lifetime. In-depth participant-led interviews were conducted to explore participants’ experiences of receiving and living with each diagnosis, their understanding of each diagnosis, and ways in which they felt each diagnosis had influenced their interactions with healthcare professionals, work and relationships. Transcripts were analysed using thematic analysis.

**RESULTS:** Emergent themes are:

- The perception that experiences of bipolar disorder are often dismissed and overlooked due to the borderline personality disorder diagnosis.
- The feeling of being an outsider who cannot relate to individuals with either disorder.

**CONCLUSION:** Our ongoing analysis suggests that individuals with bipolar disorder who receive a diagnosis of borderline personality disorder may experience disruption in their sense of self, feel unsupported by healthcare professionals and feel like an outsider from either patient group. Work may be needed to help individuals with both diagnoses have a greater understanding of the two disorders and to help them feel supported by healthcare professionals.

**Keywords:** bipolar disorder, borderline personality disorder, comorbidity, experiences, qualitative

**P-052**

**A Network model of positive resource, temperament, childhood trauma and comorbid symptoms for patient with depressive disorders**

Hyu Jung Huh¹, Soon Young Lee², Soo Sang Lee², Jeong Ho Chae³

1Department of Psychiatry, Incheon St.Mary’s Hospital, The catholic University of Korea, College of Medicine, Incheon, Republic of Korea
2Department of Library, Archives Information Studies, The Busan National University, College of Social Science, Busan, Republic of Korea
3Department of Psychiatry, Seoul St. Mary’s Hospital, The Catholic University of Korea, College of Medicine, Seoul, Republic of Korea

**OBJECTIVE:** Temperament, positive resource, childhood trauma and other clinical symptoms (anxiety, somatization, hostility) were known to be related to depressive symptoms severity. However, it is currently unknown how these factors’ interactions affect depressive symptoms. Here, we used network analysis to examine the interrelations between these clinical factors in patients with mild depressive symptoms and relatively severe depressive symptoms.

**MATERIAL-METHODS:** Patients with depressive disorders (n=454) completed self-report questionnaires evaluating clinical symptoms (depression, anxiety, somatization, hostility), childhood trauma, temperament and positive resource. To identify network pattern and the most central aspect, we performed network analysis and centrality approach. First, we analyzed the network pattern in total participants. Second, we set the two groups with severe depressive symptoms and with mild depressive symptoms and compare the network pattern between the two groups.

**RESULTS:** Optimism and depression were the most central nodes in the network of total participants. In the group with severe depressive symptoms, social support and childhood emotional trauma showed high level of centrality. Social support and other individual’s positive resources played central role in the groups with mild depressive symptoms.

**CONCLUSION:** Network pattern of psychological factors was different between mild and severe depression. Several positive resources are important factors in the psychological processes in both mild and severe depression. However, childhood emotional trauma may play relatively important roles in patients with severe depressive symptoms.

**Keywords:** Depression, Childhood trauma, Optimism, Network analysis
P-053
Autonomic Responses to Emotional Stimuli While Sleep Deprived: Evidence of an Adaptive Mechanism

Ilana Susie Hairston1, Mairav Cohen Zion2

1 Psychology Department, Tel Hai Academic College, Kiryat Shemona, Israel
2 Department of Behavioural Sciences, Tel Aviv-Yafo Academic College, Tel Aviv, Israel

OBJECTIVE: Insufficient sleep can cause negative physical and mental health outcomes, some of which may be linked to the effects of sleep deprivation on autonomic function. Partial sleep deprivation (PSD) approximates real-world sleep insufficiency. Here we assessed the effects of PSD on physiological and self-reported responses to emotional stimuli.

MATERIAL-METHODS: Thirty-six participants (25 women, ages 25±2.2) took part in a 2x2 within-subject mood induction study, wherein physiological and self-report data were collected twice: once following three nights of PSD (5hrs/night), and once following three well-rested nights (8hrs/night). Mood induction consisted of viewing “neutral” and “sad” film clips. Visual analogues scales (VAS) for fatigue and sadness were used to confirm the efficacy of sleep restriction and mood induction. Physiological data measures included heart rate (HR; beats/min), heart rate variability measured as the ratio of the low (0.04-0.15Hz) to high (0.15-0.4Hz) frequency (LH/HF) components of the HR spectrum, and skin conductance response (SCR).

RESULTS: Analysis of the VASs confirmed that participants felt sadder after watching the “sad” clip, and more fatigued in the PSD condition (p’s<.010). Watching the “sad” clip reduced fatigue only in the PSD condition (p=.025). Sleep restriction did not affect baseline physiological measures collected prior to each clip. HR decelerated only while watching the sad clip (p=.013), across sleep conditions. LF/HF was higher in the PSD condition (p=.048), mainly while watching the “sad” clip (p=.050). Sleep restriction also increased the number of SCRs (p=.016), across emotion conditions. Regression analyses, with VAS for sadness in the “sad” condition as the dependent variable, indicated that LF/HF was a significant predictor of sadness (p’s<.050).

CONCLUSION: As insufficient sleep is a feature of modern day life, these findings point to its impact on the autonomic system. The results indicate to an adaptive response, maintaining “normal” heart rate response to emotional cues.

Keywords: sleep restriction, physiology, mood induction, psychiatric.

P-054
ADHD in childhood as a Bipolar Disorder predictive factor in adulthood

Javier Domínguez Cutanda, Cristina Martín Villarroel, Laura Carpio García, Laura Gil García Uceda, Gema Belmonte García, Elías García Martin De La Fuente, Marta Soto Laguna, Adolfo Benito Ruiz, María García Martín, Paloma Barredo De Valenzuela Álvarez

Hospital Provincial de Toledo, Toledo, Spain

OBJECTIVE: Differential diagnosis between ADHD and bipolar disorder in childhood is sometimes complex. It has been observed how many patients with bipolar disorder in adulthood also presented personal history of ADHD in their childhood. With this work we want to propose that ADHD may actually be a prodromal manifestation of a future affective disorder.

MATERIAL-METHODS: From a series of cases, a bibliographic search was performed in databases (PubMed, Ovid, ScienceDirect) about this two entities, focusing on aspects related to differential diagnosis and the transition of patients from a diagnosis of ADHD to a diagnosis of bipolar disorder.

RESULTS: Attention deficits are considered one of the possible endophenotypic markers of bipolar disorders and deficits in processing of emotions and hyperarousal symptoms constitute early presentations of bipolar disorders and ADHD. Also emotional dysregulation in ADHD is a factor sometimes forgotten in the assessment of this entity, to a point that affective disorders in ADHD are not beared in mind in DSM. This emotional dysregulation has been proposed by various authors for its inclusion as another diagnostic criterion. In order to understand the common physiopathology of both disorders, more studies with patients presenting shared symptoms are neccessary.

CONCLUSION: More studies would be necessary to be able to carry...
ABSTRACTS OF POSTER PRESENTATIONS

P-055
Immigration and cultural differences between first and second immigrants generation as a main factor to mood disorders: a case report

Laura Carpio García, Laura Gil García Uceda, Javier Domínguez Cutanda, Cristina Martín Villarroel, Gema Belmonte García, Marta Soto Laguna, Manuel Fernández Torija Daza, María García Martín, Paloma Barredo De Valenzuela Alvarez, García Martín De La Fuente García Martín De La Fuente

Department of Psychiatry, Complejo Hospitalario de Toledo, Toledo, España

OBJECTIVE: There are not two similar moods disorders, as anyone may respond to different causes. Sometimes, culture may be the main factor as it acts as a gap between parents and children generations, so it is complicated to adapt oneself’s evolution to different frames: domestic and social one. That is true specially at adolescence when identity is not yet formed. Our objective focus on mood disturbance derived from cultural differences in second generation immigrants sons.

MATERIAL-METHODS: We analyse through one case how anxiety and mood disturbance may be linked to culture differences between first generation immigrants parents and their second generation immigrants sons during adolescence.

RESULTS: Drugs use, conduct disorders and low self esteem, may be depressive equivalents that are behind cultural ambivalence, so clinical approach should take cultural issues into account.

CONCLUSION: Adolescence is a cultural construct that emerged and enhanced some aspects that implied a rebel attitude. Later adolescence may be defined as an evolution from previous stages, and it was the result of integrating different roles, autonomy vs dependency.

The process is quite similar when an immigrant’s son is born or early adopted in a new culture so he or she has to join opposite concepts, but now in their closest circle, so rebellion against adulthood or society transforms into a family issue, which enforces the relationship with parents, who don’t know how to act, being the depressive patient, like adolescence was, an emergent of a cultural problem. Considering the cultural background of patients can optimize service delivery and therapy outcomes among children and adolescents belonging to second generation of immigrants.

Keywords: immigration, adolescence, mood disorders

P-056
A systematic review of pharmacological augmentation treatment guidelines for unipolar depression

Lindsey Marwood, Rachael Taylor, Emanuella Oprea, Valeria De Angel, Sarah Mather, Beatrice Valentini, Allan Young, Anthony Cleare

1 Department of Psychological Medicine, Institute of Psychiatry, Psychology & Neuroscience, King’s College London, London, UK
2 South London and Maudsley NHS Foundation Trust, London, UK
3 Department of Psychological Medicine, Institute of Psychiatry, Psychology & Neuroscience, King’s College London, London, UK and National Institute for Health Research Maudsley Biomedical Research Centre, South London & Maudsley NHS Foundation Trust, London, UK
4 Oxford Health NHS Foundation Trust, Oxford, UK
5 Department of General Psychology, University of Padova, Italy

OBJECTIVE: Pharmacological augmentation is a widely recommended treatment strategy for depressed patients who have inadequately responded to antidepressant monotherapy. Clinicians may refer to a range of guidelines for advice on treatment selection, prescription, monitoring and discontinuation, each compiled by a different group or governing body, using varying methodologies. It is therefore plausible that the quality and content of recommendations may vary across guidelines, potentially limiting the ability of clinicians to offer objective, evidence-based care. This systematic review sought to review the quality of treatment guidelines for depression and compare augmentation recommendations.

MATERIAL-METHODS: A systematic literature search was conducted to identify guidelines published in English between 26.07.2008 and 26.07.2018. Current versions of guidelines relating to the management of unipolar depression using pharmacological augmentation were quality assessed using the AGREE II tool. Data relating to the prescription of pharmacological augmenters were extracted from guidelines deemed by AGREE II to have been developed with sufficient rigour, and were narratively synthesised. RESULTS: 1467 records were identified by the search, 20 eligible guidelines were included. The stage at which they recommended the use of augmentation strategies, as well as the pharmacological agents recommended. Lithium and atypical antipsychotics were the only treatments to be recommended by all 11 guidelines, while ketamine was only recommended as a second-line option by one and as an experimental specialist option in two.

CONCLUSION: There is a clear need for greater consistency in the quality and content of current guidelines for pharmacological augmentation in unipolar resistant depression. Although some inconsistencies can be accounted for by varying dates of guideline publication, and therefore differences in available literature, variation in the interpretation of research was also apparent.

Keywords: treatment resistant depression, augmentation, treatment guidelines, systematic review
P-057 Parental Accommodation and Parental Depression are associated with Selective Mutism Levels in Children – Preliminary Results

Maayan Shorer1, Zivit Ben Haim2, Orit Krispin3

1Clinical Psychology Program, Ruppin Academic Center, Emek Hefer, Israel
2Psychological Medicine Department, Schneider Children’s Medical Center of Israel, Petach-Tikva, Israel
3Baruch iicher School of Psychology, Herzliya Interdisciplinary Center, Herzliya, Israel

OBJECTIVE: Selective Mutism (SM) is an early onset anxiety disorder, characterized by strict speech avoidance in social situations. There is some evidence for greater rates of social anxiety and higher parental control among parents of children with SM. However, the role of parental variables in SM requires further research. The current study is aimed at examining the contribution of parents’ psychopathology, parental attitudes towards child’s anxiety and parenting practices (accommodation to the child’s avoidance, authority style and parental accommodation) to children’s SM symptoms level.

MATERIAL-METHODS: Participants were 47 children diagnosed with SM, aged 3-8 years (M=5.54y, SD=1.39), and their main caregiving parent. Participants were recruited at the Selective Mutism unit of Schneider Children’s Medical Center of Israel during their first visit. Children’s SM diagnosis was established using the ADIS and SM symptom levels were measured using the SMQ. Parents completed self-reports on their social anxiety, depression, trait anxiety, parental accommodation, parental authority style and parental playfulness.

RESULTS: Parents' social anxiety, parents’ depression and parental accommodation levels were significantly and positively associated with children’s SM levels. A Mediation model revealed that the association between parental accommodation and SM levels is mediated by parents' depression levels.

CONCLUSION: Greater parental accommodation to the child’s speech avoidance is related to higher SM symptoms levels. However, parental accommodation may be a product of the parents’ depression. Thus, clinicians treating children with SM should be aware and address both parents’ depression and accommodation behaviors.

Keywords: Selective Mutism, Parental Accommodation, Parental Depression

P-058 Depression history as a predictor of good opioid treatment outcome: A test of two potential explanations

Margaret L Griffin, Andrew D Peckham, Roger D Weiss

McLean Hospital/Harvard Medical School

OBJECTIVE: In the multi-site Prescription Opioid Addiction Treatment Study, the best predictor of successful opioid use outcome was a diagnosis of major depressive disorder. The primary aim of this secondary analysis was to assess two explanations for this counterintuitive finding that depression history predicts good outcome for prescription opioid-dependent patients treated with buprenorphine-naloxone.

MATERIAL-METHODS: First, we tested the hypothesis that depression history predicted good treatment outcome due to a reduction in depressive symptoms. Second, we tested the hypothesis that depression history was associated with greater motivation and engagement in treatment, and that these two factors would account for the effect of depression history on substance use outcomes. This secondary analysis used data from the Prescription Opioid Addiction Treatment Study sponsored by the NIDA Clinical Trials Network, a national, 10-site randomized controlled trial (N=360 enrolled in the 12-week buprenorphine-naloxone maintenance treatment phase).

RESULTS: Although depression scores decreased significantly throughout treatment, this improvement was not associated with opioid outcomes. Similarly, reporting a goal of opioid abstinence at treatment entry was not associated with good outcomes; however, mutual help group participation was associated with good treatment outcomes. Finally, the interaction effect of gender and depression on treatment outcomes was significant: for women, depression was not associated with outcomes, whereas men with depression were more likely to have successful outcomes than men without depression.

CONCLUSION: Results indicate several pathways by which depression may influence opioid outcomes. Findings are consistent with the premise that depression motivates some individuals to engage more actively in substance use treatment. Results also supported a significant role for gender. More research is needed to understand how gender and depression history affect opioid outcomes. A better understanding of predictors of successful treatment outcomes in those with opioid dependence could be used to improve treatment.

Keywords: opioid use disorder; depression; buprenorphine

P-059 Prodromal features of Bipolar Disorder during adolescence and the importance of its identification

Maria João Santos Lobato1, João Pedro Ribeiro2, Carla Maria Maia3

1Department of Psychiatry, Child and Adolescent Psychiatry Unit, Centro Hospitalar Tâmega e Sousa, Penafiel, Portugal.
2Department of Psychiatry, Centro Hospitalar Tâmega e Sousa, Penafiel, Portugal.
3Department of Psychiatry, Child and Adolescent Psychiatry Unit, Centro Hospitalar Tâmega e Sousa, Penafiel, Portugal.

OBJECTIVE: Bipolar Disorder (BD) is a severe and chronic psychiatric disorder with important features, including high risk of suicide. Additionally, BD adversely affect the quality of life and global functioning. This study aims to review the prodromic phase of BD, as well as to understand the importance of its identification for the outcome.

MATERIAL-METHODS: We carried out a narrative literature review by performing a search on PubMed database supplemented with hand-search to identify suitable English-written articles. Search terms included bipolar disorder, affective disorder, prodromal, diagnosis, outcome, child and adolescent.

RESULTS: Twenty-two studies were included in this review. The onset of BD typically occurs between the second and third decades of life and can be preceded by several symptoms, with greater or less specificity, that frequently arise during childhood and adolescence. Although BD is considered an uncommon disease of youth, recent studies have frequently shown that the symptoms begin to emerge in this period, the so-called prodromal stage. According to recent literature, the most commonly prodromal symptoms of BD are mood swings, sub-syndromal mania or depressive mood and symptoms common to other psychiatric disorders such as sleep disturbances, irritability, hyperactivity and anxiety. Furthermore, it is not uncommon to find psychotic symptoms as a manifestation of BD during adolescence. This pattern of nonspecific symptoms is what challenges the diagnosis. The time gap between the first experience of symptoms and the initiation of treatment are one of the most important factors that determine the course and outcome of BD.

CONCLUSION: Regular follow-up of children and adolescents with mood disturbances provides an opportunity for BD detection. Early treatment initiation is associated with a better outcome. Therefore,
premature recognition of individuals who are in the prodromal stage can determine an earlier intervention and, in this way, dictate a better outcome of the disease.

Keywords: bipolar disorder, affective disorder, prodromal, diagnosis, children, adolescents

P-060
Relationship between parenting practices and mother and child psychopathological traits: a cross-sectional study

Monica Bellina1, Silvia Grazioli1, Marco Garzitto2, Maddalena Mauri1, Maddalena Mauri1, Massimo Molteni1, Paolo Brambilla1, Maria Nobile1

1Scientific Institute, IRCCS E. Medea, Developmental Psychopathology Unit, Bossio Parini, Lecco, Italy.
2Scientific Institute, IRCCS E. Medea, San Vito al Tagliamento, Pordenone, Italy.
3Department of Neurosciences and Mental Health, Fondazione IRCCS Ca’ Granda Ospedale Maggiore Policlinico, University of Milan, Milan, Italy.

OBJECTIVE: Increasing evidences suggest a complex interplay of environmental influences, such as the exposure to mother psychopathology through parenting behavior, in intergenerational mother-to-child psychopathology transmission. Indeed, environmental factors could represent a relevant target of clinical intervention. In this work, we present data evaluating homotypic and heterotypic relations between mother and child psychopathological traits, mediated by parenting behaviors and taking into account the dimensional constructs of parent and offspring internalizing and externalizing psychopathology.

MATERIAL-METHODS: Internalizing and Externalizing traits in 272 children and adolescents and their mothers (N = 272) were assessed through the Child Behavior Checklist and the Adult Self Report; four areas of parenting behaviors were investigated through the Family Life Questionnaire. Parallel multiple mediation models were built, considering mother psychopathology scales as independent variables, parenting styles as mediators and child psychopathology scales as dependent variables.

RESULTS: Significant positive correlations were found between each dimension of mother and child psychopathology; nevertheless, significant negative correlations were found between two parenting practices (supportive behaviors and coherent family rules) and mother and child psychopathology. Overall regression models showed good predictive values of maternal psychopathology on child homotypic and heterotypic outcomes; high levels of maternal pathological traits predicted high levels of children psychopathology. A partial mediating effect of parenting style was found: support mediated the relationship between mother psychopathology and children externalizing psychopathology. On the other hand, rules mediated the relationship between maternal symptomatology and offspring internalizing psychopathology.

CONCLUSION: Our study results suggest the existence of interdependent links between mother psychiatric symptomatology, parenting style and offspring internalizing and externalizing outcomes. On a clinical and rehabilitation ground, this work underscores the need to address environmental factors (particularly, mother psychopathology) involved in the maintenance of child psychopathology.

Keywords: Parenting practices; Developmental Psychopathology; Internalizing and externalizing disorders; Rehabilitation; Risk factors; Mediation analysis.
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Table 3: Pearson correlations

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Table 4a: First mediation model

Mediation model: mother internalizing psychopathology, parenting style (Rules and Affirmation), child externalizing psychopathology.

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Table 4b: Second mediation model

Mediation model: mother internalizing psychopathology, parenting style (Rules and Affirmation), child internalizing psychopathology.

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Table 4c: Third mediation model

Mediation model: mother externalizing psychopathology, parenting style (Rules and Affirmation), child internalizing psychopathology.

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Table 4d: Fourth mediation model

Mediation model: mother externalizing psychopathology, parenting style (Rules and Affirmation), child externalizing psychopathology.

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P-061 Neuropsychological functioning and early life stress from toddlerhood to adolescence: a systematic review

Marta Maria Moreira, Anthony J. Cleare, Mario Francisco Juruena
Centre for Affective Disorders, Department of Psychological Medicine, Institute of Psychiatry, Psychology and Neuroscience, King’s College London, London, UK

OBJECTIVE: This study aims to systematically review the neuropsychological functioning (intelligence, language, executive functions, attention, processing speed, memory, motor functioning) of toddlers, children, and adolescents that experienced one or more sub-types of early life stress (ELS). Additionally, it explores if some deficits of cognitive functioning are associated with the sub-type of ELS experienced and what characteristics are predictors of cognitive functioning.

MATERIAL-METHODS: A search to identify all eligible studies was conducted in PubMed, MEDLINE, EMBASE and PsycINFO (via Ovid interface), up to 30 May 2019. References of published studies were also manually searched. Databases were examined using the following key words: (“early life stress” OR “maltreatment” OR “neglect”) AND (“cognit*” OR “IQ” OR “attention” OR “executive funct*”) AND (“toddler” OR “children” OR “adolesc*” OR “teen”).

The inclusion criteria were: participants are toddlers, children and adolescents; participants must have experienced at least one sub-type of ELS; scores of cognitive functioning must have been obtained through standardized tests; articles published in English or Portuguese languages.

RESULTS: A total of 58 articles met our inclusion criteria, including 22,710 maltreated participants and 1,700 matched nonmaltreated controls. Findings show that neurocognitive deficits were common and impairments in executive functions were the most reported, followed by deficits in intelligence, language, visuospatial skills, memory, processing speed, and motor functioning. Type, severity, chronicity, and timing of ELS during development were associated with the severity of cognitive impairments.

CONCLUSION: In toddlers, children, and adolescents cognitive functioning is compromised after the experience of ELS. These results have serious implications for the clinical practice and research with this population, as cognitive deficits are associated with impairments in functioning and may constitute a vulnerability factor for the onset of neuodevelopmental and psychiatric disorders.

Keywords: early life stress, maltreatment, children, adolescent, cognition, executive function
P-062
Admission rate and mental distress among patients with bipolar disorder in the perinatal period

Saghair Zageneh Pour1, Mathilda Eberhard1, Mahnaz Farkhondehpour1, Christina Johannsson1, Steinunn Steingrimsson2, Michael Ioannou2
1Psychiatri Affektiva, Sahlgrenska University Hospital, Gothenburg, Sweden
2Department of Psychiatry and Neurochemistry, Institute of Neuroscience and Physiology, Sahlgrenska Academy, University of Gothenburg, Sweden

OBJECTIVE: The perinatal period can be destabilizing for patients with bipolar disorder (BD). A specialized BD outpatient clinic was established in 2013 in Gothenburg and since 2015, an individualized perinatal care plan has systematically been implemented for female patients prior to pregnancy. The aim of this study was to examine the outcome of the perinatal psychiatric care for BD for both male and female patients.

MATERIAL-METHODS: The perinatal period was defined as the time frame from pregnancy up to the first 12 months after childbirth. Patient records of both female and male patients with BD I and II were examined retrospectively. The outcome of the perinatal psychiatric care was rated, in terms of signs of mental distress, relapse in BD and hospital admission rate.

RESULTS: Between January 2015 and March 2019, 79 BD-patients (♀=43, ♂=36) became parents where 93% of women and 3% of men had an individualized care plan for the perinatal period. Patient-chart review found a reported mental distress rate among 77% of women and 44% of men. Furthermore, 12% of women and 11% of men were admitted to a psychiatric ward in the perinatal period.

CONCLUSION: The high rate of mental distress in this vulnerable patient group highlights the need of individualized care plan for both male and female BD-patients during the perinatal period. In some cases of hospital admission, stigma-associated factors had played a significant role in the delivery of health care raising the question of preventability.

Keywords: bipolar disorder, perinatal, pregnancy, outcome, hospital admission

P-063
Manic syndrome as the presenting feature of pancreatic cancer

Pedro Oliveira1, Daniela Pereira1, Nuno Madeira2
1Department of Psychiatry, Centro Hospitalar e Universitário de Coimbra, Coimbra, Portugal; Institute of Psychological Medicine, Faculty of Medicine - University of Coimbra, Coimbra, Portugal
2Department of Psychiatry, Centro Hospitalar e Universitário de Coimbra, Coimbra, Portugal

OBJECTIVE: Comorbidity between pancreatic carcinoma and depression is high: up to 75% of cases, with depressive symptoms frequently preceding the cancer’s diagnosis. Although other psychiatric symptoms such as anxiety are also common, manic symptoms are infrequent presenting features of pancreatic cancer: to our knowledge, only two cases of pancreatic cancer related with manic episodes have been reported. We present a clinical report of a 75-year-old woman with a manic syndrome as the presenting feature of an uncinate process cancer.

MATERIAL-METHODS: In addition to describing the clinical case, searches were undertaken in Pubmed and other databases using keywords such as “manic”, “pancreatic cancer”, “bipolar disorder” and “paraneoplastic syndromes”.

RESULTS: A 75-year-old white woman was admitted to a Psychiatric Emergency room with significant behavioral changes since about two to three weeks, without a clear triggering factor. Most striking symptoms were expansive mood, disinhibition, tachypnea and verbosity. The patient was alert and there were no changes in attention or orientation. She had no psychiatric history, substance misuse of any kind, or family history of mental disorders. Head CT scan had no metastatic lesions. Laboratory exams presented elevated liver enzymes; abdominal ultrasound showed a heterogeneous lesion with around 3 cm located in the uncinate process of the pancreas, compatible with pancreatic adenocarcinoma; a body CT scan revealed probable hepatic and lung micrometastatization.

CONCLUSION: When facing inaugural manic episodes at advanced ages, organic pathology should be actively investigated. We present the third known case of a manic syndrome as the presenting feature of pancreatic cancer, although in other reported cases, psychiatric features predated the cancer diagnosis by several months. Paraneoplastic manifestations, namely through cytokine-mediated immune response, could be involved in this uncommon psychiatric manifestation of pancreatic cancer. Keywords: manic syndrome, pancreatic cancer, bipolar disorder, paraneoplastic syndromes

P-064
Treatment emergent affective switch and antidepressant treatment in bipolar depression: a retrospective study

Pedro Oliveira1, Rita Almeida Leite1, Tiago Santos2, Nuno Madeira3
1Department of Psychiatry, Centro Hospitalar e Universitário de Coimbra, Coimbra, Portugal; Institute of Psychological Medicine, Faculty of Medicine - University of Coimbra, Coimbra, Portugal
2Department of Psychiatry and Mental Health, Baixo Vouga Hospital Centre, Aveiro, Portugal
3Department of Psychiatry, Centro Hospitalar e Universitário de Coimbra, Coimbra, Portugal; Institute of Psychological Medicine, Faculty of Medicine - University of Coimbra, Coimbra, Portugal

OBJECTIVE: The use of antidepressants (AD) in bipolar disorder (BD) remains controversial. Although discouraged in guidelines, medium to long-term AD use in BD patients is commonly seen in clinical practice, with as much as 40% of patients taking AD in the maintenance phase. This may be due to inadequate effectiveness of recommended treatment regimens, namely, mood stabilizers (MS) and antipsychotics (AP). Given this, we aimed to access if the use of AD in depressed bipolar inpatients was associated with a higher risk of subsequent affective switch.

MATERIAL-METHODS: We retrospectively reviewed the records of subjects hospitalized with a diagnosis of bipolar depression in a large university hospital between 2006 and 2016. Medication at discharge of patients who developed a manic episode (S) in the following two years (n=41) was compared with the medication of those who did not develop (NS) manic episodes (n=271). We calculated and compared the Defined Daily Dose (DDD) of MS, AP, MS+AP and AD in these two groups.

RESULTS: There were no differences between groups regarding the DDD of AD. Patients of the NS group had a significantly higher DDD of AP (0.75+/-0.81 vs. 0.54+/-0.54; p=0.042), MS (0.79+/-0.43 vs. 0.54+/-0.43; p=0.000) and MS+AP (1.54+/-0.93 vs. 1.08+/-0.67; p=0.000).

CONCLUSION: Treatment with AD during and after inpatient treatment for bipolar depression was not associated with increased
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Risk of new manic episodes in a 2-year follow-up. However, the use of AP and MS could mitigate the risk of a treatment emergent affective switch. Perhaps the increased risk of manic episodes with AD is mainly due to their use in monotherapy, and this risk could be reduced by a judicious use of MS, AP or their association.
Keywords: Antidepressants, antipsychotics, bipolar disorder, mood stabilizers, treatment emergent affective switch

P-065 Symptom effects of caffeine intake in patients with bipolar disorder: a systematic review
Rebecca Strawbridge1, Sofia Frigerio2, Allan H Young1
1Department of Psychological Medicine, Institute of Psychiatry, Psychology & Neuroscience, King’s College London, London, UK
2Medical School, University of Pavia, Pavia, Italy

OBJECTIVE: In healthy populations, caffeine appears to have beneficial effects on health; however, patients with bipolar disorder are routinely advised to limit caffeine use in psychoeducation programmes. We aimed to examine all literature reporting whether caffeine intake/withdrawal impacts the natural course of bipolar disorder, in terms of clinical outcomes.

MATERIAL-METHODS: Studies reporting data on individuals with bipolar disorder comparing a measure of caffeine use with illness severity (symptoms of mania, depression, psychosis, anxiety or suicidality) were included. PubMed, Embase and PsycINFO were searched (up to 01/12/2018).

RESULTS: 17 studies were included (11 case reports, 5 case-control cohort, 1 interventional study). 2 case studies reported patients with a diagnosis of bipolar disorder switching to a manic/mixed state after acutely increasing caffeine intake; another described an individual able to taper off psychotropic medications after stopping caffeine and related increases in plasma lithium concentration after decreasing caffeine. The largest cohort study found that coffee drinkers were over twice as likely to exhibit suicidal behaviour than non-drinkers, while a smaller study showed greater caffeine usage among patients with mixed states than those with uncomplicated clinical presentations. One further study showed no significant association between caffeine use and time to recover from a depressive episode, time to switch or relapse following recovery. CONCLUSION: The inconclusive results of this systematic review are mainly due to scarce studies and absence of trials assessing caffeine effects on clinical outcomes. A preliminary conclusion is that acute increases in caffeine consumption may precede the occurrence of manic episodes in patients with bipolar disorder, potentially through a direct stimulant effect and/or affecting the metabolism of lithium. Conversely, in light of the few long-term studies and inconsistency of results, further research is needed to determine whether caffeine use impacts the long-term prognosis of bipolar disorder.
Keywords: caffeine; coffee; bipolar; suicide; depression; mania

P-066 Morningness–Eveningness Scores Predict Outcomes Differentially for Depressed Patients Attending Morning vs. Afternoon Day Treatment Streams
Robert Levitan1, Ryan Klein1, Neely Bakshi2, Judith Laposa1, Sean Hill1, Stefan Kloiber1, Zafirins Daskalakis1
1Centre for Addiction and Mental Health (CAMH), Department of Psychiatry, University of Toronto, Toronto, Canada
2Krembil Centre for Neuroinformatics, CAMH, Toronto, Canada

OBJECTIVE: In patients experiencing major depression, structured day treatment helps to optimize activity rhythms and functioning. At the CAMH Integrated Day Treatment (IDT) program, each patient attends either a morning stream or an afternoon stream, but not both. We examined whether subjective chronotype, or the time of day an individual prefers to be most active and alert, predicts treatment outcomes differentially in depressed patients attending the morning vs. afternoon IDT streams.

MATERIAL-METHODS: The Horne–Östberg Morningness–Eveningness Questionnaire (MEQ), a measure of chronotype, was administered before and after treatment to 203 patients experiencing an MDD episode. Multiple regression was used to predict change in depression and quality of life scores based on treatment stream (morning or afternoon), baseline MEQ scores and the treatment stream by MEQ interaction. Based on the notion that alertness would associate with better outcomes, we predicted that greater morningness at baseline would predict better outcomes in the morning stream and vice-versa for the afternoon stream.

RESULTS: The treatment stream by MEQ interaction was a highly significant predictor of both depression and quality of life change scores over the four weeks of treatment. Opposite to predictions, post-hoc analysis revealed that greater eveningness at baseline predicted better responses in the morning stream, while greater morningness predicted better responses in the afternoon stream.

CONCLUSION: Patients experiencing a major depressive episode improved more if they attended the day treatment stream asynchronous to their baseline morning–evening preference. This may reflect the benefits of experiencing behavioural activation during an otherwise quiescent time of the day for a given patient. Treatment stream assignment based on MEQ scores may be a helpful aspect of day treatment planning going forward.
Keywords: Major Depressive Episode, Day Treatment, Predictors of Response, Subjective Chronotype

P-067 Overdose and Suicidal Motivation in Adults with Opioid Use Disorder
Roger D. Weiss1, R. Kathryn McHugh1, Margaret L. Griffin1, Nadine R. Taghian1, Hilary S. Connery1
1Division of Alcohol and Drug Abuse, McLean Hospital, Belmont, Massachusetts

OBJECTIVE: Suicide and overdose are both common among people with opioid use disorder (OUD); however, little is known about the role of suicidal motivation in those who overdose on opioids. The aim of this study is to identify correlates of opioid overdose and to assess the extent of suicidal motivation prior to opioid overdose in treatment-seeking patients with OUD.

MATERIAL-METHODS: Adults with OUD on an inpatient treatment
ABSTRACTS OF POSTER PRESENTATIONS

P-068
A systematic review to investigate what constitutes early age at onset of Bipolar disorder
Sorcha Bolton, Jeremy Warner, Kate Saunders, John Geddes
Department of Psychiatry, University of Oxford, Warneford Hospital, Oxford, OX3 7JX

OBJECTIVE: Bipolar Disorder (BD) is a chronic and severe mental health disorder with significant morbidity and mortality. Evidence suggests that an earlier age of onset in BD is associated with a longer delay to treatment, greater severity of depression, and higher levels of comorbid anxiety and substance abuse. However, no known research has systematically examined what is meant by ‘early onset.’ Consequently, we present the first systematic review that examines age at onset distributions in Bipolar Disorder, with a focus on what constitutes an early age at onset.

MATERIAL-METHODS: A systematic literature search of the following databases was performed: Cochrane Central Register of Controlled Trials, PsychNFO, MEDLINE, Embase, Cumulative Index of Nursing and Allied Health Literature, Scopus, Proquest Dissertations and Theses, and BIOSIS Previews. Original qualitative and quantitative English language studies investigating age at onset in BD were sought. No date limits were imposed on the search. Review papers, book chapters, editorials or commentaries were excluded.

RESULTS: A total of 9508 unique publications were identified. From initial title and abstract screening 3785 have been included. Detailed abstract and full-text review will lead to further exclusion of studies. Once the final stage of screening has been completed, if studies are sufficiently homogeneous, quantitative synthesis of the results will be appropriate. We aim to pool age of onset data and conduct admixture analysis to determine what constitutes early vs. middle, vs. late) onset of BD. If studies are very heterogeneous, we will provide a narrative synthesis of our findings.

CONCLUSION: Our systematic review aims to synthesise BD age of onset evidence to reach a consensus as to what constitutes early onset; without a clear understanding as to what is meant by ‘early onset’ strong conclusions regarding the relationship between BD age at onset and clinical trajectory cannot be drawn.

Keywords: Bipolar disorder, age at onset

P-069
What predicts verbal learning and memory in euthymic patients with bipolar disorder? – Is it anxiety, intelligence or other factors?
Thomas Daniel Meyer¹, Ryan Hinojosa¹, Martin Hautzinger²

¹Department of Psychiatry & Behavioral Sciences, McGovern Medical School, University of Texas HSC, Houston, TX, US
²Department of Psychology, Eberhard Karls University, Tuebingen, Germany

OBJECTIVE: There is evidence that patients with BD show deficits when compared to healthy controls. The objective of this study was to explore predictors of verbal learning and memory in a sample of euthymic patients with BD to see if a) mood and anxiety at the time of testing explain performance, and b) other clinical factors contribute to differences in performance.

MATERIAL-METHODS: This sample of patients was assessed with the Auditive Verbal Learning Test (AVLT). On the day of testing the patients (n = 95) also did an intelligence test, the CES-D and State Anxiety Scale (Aim A). The second set of regressions (Aim B) tested whether other baseline characteristics such as clinician-ratings (HAM-D, YMRS), age of onset, duration of illness and medication predicted performance.

RESULTS: Comparing the performance of our sample with other studies revealed that our euthymic sample was significantly better than bipolar depressed patients but did not differ from healthy controls. Age at testing, gender and intelligence significantly predicted verbal learning and free recall but not state anxiety or self-reported depression. For delayed recognition, self-reported depressive symptoms showed a trend to predict lower performance. When looking separately at clinician ratings, age of onset, duration of illness and medication, there was a trend for higher medication levels to predict less learning, but not recall or recognition. However, the overall regression model was not significant.

CONCLUSION: Contrary to our expectations, state anxiety and residual depression did not generally affect performance. Only medication level was marginally associated with less learning, but not age of onset or duration of illness. Furthermore, our sample seems cognitively to resemble healthy controls. Our results suggest that a) not all bipolar patients show cognitive deficits, b) that state anxiety is surprisingly irrelevant, and c) that medication level might need to be controlled for.

Keywords: bipolar disorder, anxiety, cognition, memory, learning, neuroprogression

P-070
Sexual health and its correlates in individuals with mood disorders
Thomas D. Meyer¹, Ethan Lau², Nicholas P. Crist³, Erin Michalak¹, Elizabeth V. Cory¹, Andrew A. Nierenberg¹, Louisa G. Sylvia⁴

¹Department of Psychiatry & Behavioral Sciences, McGovern Medical School, University of Texas HSC, Houston, TX, USA
²Department of Psychology, Rice University, Houston, TX, USA
³Department of Psychiatry, University of British Columbia, Vancouver, Canada
⁴Massachusetts General Hospital, Harvard Medical School, Boston, MA, USA

OBJECTIVE: Depression is associated with decreased libido, and the opposite is true for (hypo)manias. Additionally, sexual dysfunctions are sometimes listed as potential side effects of medications. Surprisingly, not many studies have explored the satisfaction of, or sexual health in patients with mood disorders. Therefore, the aim of this project was to take a first step to gather information about how

Keywords: bipolar disorder, anxiety, cognition, memory, learning, neuroprogression
ABSTRACTS OF POSTER PRESENTATIONS

P-071 Cognitive function, depressive symptoms and psychological function in patients with major depressive disorder treated with antidepressants: A longitudinal analysis of PERFORM-J data

Tomoki Sumiyoshi1, Koichiro Watanabe2, Shinichi Noto3, Shigeru Sakamoto2, Yoshiya Moriguchi4, Lena Hammer Helmich5, Joelle Fernandez6

1Department of Preventive Intervention for Psychiatric Disorders, National Institute of Mental Health, National Center of Neurology and Psychiatry, Tokyo, Japan
2Department of Neuropsychiatry, Kyorin University School of Medicine, Tokyo, Japan
3Department of Health Sciences, Niigata University of Health and Welfare, Niigata, Japan
4Japan Medical Office, Takeda Pharmaceutical Company Limited, Tokyo, Japan
5Real World Evidence, H. Lundbeck A/S, Valby, Denmark

OBJECTIVE: To investigate longitudinal changes in cognitive function and depressive symptoms during 6 months of treatment with antidepressants in patients with major depressive disorder (MDD), and the impact of cognitive function on the risk of relapse of depressive symptoms using data from PERFORM-J, a prospective epidemiologic cohort study.

MATERIAL-METHODS: Japanese patients with MDD initiating new antidepressant monotherapy were followed for 6 months. Objective and subjective cognitive functions were assessed using the Digit Symbol Substitution Test (DSST) and Perceived Cognitive Deficit Questionnaire – depression (POQ-D), respectively. Depressive symptoms were assessed using the Montgomery Asberg Depression Rating Scale (MADRS). Psychosocial function was assessed using the Sheehan Disability Scale (SDS) and Work Productivity and Activity Impairment questionnaire (WPAI), while quality of life was assessed using the EuroQol-5 Dimension-5 Level (EQ-5D-5L).

RESULTS: Data were obtained from 518 patients. Mean scores at baseline and 6-month were 72.4 and 79.7 for DSST, 32.2 and 20.1 for PDQ-D, and 27.0 and 10.5 for MADRS, respectively. These results suggest significant improvement during treatment with antidepressants. The proportion of patients with a MADRS score of ≥20 was 78.6% at baseline and 18.4% at 6-month. Those with DSST score of 1 standard deviation or worse was 53.3% at baseline and 35.6% at 6-month. Larger PDQ-D score at 2-month was associated with higher SDS score and lower EQ-5D-5L score at 6-month. The relapse rates of depressive symptoms at 6-month were 5.7% and 3.5% in patients whose PDQ-D scores at 2-month were 0 to 10 and 31 to 80, respectively.

CONCLUSION: Antidepressant therapy for 6 months improved both depressive symptoms and cognitive function in MDD patients; however, objective and subjective cognitive function remained impaired in about one third of the cases. Patients with residual cognitive symptoms after 2 months administration of antidepressants tended to have a higher risk of relapse.

Keywords: Cognitive function, Depression, Psychosocial function, Quality of life
Keywords: melancholia, premorbid personality.

These results suggest that there is a certain personality deviation in temperament, depressive temperament and neuroticism scores. However, compared with HC, the MEL group had higher cyclothymic temperaments and neuroticism between MEL and NMEL subjects.

CONCLUSION: We found no significant differences in affective temperaments and personality traits of neuroticism between MEL (n=52) and NMEL (n=54) groups. The MEL group showed significantly higher cyclothymic temperament, depressive temperament and neuroticism scores compared to the HC group (p < 0.01). The NMEL group showed significantly higher cyclothymic temperament, depressive temperament, anxious temperament and neuroticism scores than the HC group (p < 0.01). The severity of depressive symptoms measured by PHQ-9 was not significantly different between MEL and NMEL.

CONCLUSION: We found no significant differences in affective temperaments and neuroticism between MEL and NMEL subjects. However, compared with HC, the MEL group had higher cyclothymic temperament, depressive temperament and neuroticism scores. These results suggest that there is a certain personality deviation in MEL patients.

Keywords: melancholia, premorbid personality.

P-074 Who benefits from standard antidepressants? Preliminary findings supporting a moral sentiment-task based functional MRI measure for personalising treatment

Dieke Fennema1, Philippa Harrison1, Gareth J Barker2

1Department of Psychological Medicine, Institute of Psychiatry, Psychology & Neuroscience, King’s College London
2Department of Neuroimaging, Institute of Psychiatry, Psychology & Neuroscience, King’s College London

OBJECTIVE: To provide the proof-of-concept for using fMRI to prospectively predict which major depressive disorder (MDD) patients will not benefit from selective serotonin-reuptake inhibitor (SSRI) antidepressant treatments.

MATERIAL-METHODS: Patients are recruited through a larger National Institute for Health Research-funded trial, “The Antidepressant Advisor: A decision support system for UK primary care – a feasibility study”. Eligible patients have at least moderately severe major depressive syndrome on the Patient Health Questionnaire-9 (score > 14) and are non-responders to at least two serotoninergic antidepressants in the current or previous episodes. The functional MRI is based on the so-called moral sentiment task, previously reported to predict subsequent recurrence risk in remitted MDD patients. Patients are shown short written statements describing actions counter to social and moral values described by social concepts in which the agent is either the participant (self-agency) or their best friend (other-agency). Stimuli are presented in an event-related design within which participants must decide whether they would feel “quite unpleasant” or “mildly unpleasant” about the imagined behaviours from their own perspective. This study pilots a shortened and optimised version.

RESULTS: Initial exploratory single subject-level analysis in SPM12 in a case series of n=8 patients with MDD provides support that the optimised, shortened, moral sentiment task can detect differences in blood-oxygen-level-dependent (BOLD) signal between the self- and other-agency conditions in our regions of interest, such as the subgenual cingulate cortex (threshold p-value = 0.05, uncorrected).

CONCLUSION: The preliminary findings confirm that the optimised, shortened, moral sentiment task can detect differences between self- and other-agency conditions. It shows selective activation in regions implicated in overgeneralised feelings of self-blame. The next step is to investigate whether anterior temporal-subsymbolic cingulate and anterior temporal-ventral striatal connectivity prospectively predicts who will fail to respond to another course of SSRI treatment based on these differences. Keywords: major depressive disorder, fMRI, biomarker, prediction, antidepressants.
P-075
The Antidepressant Advisor: A Decision Support System for UK primary care - a feasibility study

Phillippa Harrison¹, Diede Fennema¹, Ewan Carr², Kimberley Goldsmith², Allan Young¹, Mark Ashworth³, Barbara Barrett⁴, Roland Zahn¹

¹Department of Psychological Medicine, Institute of Psychiatry, Psychology & Neuroscience, King’s College London
²Department of Biostatistics & Health Informatics, Institute of Psychiatry, Psychology & Neuroscience, King’s College London
³School of Population Health and Environmental Sciences, King’s College London
⁴Department of Health Services & Population Research, Institute of Psychiatry, Psychology & Neuroscience, King’s College London

OBJECTIVE: To investigate the feasibility of a clinical trial in which the UK’s first decision support tool for antidepressant treatment is used compared to treatment-as-usual.

MATERIAL-METHODS: The study is a 14-week feasibility cluster-randomised trial of a computerised decision support system for antidepressant prescribing in UK primary care. The study aims to recruit 20 GPs from 20 different NHS GP practices across South London and 86 patients with Major Depressive Disorder from these GP practices. Participants attend GP appointments over 14 weeks to review their antidepressant treatment in which their GP uses the decision support tool or treatment as-usual to guide treatment decision-making. The decision support tool uses an algorithm that takes into account patient information to provide tailored recommendations for monotherapy based on NICE guidelines for the treatment of depression with antidepressants. Participants use a mobile app to track their symptoms and side effects for the duration of the study. The primary clinical outcome measure for future definitive trials and for estimating the effect size of the intervention effect is the Self-rated Quick Inventory of Depressive Symptomatology sum score (QIDS-SR16) at follow-up. Our main outcome measures are feasibility outcomes including recruitment rate and GP satisfaction, as well as adherence to the tool.
COMPANY PROFILES

ATAI Life Sciences

Address : Barer Straße 7, 80333 München
Phone : 917.974.1371
E-mail : Allan@ATAI.life
Web : ATAI.life
Contact person : Allan Malievsky

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COMPASS Pathways

Address : suite 301, 120 New Cavendish St, Fitzrovia, London W1W 6XX
Phone : +44 7813 777 919
E-mail : Amy@compasspathways.com
Web : https://compasspathways.com/
Contact person : Amy Lawrence

COMPASS Pathways is a life sciences company dedicated to accelerating patient access to evidence-based innovation in mental health. Founded in 2016, our first major initiative is developing psilocybin therapy through late-stage clinical trials in Europe and North America for patients with treatment-resistant depression. We are taking a new approach to mental health and are committed to developing care pathways and therapies that will help patients and their families, and ease the burden on healthcare systems. Backed by a team of leading experts in medicine, mental health, business, and academia, we put patients at the heart of everything we do.

LivaNova

Address : 1370 Montpellier Court, Gloucester Business Park, Gloucester, GL3 4AH
Phone : 07392 879157
E-mail : mark.glencorse@livanova.com
Web : www.livanova.com
Contact person : Mark Glencorse

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Address : Lundbeck Limited, 2nd Floor, Building 3, Abbey View, Everard Close, St Albans, AL1 2PS, United Kingdom
Phone : 01908 638 933
Email : anwm@lundbeck.com
Web : www.lundbeck.co.uk
Contact : Andy Masterson

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Sage Therapeutics, Inc.

Address : Dammstrasse 19, 6301 Zug, Switzerland
E-mail : info@sagerx.com
Web : https://www.sagerx.com
Contact person : Dominic Atkins

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Address : 15 Lyon Road, Merton, London, SW19 2RL
Phone : +44 20 8715 1812
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