and the Fondo Europeo de Desarrollo Regional (FEDER),, A. Martinez-Aran: None Declared, E. Vieta Grant / Research support from: Spanish Ministry of Science and Innovation (PI18/00805, PI21/00787) integrated into the Plan Nacional de I+D+I and cofinanced by the ISCIIISubdireccio´n General de Evaluacio´n and the Fondo Europeo de Desarrollo Regional (FEDER); the Instituto de Salud Carlos III; the CIBER of Mental Health (CIBERSAM); the Secretaria d'Universitats i Recerca del Departament d'Economia i Coneixement (2017 SGR 1365), the CERCA Programme, and the Departament de Salut de la Generalitat de Catalunya for the PERIS grant SLT006/17/00357; the European Union Horizon 2020 research and innovation program (EU.3.1.1. Understanding health, wellbeing and disease: Grant No 754907 and EU.3.1.3. Treating and managing disease: Grant No 945151)., B. Sole: None Declared

EPP0556

Lithium management around delivery: a retrospective observational cohort study

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doi: 10.1192/j.eurpsy.2024.673

Introduction: During the perinatal period lithium is proven effective as maintenance therapy and to prevent postpartum psychosis. Pregnancy affects all aspects of kidney physiology altering the pharmacokinetics of lithium. To minimize the risk of both maternal and neonatal complications around delivery, several authors have provided clinical advice on lithium dosing around delivery: decreasing dose by 30-50%, suspend lithium therapy 24-48 hours before scheduled cesarean section or induced delivery or even discontinuing lithium after first signs of labour.
Objectives: To evaluate the validity of these recommendations by investigating 1) maternal lithium serum concentrations changes around delivery, 2) the lithium trasplacental passage at delivery and 3) the association between neonatal lithium serum concentration at delivery and neonatal outcomes.
Methods: Psychopathologically stable women with a singleton pregnancy (n=66) who used lithium around delivery, were included in this retrospective observational cohort study (HCB/2020/1305). All women were advised to suspend lithium administration at the onset of labour in the event spontaneous deliveries. Study date: demographic, psychiatric, obstetric and neonatal outcomes for each mother-infant pair obtained from the hospital medical records.Lithium serum concentrations were determined by means of an AVL 9180 electrolyte analyzer based on the ion- selective electrode (ISE) measurement principle. Limit of quantification (LoQ) was 0.20 mEq/L.
Results: The most common psychiatric diagnosis was a bipolar disorder type I (n=54, 90%). Forty mothers (61%) were on lithium monotherapy. Mean (SD) umbilical cord and intrapartum maternal lithium serum concentration was 0.59 (0.13) mEq/L and 0.55 (0.13) mEq/L respectively. There was a strong positive correlation between umbilical cord and maternal lithium serum concentrations (Pearson correlation coefficient 0.95 (95%IC: 0.91,0.97). In a subsample (N=22) a paired t test indicates that the maternal serum lithium concentrations at delivery were significantly lower (mean difference=0.19 mEq/L, 95%CI=0.13-0.25) than those during obtained the day before delivery hospitalization, after a mean (SD) of 31.29 (±11.92) hours (SD=11.92) have elapsed since the taking the last dose of lithium prior to delivery. Four women (6%) relapsed early postpartum.There were no significant differences between lithium monotherapy (N=18/40) and polytherapy (N=11/26) groups with regard to acute neonatal complications (p>0.05). The only acute neonatal complication associated to umbilical cord lithium serum concentration was hypotonia [0.712 (0.298) vs. 0.534 (0.214) (F=5.065; df=1,60; p=0.028)].
Conclusions: When lithium is used around delivery, maternal and neonatal well-being can be maximized by maintaining maternal serum lithium concentrations at the minimal effective level and discontinuing briefly when presenting to hospital for delivery.

Disclosure of Interest: None Declared

EPP0557

Cortisol awakening response in bipolar patients with comorbid type 2 diabetes mellitus

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doi: 10.1192/j.eurpsy.2024.674

Introduction: Bipolar Disorder (BD) is a severely debilitating psychiatric disorder with high rates of morbidity and mortality, and patients with BD have a 10-year reduction in their life expectancy. Bipolar disorder (BD) is frequently associated with type 2 diabetes mellitus (T2DM). BD patients with comorbid T2DM have been shown to have three times higher odds of a chronic course and rapid cycling and are more likely to present worse outcomes to treatment with lithium and/or other mood stabilisers when compared to BD patients without IGM (impaired glucose metabolism).
Objectives: The functioning of the hypothalamic-pituitary-adrenal (HPA) axis has been never investigated in BD with respect to the glucose metabolic status. Therefore, we assessed the cortisol awakening response (CAR) in bipolar patients with or without comorbid T2DM.
Methods: Twenty euglycemic bipolar patients [12 males and eight females; mean age (±SD): 47.4 ± 14.4 years; mean (±SD) duration of illness: 18.3 ± 12.1 years], 16 BD patients with T2DM [11 males and five females; mean age (±SD): 63.6 ± 12.8 years; mean (±SD) duration of bipolar illness: 17.1 ± 10.8 years; mean (±SD) duration of T2DM: 5.2 ± 5.3 years], 18 healthy subjects [seven males and 11 females; mean age (±SD): 45.0 ± 12.1 years] and 12 non-psychiatric subjects with T2DM [eight males and four females; mean age (±SD): 56.7 ± 11.2 years; mean (±SD) duration of

T2DM: 5.2 ± 3.5 years] were recruited. Saliva cortisol was measured at awakening and after 15, 30, and 60 min.
Results: With respect to both healthy controls and controls with T2DM, euglycemic and diabetic BD patients exhibited a CAR occurring at significantly lower levels. No significant difference emerged in the CAR between the two groups of bipolar patients. Controls with T2DM had an overall post-awakening cortisol production significantly higher than healthy controls.
Conclusions: Our results show that the CAR of patients with BD is reduced in terms of overall cortisol production but normal in terms of cortisolo reactivity independently from the occurrence of comorbid T2DM. The dampened CAR points to a tuning down of the functioning of the HPA axis in both euglycemic and diabetic BD patients, which may be a factor of vulnerability, since a preserved HPA axis functioning is essential to deal with stressors, which may precipitate affective episodes

Disclosure of Interest: None Declared

EPP0558

Endogenous phenotype of diagnostic transition from major depressive disorder to bipolar disorder: a prospective cohort study

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doi: 10.1192/j.eurpsy.2024.675

Introduction: This study investigated sensor-level electroencephalography (EEG) power and related source-level cortical activity using resting-state EEG in patients with MDD and BD.
Objectives: This study aims to comparing bipolar disorder (BD) and major depressive disorder (MDD) to understand neuropathology of these disorders.
Methods: A total of 68 patients with MDD were enrolled and recorded EEG. Among patients with MDD, 17 patients with MDD converted to BD during the study periods. Clinical symptoms and EEG measures were compared between two groups. This study applied machine learning to differentiate the two groups using sensor and source-level features
Results: At the sensor level, patients with BD showed higher power of AF3 channel in the theta beta band(p=0.011) and FC5 channel in the low alpha band(p=0.014), compared to MDD. At the source-level, compared to MDD, patients with BD showed higher activity in the right anterior cingulate(p=0.011) and left parahippocampal gyrus(p=0.035). The best classification performance for MDD and BD showed an accuracy of 80.88%, a sensitivity of 76.47%, and a specificity of 82.35% based on theta and low alpha band power and activity features.
Conclusions: Our findings might suggest different theta and low alpha band activity between patients with BD and MDD might serve clinically as a candidate neuromarker for differentiating two distinct mood disorders.

Disclosure of Interest: None Declared

Child and Adolescent Psychiatry

EPP0560

Assessing the dimensions of psychological (in) flexibility in adolescence: Validation of the Portuguese Version of the Multidimensional Psychological Flexibility Inventory - short form

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doi: 10.1192/j.eurpsy.2024.676

Introduction: Psychological Flexibility (PF) is a complex and extensively studied concept within the Acceptance and Commitment Therapy (ACT) framework. PF denotes one's capacity to effectively navigate psychological distress and challenges while aligning one's actions with deeply held values. Given its association with mental health and overall well-being, it is crucial to develop assessment tools able to capture the various facets of flexible behaviour and design strategies for its enhancement.
Objectives: To adapt the Portuguese version of the Multidimensional Psychological Flexibility Inventory (MPFI-24; Grégoire et al., 2020) for the adolescent population.
Methods: The study involved 269 adolescents aged 12 to 18 years old. Participants completed a set of self-report instruments, including the MPFI24-A, the Depression, Anxiety, and Stress Scales-21 (DASS-21), Mental Health Continuum - Short Form (MHC-SF), and the PsyFlex-A, which also assesses PF. A subsample also completed the MPFI24-A four weeks later to assess test-retest reliability.
Results: Two models, specifically the six-factor correlated model and the bifactor model, emerged as presenting the best fit when analysing data separately for the Flexibility and Inflexibility indices. The MPFI24-A demonstrated good reliability for both overall scores (α = .90 and α = .85, respectively) and good test-retest reliability. The PF index showed significant positive associations with PsyFlex-A scores, perceived mental health, and a moderate negative association with depression and anxiety. Conversely, the Psychological Inflexibility (PI) index presented the opposite association pattern with these variables and showed no significant correlation with PF as measured by the PsyFlex-A. The two indices of the MPFI24-A demonstrated a weak positive correlation. Significant differences between boys and girls were found for the PF index, with boys showing higher scores. No significant differences were found between boys and girls concerning the PI index.
Conclusions: Results suggest that the MPFI24-A is a reliable and valid instrument for assessing adolescents' psychological flexibility and inflexibility competencies. Although further clarification of the MPFI24-A factor structure and the utility of different factors is warranted, the findings support its overall applicability.

Disclosure of Interest: None Declared