EPP0432

Plasma concentrations of IL-8, IFN-γ and IL-1β in schizophrenia patients with subgroup analysis of first episode drug naïve patients

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Introduction: Increased plasma concentrations of proinflammatory cytokines are found in chronic schizophrenia patients, patients with first episode and in individuals with high risk for psychosis. The most replicated findings are increased concentrations of IL-6, TNF-α and IL-1β through different phases of the disorder while the results for two important proinflammatory cytokines IL8 and IFN-γ were not consistent.
Objectives: Primary objective of this study was to assess differences in concentrations of IL-8, IFN-γ and IL-1β between schizophrenia patients and healthy controls, Secondary objective was to explore differences in first episode drug naïve patients.
Methods: We measured plasma concentrations of IL-8, IFN-γ and IL-1β in 64 healthy controls and 64 schizophrenia patients during acute exacerbation and remission phase. 25% were drug naive first episode schizophrenia patients. The patients were matched by age, sex and body mass index and exclusion criteria included obesity class 2 or higher, any concomitant organic mental or neurological disorder, acute or chronic inflammatory disease, and use of immunomodulatory drugs or psychoactive substances.
Results: Levels of IL-8 were significantly lower in patients with schizophrenia in acute phase and remission compared to healthy controls (p=0,009 for acute phase and p=0,020 for remission). There was no significant difference in the levels of INF-γ and IL-β between schizophrenia in acute phase and remission and healthy controls (p>0,05). In schizophrenia patients there was no difference in the levels of INF-γ, IL-β and IL-8 between acute phase, remission and healthy controls (p>0,05). There was no difference in plasma levels of IL-8, IFN-γ and IL-1β between first episode drug naïve and previously treated schizophrenia patients.
Conclusions: Our research did not find disturbance of plasma levels of IFN-γ and IL-1β in schizophrenia patients, although the increase of IL-1β was the most replicated finding up to date. Interestingly and contrary to expected the finding of significantly decreased levels of IL-8 in schizophrenia patients requires further research since IL-8 plays a vital role in the inflammatory pathway and may be implicated in cognitive dysfunction.

Disclosure of Interest: None Declared

EPP0433

Association of anti-thyroid autoantibodies with neuropsychiatric features in patients with affective and schizophrenia spectrum disorders

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Introduction: A growing body of evidence has shown the association between autoimmune thyroiditis and mental illness (Rege *et al.* AUS N J S Psychiatry 2013; 300 141-154). Identifying the neuropsychiatric features associated with thyroid antibody positivity could have significant implications for diagnostic and therapeutic strategies. However, the link between anti-thyroid antibodies and precise underlying pathophysiology requires future research.
Objectives: The aim of the present study was to conduct a retrospective evolution in patients diagnosed with schizophrenia spectrum disorder and affective disorder who were screened for anti-thyroid antibodies at the time of their hospitalization and to investigate neuropsychiatric features of anti-thyroid antibody-positive patients.
Methods: A total of 143 inpatients diagnosed with schizophrenia spectrum disorders and affective disorders between 2021 and 2023 were screened for anti-thyroid antibodies such as thyroid peroxidase (TPO) and thyroglobulin (TG). All patients were women. In order to elucidate the subsequent neuropsychiatric clinical features of individuals with positive anti-thyroid antibodies, the retrospective examination was conducted based on Neuropsychiatric Invetory-Q (NPI-Q) and DSM-V diagnostic criteria utilized at the time of hospitalization.
Results: The main age of the patients was 48.2 (SD 10.4). A total of 143 inpatients with schizophrenia spectrum disorders and affective disorders were screened for anti-thyroid antibodies at the time of their hospitalizations. %23.1 (n=33) tested positive for at least one of the anti-TG or anti-TPO. All patients were euthyroid. The neuropsychiatric diagnoses are shown in Table 1. The most common neuropsychiatric features assessed by NPI-Q are shown in Table 2. 12.1% (n=4) of all patients were treated with IV steroid Pulse therapy.

Table 1. Neuropsychiatric syndrom-level diagnostic patterns according to DSM-V

	Patients with positive thyroid autoantibodies (n=33)
Manic syndrome	10 (30.3%)
Psychotic Syndrome	19 (57.6%)
Depression syndrome	5 (15.2%)
Catatonia	10 (30.3%)
Exited	6 (18.2%)
Stuporus	2 (6.1%)
Fluctuating	2 (6.1%)

Table 2. The most common clusters of Neuropsychiatric features

NPI-Q	Positive Thyroid Autoantibodies (n=33)
Delusion	15 (45.4%)
Agitation/Aggression	14 (42.4%)
Irrıtability	14 (42.4%)
Motor abnormality	14 (42.4%)
Sleep disorder	15 (45.4%)
Appetite/Eating	14 (42.4%)

Conclusions: In particular, in a subset of schizophrenia spectrum disorder or affective disorder patients with positive anti-thyroid antibodies may indicate autoimmunity, especially in cases where catatonic symptoms dominate the clinical presentation.

Disclosure of Interest: None Declared

EPP0434

Features of the spectrum of immune markers in patients with juvenile depression with clinically high risk of psychosis

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Introduction: Identification of biomarkers associated with the risk of psychosis manifestation in juvenile patients with depression may contribute to a better understanding of the pathogenesis of mental disorders and early diagnosis.
Objectives: To determine the level of pro-inflammatory and anti-inflammatory cytokines and other inflammatory indicators in the plasma of juvenile patients with depression and clinically high risk of psychosis, and to study the correlation of these markers with the severity of psychopathologic symptoms.
Methods: 80 young men aged 16-24 years with the first depressive episode (F32.1-2, F32.38, F32.8) were examined. Based on the severity of attenuated psychotic symptoms (APS) in the structure of depression according to the SOPS scale, all patients were divided into two groups - with clinically high risk of psychosis (n=58) and with depression without APS (n=22). The HDRS-21 and SANS scales were also used for psychometric assessment. Serum level of cytokines TNF-α, IL-6, IL-8, IL-10, TNF-α/IL-6 ratio, TNF-α/IL-10 ratio, leukocyte elastase (LE) and α1-proteinase inhibitor (α1-PI) activity, C-reactive protein (CRP) concentration, and the level of autoantibodies to S-100B protein were determined.
Results: Both groups of patients showed a high level of inflammation assessed by LE and α1-PI activity (p>0.05). Significantly higher level of IL-6 (p=0.03), CRP concentration (p=0.026) and TNF-α/IL-10 ratio (p=0.032) were found in patients with clinically high risk of psychosis. This group was also characterised by high level of autoantibodies to the S-100B protein compared to patients with depression without APS (p=0.048).
In the high clinical risk group, correlations were found between the SOPS positive subscale score and the level of TNF-α (R=0.32, p=0.017), IL-8 (R=-0.3, p=0.034), TNF-α/IL-6 ratio (R=0.30, p=0.021) and TNF-α/IL-10 ratio (R=0.32, p=0.014). The SOPS negative subscale score correlated with CRP concentration (R=0.3, p=0.043). The SOPS total score correlated with TNF-α/IL-10 ratio (R=0.31, p=0.021). In this group of patients, the level of IL-10 was found to correlate with the duration of the disease (R=0.48, p<0.001). In patients with depression without APS, the level of IL-6 was correlated with the severity of depression according to the HDRS scale, and the level of TNF-α was associated with the duration of the depressive episode (R=0.51, p=0.029).
Conclusions: The obtained results confirm the involvement of inflammation in the development of juvenile depression. Qualitative and quantitative characteristics of the spectrum of immune markers and the cytokine profile, and correlations with the severity of psychopathologic symptoms were revealed in patients with clinically high risk of psychosis.

Disclosure of Interest: None Declared

EPP0435

Immunological predictors of rhythmic transcranial magnetic stimulation (rTMS) efficiency in patients with treatment-resistant schizophrenia

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Introduction: Model and clinical studies demonstrate the efficiency of rhythmic transcranial magnetic stimulation (rTMS) in diseases associated with neuroinflammation. The therapeutic potential of rTMS is related to modulation of neuroplasticity in the CNS, activation of neurogenesis and reduction of neuroinflammatory processes. Presumably, one of the factors that determines the efficiency of rTMS can be the features of the immune status of patients.
Objectives: To reveal the features of the spectrum of inflammatory markers in patients with treatment-resistant schizophrenia with different efficiency of rTMS.
Methods: 31 male patients aged 16 to 47 years (mean age 29.9 ± 8.4 years) with treatment-resistant schizophrenia who developed a first psychotic episode in adolescence (19-25 years) were examined. The course of rTMS was conducted for 3 weeks (15 sessions). Depending on the dynamics of clinical and psychometric parameters after the course of rTMS, the patients were divided into three groups: group 1 - with worsening of clinical condition (n=8); group 2 - without therapeutic effect (n=12); group 3 - with good therapeutic response (n=11). Before rTMS, leukocyte elastase (LE) and α1-proteinase inhibitor (α1-PI) activity, and the levels of autoantibodies to S-100B protein and myelin basic protein (MBP) in the plasma of patients were determined. The parameters of 18 healthy male donors without clinical signs of psychiatric and somatic pathology were used as controls.