

EPP0261

Structural abnormalities of choroid vasculature in first-episode psychosis

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Introduction: The eye is considered as a part of the central nervous system and a window of the brain. The eye and the brain, also their microvascular system, share many common features in terms of anatomy and pathophysiology. Choroid and retina related abnormalities have been reported in psychotic disorders, especially in schizophrenia. Choroidal vascularity index (CVI) is a useful tool to assess choroidal structural alterations and CVI is defined as the proportion of luminal area (LA) to the total choroidal area (TCA). **Objectives:** This is the first study to investigate choroidal vascularity index in first-episode psychosis (FEP) using optical coherence tomography (OCT).

Methods: 31 patients with FEP and 30 age and gender-matched healthy controls (HC) included in this study. All participants underwent psychiatric and ophthalmological clinical assessments. Imaging of the choroid was performed using enhanced deep imaging (EDI) protocol - spectral domain OCT. Central choroidal thickness (CCT) with EDI-OCT was measured manually from the inner border of the sclera to the outer border of the RPE vertically using the calipers of the Heidelberg reader subfoveally. The choroidal vascularity index was assessed using the EDI-OCT images.

Results: There were no statistically significant differences between FEP and HC in terms of CCT ($p=0.33$), TCA ($p=0.809$) and LCA ($p=0.710$). The CVIs were $66.66 \pm 2.98\%$ and $62.32 \pm 3.32\%$ in FEP and HC, respectively and it was significantly different between groups ($p<0.001$, effect size $d=1.38$).

Conclusions: These results suggest that first episode psychosis is characterized by choroidal vascular abnormalities. in vivo ophthalmological imaging with OCT, a non-invasive, fast, and safe technological tool, can be a promising biomarker to quantitatively evaluate microvasculature abnormalities in patients with psychosis.

Disclosure of Interest: None Declared

EPP0262

A functional linguistic analysis of social cohesion impairment in guided interviews conducted with individuals with schizophrenia

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Introduction: Individuals with schizophrenia exhibit severe speech and Theory of Mind (ToM) deficits creating substantial handicaps

for them on the level of communication and interpersonal skills. Consequently, these individuals cannot adequately take part in social life, and are exposed to marginalization in all aspects of life. Hence, communication impairments associated with schizophrenia are a central issue to investigate in order to optimize their quality of life and functioning in society. The study being part of an interdisciplinary research is based on guided interviews related to a short story by Hemingway. The analysis of person deictic expressions related to social emotions and social interactions combined with the most frequently used mental state terms (e.g. 'I don't know', 'I think') identified in the corpus may not only describe the severity of linguistic disturbances indicating ToM deficits but can also help understand patients' social dysfunction and difficulties in the context of social cohesion.

Objectives: The primary task of the functional linguistic research is to identify and classify the occurrence of linguistic disturbances during mentalizing processes expressed via mental state terms. The study particularly focuses on interpersonal relations expressed with person deictic forms that may indicate the difficulties of this patient group with social cohesion.

Methods: The corpus involves 40 guided interviews including 20 individuals with schizophrenia treated at the Department of Psychiatry of the University of Pécs and 20 controls. The interviews were conducted by a PhD student of Psychology in Hungarian and centred around Hemingway's short story entitled *The End of Something*. The interviews were digitally recorded and transcribed in Hungarian. The qualitative analysis was performed with Sketch Engine corpus analysis tool, which assisted in the identification and classification of collocations associated with the interviewees' mental processes directed at interpersonal relations expressed by person deictic forms.

Results: Pragmatic processes including the communicative aspect showed severe deficiencies. The most commonly used mental state term 'I don't know' combined with person deictic expressions revealed that individuals with schizophrenia have difficulty attributing mental states to a specific linguistic utterance during a social situation (e.g. 'I don't know why somebody said that'). These examples show that their communicative and interpersonal skills are substantially impaired.

Conclusions: The findings can offer some possible indications for psychotherapists how to detect pragmatic impairments in schizophrenic speech and interpret mental state terms with reference to social interaction, thereby contributing significantly to therapeutic success enhancing the social reintegration of individuals with schizophrenia.

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EPP0263

Clozapine levels and therapeutic response: using individual patient meta-analysis data for a ROC Curve analysis

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Introduction: Clozapine has been well established as the most efficacious medication for treatment refractory schizophrenia. Optimising the benefit during clozapine trial is an important clinical consideration. Therapeutic drug monitoring of clozapine plasma or serum levels has formed a critical part of this. Though there is no agreed standardised therapeutic range, advice traditionally recommends a clozapine level of >350ng/mL in order to effect best response. Most studies analysing the relationship between treatment response and clozapine level are older, have small sample sizes, and do not consider whether additional factors might assist in determining optimal clozapine level for response.

Objectives: We conducted a systematic review of PubMed, PsycInfo and Embase for studies that provided individual participant level data on clozapine levels and response.

Methods: This data was analysed using Receiver Operating Characteristic (ROC) curves to determine the prediction performance of serum clozapine levels for treatment response.

Results: We were able to include data on 294 individual participants. ROC analysis yielded an area under the curve (AUC) of 0.612. The clozapine level at the optimal Youden index was 372ng/mL, and at this level there was response sensitivity of 57.3%, and specificity of 65.7%. The interquartile range for treatment response was 223ng/mL – 558ng/mL. There was no improvement in ROC performance with mixed models including patient sex, age or length of trial.

Conclusions: Clozapine dose should be optimised based on clozapine therapeutic levels. We found that a range between 250 – 550ng/mL could be recommended, while noting that a level of >350ng/mL is most optimal for response.

Disclosure of Interest: None Declared

EPP0264

Anterior pituitary hormones in first-episode psychosis: a systematic review and meta-analysis

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Introduction: Although the role of pituitary gland in schizophrenia and psychotic disorders has been studied for decades, evidence on anterior pituitary hormones in the early phases of psychoses – without the influence of chronicity, comorbidities, and pharmacological treatment – is mostly unclear and inconsistent.

Objectives: Our systematic review and meta-analysis was aimed at comparing the blood concentrations of adrenocorticotrophic hormone (ACTH), follicle stimulating and luteinizing hormones (FSH and LH), growth hormone (GH), prolactin (PRL), and thyroid-stimulating hormone (TSH) between people with drug-naïve first-episode psychosis (FEP) and healthy controls.

Methods: We searched main electronic databases for articles indexed up to September 2022. We appraised the quality of data. We carried out random-effects meta-analyses, generating pooled

standardized mean differences (SMDs) and estimating between-study heterogeneity. Moreover, we performed sensitivity and meta-regression analyses.

Results: Twenty-six studies were included. People with drug-naïve FEP had higher ACTH ($p<0.001$; moderate-to-high heterogeneity) and PRL ($p<0.001$; high heterogeneity) concentrations, as well as lower TSH concentrations ($p=0.001$; low heterogeneity), than healthy subjects. Sensitivity analyses confirmed these findings. Data were not sufficient to perform meta-analyses on other hormones (FSH, LH, and GH).

Conclusions: People with drug-naïve FEP have abnormal ACTH, PRL, and TSH blood concentrations, supporting the hypothesis that anterior pituitary hormone secretion is altered in the first stages of schizophrenia and psychoses. Additional research is needed to clarify the complex interconnections between vulnerability, environmental factors, and pituitary hormones in FEP.

Disclosure of Interest: None Declared

EPP0265

Association of α -klotho levels with serum copper and cadmium levels in schizophrenia

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Introduction: Schizophrenia is associated with harmful health effects such as oxidative stress from heavy metal exposure. We considered the relationship between genes and heavy metals in association with oxidative stress and then investigated the association between serum α -klotho and copper and cadmium exposure among schizophrenia patients in western India.

Objectives: To investigate the association between serum α -klotho and copper and cadmium exposure among schizophrenia patients in western India.

Methods: 100 individuals participated out of which 50 were diagnosed with schizophrenia, severity was assessed by using PANSS score and 50 were taken as controls using General health questionnaire. Serum Klotho levels were estimated using ELISA. Serum Cadmium (Cd) and Serum Copper (Cu) was estimated using Atomic Absorption Spectrophotometry.

Results: The mean \pm SD levels of Serum Cd, Serum Cu and serum Klotho were 1.05 ± 0.55 μ g/dl, 135.5 ± 51.25 μ g/ml and 62.9 ± 35.1 ng/ml respectively in the patients and 0.23 ± 0.17 μ g/dl, 147.9 ± 25.42 μ g/ml and 78.6 ± 34.6 ng/ml respectively in controls. The differences in Serum Cd, Serum Cu levels and Klotho levels among the study group were highly significant ($p < 0.05$).

Conclusions: Both Cu and Cd levels were significantly raised in schizophrenic patients compared with controls. Serum klotho levels showed a statistically significant decreasing trend with increasing cadmium levels. These results suggest that cadmium levels may be associated with the serum klotho levels which may be associated with decreased cognition in schizophrenia.

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