EPP0956

Post-traumatic stress disorder after first-episode psychosis

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Introduction: A psychotic episode may be sufficiently traumatic to induce symptoms of post-traumatic stress disorder (PTSD), which could impact outcomes in first-episode psychosis (FEP). Yet, post-traumatic stress disorder is often left untreated and undiagnosed in the presence of psychosis.
Objectives: To conduct a short review of literature on the prevalence and impact of PTSD after FEP.
Methods: We performed a literature search on PUBMED, using the query: "Stress Disorders, Post-Traumatic" [Mesh] AND "first episode" AND "psychosis". We focused on data from systematic reviews, clinical trials and meta-analysis published on last 10 years, either in English or Portuguese.
Results: Approximately one in two people experience PTSD symptoms and one in three experience full PTSD, following a FEP. Prevalence may be higher in affective psychosis, inpatient samples and patients previously suffering from depression and anxiety. PTSD Symptom Scale – Self-Report (PSS-SR) can be a useful screening instrument, but there is no established evidence-based intervention for PTSD in people with FEP. Coercive intervention such as involuntary hospitalization, seclusion, restraint or being forced to take medication, as well as being around sick or anxious patients, can be upsetting and traumatizing.
Conclusions: Our data showed high rates of psychosis-related PTSD. To prevent PTSD, conditions of hospitalization should be optimized and the use of coercive treatments should be limited. Subjects with recent-onset psychosis should be screened for PTSD symptoms. Evidence-based interventions to treat PTSD symptoms in the context of FEP are needed to address this burden and improve outcomes.

Keywords: psychosis; first episode; post-traumatic stress disorder; trauma

Precision psychiatry

EPP0955

Vasopressin surrogate marker copeptin as a potential novel endocrine biomarker for antidepressant treatment response in major depression: A pilot study

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Introduction: Major depressive disorder (MDD) constitutes the leading cause of disability worldwide. Although efficacious antidepressant pharmacotherapies exist for MDD, only about 40-60% of the patients respond to initial treatment. However, there is still a lack of robustly established and applicable biomarkers for antidepressant response in everyday clinical practice.
Objectives: This study targets the assessment of the vasopressin (AVP) surrogate marker Copeptin (CoP), as a potential peripheral hypothalamic-level biomarker of antidepressant treatment response in MDD.
Methods: We measured baseline and dynamic levels of plasma CoP along with plasma ACTH and cortisol (CORT) in drug-naive outpatients with MDD before and after overnight manipulation of the hypothalamic-pituitary-adrenal (HPA) axis [i.e., stimulation (metyrapone) and suppression (dexamethasone)] on three consecutive days and their association with treatment response to 4 weeks of escitalopram treatment.
Results: Our findings suggest significantly higher baseline and post-metyrapone plasma CoP levels in future non-responders, a statistically significant invert association between baseline CoP levels and probability of treatment response and a potential baseline plasma CoP cut-off level of above 2.9 pmol/L for future non-response screening. Baseline and dynamic plasma ACTH and CORT levels showed no association with treatment response.
Conclusions: This pilot study provide first evidence in humans that CoP may represent a novel, clinically easily applicable, endocrine biomarker of antidepressant response, based on a single-measurement, cut-off level. These findings, underline the role of the vasopressinergic system in the pathophysiology of MDD and may represent a significant new tool in the clinical and biological phenotyping of MDD enhancing individual-tailored therapies.

Keywords: biomarker; hypothalamus-pituitary-adrenal (HPA) axis; antidepressant response; Depression

EPP0956

The influence of concentration of micro-rna hsa-mir-370-3p and CYP2D6*4 on equilibrium concentration of mirtazapine in patients with major depressive disorder

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Introduction: Mirtazapine is commonly prescribed to patients diagnosed with major depressive disorder.Some proportion of these patients do not show adequate response to treatment regimen containing mirtazapine, whereas many of them experience dose-dependent adverse drug reactions.
Objectives: The objective of our study was to investigate the influence of 1846G>A polymorphism of the CYP2D6 gene on the concentration/dose indicator of mirtazapine, using findings on enzymatic activity of CYP2D6 and on CYP2D6 expression level obtained by measuring the hsa-miR-370-3p plasma levels in patients suffering from recurrent depressive disorder.
Methods: Our study included 192 patients with major depressive disorder. Treatment efficacy was evaluated using the international psychometric scales. For genotyping and estimation of the microRNA plasma levels we performed the real-time polymerase chain reaction. The activity of CYP2D6 was assessed with HPLC-MS/MS method by the content of the endogenous

substrate of given isoenzyme and its metabolite in urine. Therapeutic drug monitoring has been performed using HPLC-MS/MS.
Results: We didn't reveal a statistical significance for concentration/dose indicator of mirtazapine in patients with different genotypes: (GG) 0.229 [0.158; 0.468] and (GA) 0.290 [0.174; 0.526], p = 0.196). We revealed the relationship between the CYP2D6 enzymatic activity and the hsa-miR-370-3p plasma concentration: rs = -0.32, p < 0.001. At the same time, correlation analysis revealed a statistically significant relationship between the mirtazapine concentration and the hsa-miR-370-3p plasma concentration: rs = 0.31, p<0.001.
Conclusions: Thus, the effect of genetic polymorphism of the CYP2D6 gene on the efficacy and safety profiles of mirtazapine was demonstrated in a group of 192 patients with recurrent depressive disorder.

Conflict of interest: Authors do not have any conflict of interests.

EPP0958

Anticipating transitions in mental health in at-risk youth: A large-scale diary study into early warning signals

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Introduction: Transitions in mental health, such as the onset or sudden progression of psychopathology, are difficult to foresee. If mental health behaves like other complex systems, drops in mental health may be anticipated by early warning signals (EWS), which manifest in the dynamics of time series data.
Objectives: This study aimed to establish the sensitivity and specificity of EWS as personalized risk markers for sudden drops mental health.
Methods: Individuals (N=122, mean age 23.6 ±0.7 years, 57% males) at increased risk for psychopathology completed daily questionnaires on mental states for six consecutive months. Transitions in mental health were identified by change point analyses. EWS, operationalized as rising trends in the autoregressive coefficient of 36 negative mental states, were identified using generalized additive models.
Results: EWS were found for 59% of individuals with a drop in mental health, and for 47% without such a drop (sensitivity: 0-.12; specificity: .88-1). There were considerable individual differences in the prevalence, strength, and timing of EWS.
Conclusions: EWS might be informative of impeding transitions, yet they are also highly conservative. Present findings may inspire future research into the prerequisites for detecting EWS in the context of mental health, for instance with respect to the stability of pre- and post-transition phases, the magnitude of transitions, and the timescale at which EWS manifest. An improved understanding of the dynamics that govern psychopathology could ultimately allow us to determine whether a specific individual at a specific moment in time is at risk for a sudden onset or progression of mental health problems.

Keywords: diary study; complex systems; transdiagnostic psychopathology; early warning signals

EPP0959

Clozapine point of care testing in acute psychiatry: A precision approach to treatment resistant psychosis

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Introduction: Clozapine, the antipsychotic of choice for treatment-resistant schizophrenia, has a narrow therapeutic range and high interpatient variability in the dose-response relationship. Serum clozapine levels are essential both for therapeutic dosing and to monitor adherence. Use of venepuncture and prolonged result turnaround times with standard laboratory based methods for drug monitoring together contribute to the suboptimal use of clozapine.
Objectives: A novel portable point-of-care (POC) device has been developed to measure whole blood clozapine concentrations using an automated homogenous immunoassay. It is as accurate and reliable as standard laboratory methods but only requires a drop of blood obtained by finger prick and can produce a result in minutes. We pioneered clozapine POC testing in the acute inpatient setting during the outbreak of the COVID-19 pandemic.
Methods: We report on the use of POC clozapine testing in the management of 4 acutely psychotic patients with treatment resistant schizophrenia.
Results: POC testing offered a more practical, less invasive and quicker alternative to conventional methods for monitoring of clozapine levels. Near immediate availability of clozapine levels expedited clinical decisions and helped ensure safe clozapine prescribing to severely unwell patients in a time of crisis. By facilitating patients' early safe discharge from hospital, clozapine point of care testing also reduced length of hospitalisation.
Conclusions: Point of care monitoring of other psychotropic medications in addition to clozapine brings about the prospect of personalised precision medicine for patients with severe mental illness, both in the acute setting and in the community.

Keywords: clozapine; Point of care antipsychotic monitoring; Inpatient psychiatry; schizophrénia

EPP0961

Phenomenological experience personality profile: A test to identify the affective dimensions of psychopathology in the context of precision psychotherapy.

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Introduction: Artificial intelligence algorithms are increasingly used to highlight refined qualifiers of pathologies and to build