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Introduction: Oxidative stress is the main characteristic of several diseases including Bipolar Disorder (BD). The involvement of oxysterol derivatives has recently been reported. In this study, the involvement of oxidative stress in the alteration of cholesterol in PTB patients will be evaluated.
Objectives: To assess the association of oxidative stress and oxysterol profiles in subjects with BD and compare them to healthy physical and mental controls.
Methods: This is a case-control study involving subjects with BD. Selected based on DSM-5 criteria, an assessment of positive and negative symptoms was performed using the Positive and Negative Syndrome Scale (PANSS). Controls included in this study were matched to patients by age and gender. For all patients and control. Eight parameters of oxidative status were assessed: plasma ferric reducing capacity (FRAP), carbonyl proteins (PC), protein products of advanced oxidation (AOPP), reduced glutathione (GSH), total thiols, malondialdehyde (MDA), glutathione peroxidase activity (GSH-Px) and catalase activity (CAT) analyzed by colorimetric methods. In addition, six cholesterol derivatives: oxysterols are measured by ULPC MS/MS.
Results: This study included 33 patients with BD and 40 controls. Plasma GSH levels were significantly reduced in patients compared to controls ($p < 0.001$). Moreover, MDA, AOPP, PC and GSH-Px activity were significantly increased in patients compared to controls (p=0.005; p=0.003; p<0.001 and p=0.05, respectively). Significantly higher levels were observed for cholestane-3β, 5α, 6β-triol, 27-hydroxycholesterol (27-OHC), and cholestanol in patients with PTB. The concentration of 24(S)-hydroxycholesterol (24-OHC) was significantly lower in patients compared to controls. 25-OHC was positively and significantly correlated with CAT and GSH-Px activities (p=0.035 and p=0.010). 27-OHC was negatively and significantly correlated with MDA (p=0.014). Binary logistic regression revealed an association between the parameters: 27-OHC, 24-OHC, PC and MDA and the occurrence of PTB (OR = 1.007, 95% CI= 1.002-1.013), (OR = 0.956; 95% CI = 0.927 – 0.986), (OR = 39.925; 95% CI = 1.101 – 44.483) and (OR = 4.238; 95% CI = 1.091 – 16.466), respectively.
Conclusions: Our data support the relationship between disruption of redox homeostasis and oxidation of lipids and cholesterol in BD.

Disclosure of Interest: None Declared

EPP0532

Coping strategies in bipolar patients: A comparative study with siblings and healthy controls

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Introduction: Data regarding coping strategies used by bipolar patients to deal with psychosocial stress and their consequences in adaptational outcomes are scant. Moreover, family studies have reported the presence of several similarities between bipolar patients and their relatives regarding genetics, biology, personality traits, temperaments and stressful lived life experiences. Bipolar patients and their siblings had significantly higher global score of life events and more events in the field of work, socio-family events and health than control subjects. This might suggest that patients with bipolar disorder would be distinguished from their family members by the coping strategies they use to deal with stress.
Objectives: In this study, we aimed to compare perceived stress and coping strategies of remitted bipolar I patients with those of their siblings and controls.
Methods: A descriptive and comparative study of case-control type was conducted. Were included 46 bipolar I patients, 46 siblings and 50 controls. The three groups were matched for age and sex. Assessments of perceived stress and coping strategies were performed using the 10-item Perceived Stress Scale (PSS) and the 28-item Brief COPE respectively.
Results: Mean age of bipolar I patients was 39 ± 13 years. Thirty-one patients (67%) reported family history of one or more psychiatric disorders.Mean duration of bipolar disorder was 11.83 ± 9.92 years.
There was no significant difference between the three groups on PSS scores. Bipolar patients and siblings were more likely to use emotion-focused coping strategies than controls (**p=0.001**). Controls used problem-focused coping strategies more than bipolar patients (**p = 0.02**). Compared to controls, bipolar patients were less likely to use active coping and planning, but they showed higher scores in the dimensions of humor, religion and behavioral disengagement with intergroup p value: **0.02; 0.019; 0.002** respectively.
Conclusions: Our findings suggest that bipolar I patients were more likely to use maladaptive coping strategies to deal with stress than their siblings. Based on this observation, it seems advisable to study coping strategies used by bipolar patients, in order to reinforce adaptive strategies and to reduce maladaptive ones.

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Gut permeability and low-grade inflammation in bipolar disorder

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Introduction: Systemic inflammation has been increasingly related to bipolar disorder -BD- (Tanaka et al. Neurosci Res 2017;115