Disord 2014; 16(5):471-7). Several clinical factors may influence illness trajectories, including the number of episodes and hospitalizations, the presence of comorbidities, stressful life events and familiarity for psychiatric disorders (Post. *Braz J Psychiatry* 2020;42(5):552-557). Trying to better define such progression, several authors conceptualized different staging models for BD, each one emphasizing different aspects of illness.

Objectives: In the present study, we focused on the Kupka & Hilleghers staging model, owing to its favorable ratio between the number of classes and transitions (Kupka & Hilleghers. *Tijdschr Psychiatr* 2012; 54(11):949-956). The aim was to investigate the transition of a sample of 100 BD patients through the different stages of illness across 10 years of observation, analyzing the potential role of clinical variables on the risk of illness progression.

Methods: Clinical stages of 100 BD patients (53 BDI and 47 BDII) were retrospectively assessed according to the model proposed by Kupka & Hilleghers at four time points: T0 (2010), T1 (2015), T2 (2018) and T3 (2020, at inclusion). Multistate Model using the mstate package in R and Markov model with stratified hazards were used for statistical analysis, to assess transition intensities across illness stages and the potential role of clinical variables on the risk of progression.

Results: A significant stage progression emerged during the observation period (Figure 1). More in detail, high hazard of transition from stage 2 to stage 3 was observed (Figure 2). A significant effect on the transition rate from 3 to 4 was found for higher number of affective episodes lifetime (> 3 episodes) (p=0.03) and for elevated predominant polarity (p=0.01). Overall, the average time subjects spent in stage 0 was 30.8 years and for stage 1 was 0.78 years. After BD onset, patients spent an average of 0.78 years in stage 2, 6.21 years in stage 3 and 2.23 in stage 4.

Image:

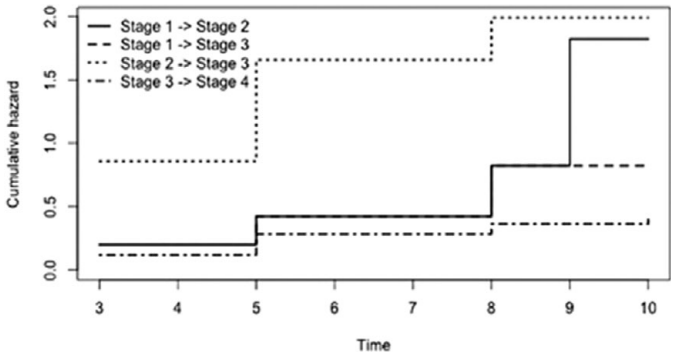
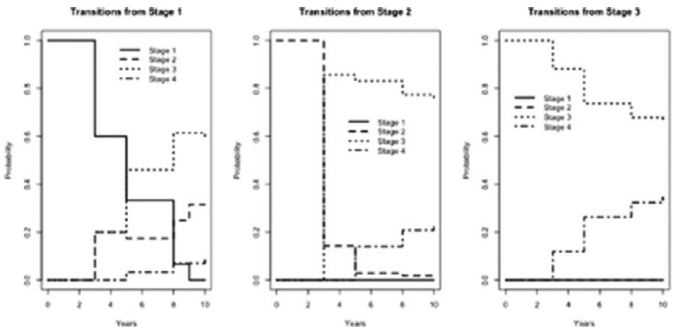


Image 2:



Conclusions: Present preliminary results confirm the progressive nature of the disorder. An increased risk of transition across stages emerged for patients with higher number of episodes lifetime and with elevated predominant polarity, confirming the need of improving timing and accuracy of diagnosis and therapeutic interventions. Further studies are warranted with the aim of define a universal staging model for BD.

Disclosure of Interest: None Declared

EPP0926

The impact of obesity and metabolic syndrome on clinical and cognitive parameters in bipolar disorder: Results from the BIPFAT/BIPLONG study

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Introduction: Patients with bipolar disorder have a hig risk of becoming overweight and obese, associated with an increased risk of somatic diseases and premature mortality. The Austrian BIPFAT/BIPLONG study aims at investigating lipid metabolism, psychosocial functioning, and cognitive parameters in bipolar disorder (BD).

Objectives: The aim was to investigate to what extent overweight, obesity and metabolic syndrome (MetS) are associated with clinical symptoms (e.g. suicidality, depressive symptoms) and cognitive factors (attention, memory, executive function) in BD.

Methods: In addition to anamnestic interview and psychological tests, all participants were tested with a neuropsychological test battery including the Trail Making Test A/B, the Stroop Color and Word Interference Test, the d2 Test of Attention Revised, Digit Span, Digit-Symbol-Test, and the California Verbal Learning Test. Additionally, body mass index (BMI) and variables defining MetS including waist circumference, serum triglycerides, high-density lipoprotein, blood pressure, and fasting glucose levels have been collected in DSM-5 diagnosed patients with BD and healthy controls.

Results: In our Austrian bipolar cohort (n=290), the median BMI was 27.9 (SD=5.9), 30.5 % of the patients were overweight (BMI = 25.5-29.9) and 24.6% of the patients were obese (BMI ≥ 30.0). In the control group (n=183), the median BMI was 24.5 (SD=4.8), 15.2% were overweight and 8.0% were obese. A sub-analysis in 215 patients showed that compared to overweight patients, normal weight patients showed more suicidal ideation in psychiatric history ($\chi 2(2)=7.97$, p=.019). In addition, there was a significant association between suicidal ideation and glucose (r=.15, p=.043) and cholesterol (r=−.17, p=.028). In another sub-analysis with 148 euthymic bipolar patients, we found a high prevalence of MetS in patients with BD (30.4% versus 15.4% in healthy controls) associated with impaired executive function compared to patients without MetS or healthy controls with and without MetS (p=.020). Clinical variables (illness duration, suicidality, number of affective episodes, medication, age of onset, and history of psychosis) did not

relate to MetS in BD (p > .05). A longitudinal analysis in 52 patients (35 without MetS and 17 with MetS) did not find an association of MetS on the one-year trajectory of cognitive decline in BD. In contrast, high baseline BMI predicted a decrease in the patient's performance in working memory in the 12-months observation period.
Conclusions: The BIPFAT/BIPLONG study demonstrated a high prevalence of overweight, obesity and MetS in bipolar patients with adverse effects on cognitive function. Clinical variables such as suicidality were not related to the presence of obesity or MetS. Clinical impact and further (unpublished) results will be presented.

Disclosure of Interest: None Declared

EPP0927

What do we know about lithium associated hypercalcemia?

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Introduction: Lithium associated with hypercalcemia may mimic a psychiatric condition and be confused for a relapse of bipolar disorder. The etiology seems to be due to a reduced sensitivity of the parathyroid cells to calcium, altering the parathyroid hormone (PTH) response. Lithium as an essential monovalent cation has some structural similarity to calcium (Ca) and can interact with protein receptors. This leads to changes in the inhibitory configuration of PTH and increased serum calcium concentrations, rising the threshold necessary to suppress hormone secretion.
Lithium-induced hyperparathyroidism (HIL) is the main cause of hypercalcemia in these patients.
Objectives: Based on a clinical case of lithium-associated hypercalcemia in a patient with bipolar disorder, review the existing literature and state the needs for periodic monitoring protocols.
Methods: Case report and bibliographical review.
Results: A 38-year-old woman, diagnosed with bipolar affective disorder at the age of 18, has been treated with lithium during which she developed secondary tubulointerstitial nephropathy as an adverse effect. Recently, she requested medical evaluation for constitutional syndrome associated with deterioration of general condition with loss of strength and difficulty in walking. Analytically, mild hypercalcemia was detected, and the study was extended to include Ca and PTH.
Chronic lithium therapy often develops mild hypercalcemia (approximately 10 to 20 percent of patients taking lithium), most likely due to increased secretion of PTH. Lithium can also unmask previously unrecognized mild hyperparathyroidism in patients with adenomas within a few years of starting therapy or induce parathyroid hyperplasia with a chronic use.
The hypercalcemia usually, but not always, subsides when the lithium is stopped. Normalization of serum calcium is more likely to occur one to four weeks post-lithium withdrawal in patients with a relatively short duration of lithium use. It is less likely in patients receiving lithium for more than 10 years.
Regarding the case to be presented, a review of the literature is carried out and the need to propose periodic calcium monitoring protocols is exposed.
Conclusions: Recommendations include determination of serum calcium every 6 months, urinary calcium and creatinine every 12 months, and bone mineral density monitoring every 1 to 3 years. Regular analytical monitoring including total calcium, PTH and vitamin D, would identify patients with a tendency to hypercalcemia so that appropriate measures could be taken. So as chronic treatment with lithium can develop mild hypercalcemia, I consider it necessary to develop periodic monitoring protocols for this adverse effect.

Disclosure of Interest: None Declared

EPP0928

Multivariate network meta-analysis of pharmacological interventions for the treatment of acute bipolar mania: a bayesian approach using lognormal prior distribution

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Introduction: Conventional Bayesian network meta-analysis (NMA) of multiple outcomes are performed using non-informative prior distribution, independently for each outcome.
Objectives: This study aimed to estimate pharmacological intervention effects against placebo within a multivariate Bayesian framework using an informative lognormal prior distribution.
Methods: 13,188 participants were evaluated for two dichotomous study outcomes, namely, treatment response and all-cause dropouts, in 57 double-blinded randomized controlled trials (RCTs) for the treatment of acute bipolar mania (ABM) in adults. Both the study outcomes were measured from baseline to week 3. 10 pharmacological drugs or interventions consisted of mood stabilizers, antipsychotics, antidepressants, combinations of the above and other agents, and were compared against each other as well as with placebo either as monotherapy or add on agents. These treatments include placebo, aripiprazole, haloperidol, quetiapine, ziprasidone, olanzapine, divalproex, paliperidone, carbamazepine, lithium; and lamotrigine. Aggregated arm-based data on both the study outcomes were considered. We used the *logit* scale to model the probability of event occurrence and adopted multivariate modelling approach; wherein both the study outcomes were included in a single NMA model. Further, the between-study variance-covariance matrix was decomposed using the Cholesky and spherical decomposition techniques and the results were compared. The deviance information criterion (DIC) indices were used to assess the model fit. Analyses included 16,00,000 Markov Chain Monte Carlo (MCMC) iterations with 6,00,000 burn-in period and thinning of 100; tested by running three chains with different starting values. All the analyses were carried out in WinBUGS software.
Results: Under Cholesky and spherical decompositions, the correlation between the study outcomes were estimated as -0.51 (-0.68, -0.29) and -0.56 (-0.68, -0.50), respectively. DIC model fit index values for Cholesky and spherical decompositions were 667.74 and