

**Results:** We found that the experiential domain correlated with the RS-FC of the VTA with the left ventro-lateral prefrontal cortex (IVLPFC) ( $r=0.372$ ,  $p=0.039$ ), while the Expressive deficit domain correlated with the RS-FC of the VTA with the left dorso-lateral prefrontal cortex (IDLFPFC) ( $r=0.470$ ,  $p=.008$ ). Looking at subdomains, only the avolition ( $r=0.418$ ,  $p=0.019$ ) and the blunted affect ( $r=0.465$ ,  $p=.008$ ) showed the same correlations of the domains to which they belong.

**Conclusions:** According to our findings, separate dysfunctional neuronal circuits could underpin distinct negative symptom subdomains. A better understanding of neurobiological dysfunctions underlying NS could help to design new treatments, targeting different NS subdomains.

**Keywords:** schizophrenia; negative symptoms; functional magnetic resonance; functional connectivity

## EPP1248

### Covid 19, lockdown and brief psychotic disorders

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**Introduction:** Acute and transient psychotic disorders are a rare condition entity as the sudden appearance of affective, confusional symptoms and paranoia triggered by some psychological trauma. The current pandemic caused by COVID-19 is an important psychological stressor that could favor the appearance of acute psychotic disorders. Several studies have been recently published proposing that the multifactorial stress associated with lockdown could function as a catalyst for acute psychotic disorders.

**Objectives:** To present a case of a brief psychotic disorder during the national lockdown in Spain and to review the literature about the relationship between the current pandemic and psychosis.

**Methods:** We will present a case report and a literature review.

**Results:** We report a case of a 27-year-old woman, with no previous psychiatric history. Three weeks after the start of Spain lockdown sudden symptoms appeared with psychomotor restlessness, confused speech, emotional lability, thought blocking and persecutory and referential delusions. Physical exam, blood analysis and cerebral CT scan with no alterations. Treatment was performed with aripiprazole 10 mg and lorazepam 1 mg daily with clinical improvement in one week. She was diagnosed of Acute transient psychotic disorder.

**Conclusions:** Stressful life events that can trigger psychosis in vulnerable individuals and the current pandemic and lockdown context could favor the appearance of acute psychotic disorders. The case reported here is in line with other current studies that show a preliminary intuition of this trend.

**Keywords:** brief psychotic disorder; lockdown

## EPP1249

### Reduced prefrontal activity and suicidal behaviour in early schizophrenia

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**Introduction:** Approximately, 15- 26% of patients with first-episode psychosis, including schizophrenia, are likely to have attempted suicide by their first treatment contact. Studies of suicidal behavior outside of schizophrenia have indicated grey matter volume loss in the prefrontal and orbitofrontal cortex, and aberrant brain activity in relation to emotional recognition and dysfunction.

**Objectives:** This study aimed to investigate the functional neural correlates of suicidal behavior in early schizophrenia.

**Methods:** fMRI faces task was conducted (fearful face versus neutral face) in 8 participants with first-episode schizophrenia together with standardised scales including PANSS and SBQ-R. fMRI activation was compared using a two-sample t-test in participants with low and high suicidal behavior. Extent threshold is 0 voxels and significance level  $p<0.001$  (FWE corrected). Processing of images was carried out using SPM12 and Matlab.

**Results:** 8 participants were recruited; 5 males and 3 females, mean age of 26.5. Results suggest that participants with higher suicidal behaviour showed reduced activation on the anterior-cingulate gyrus and medial frontal gyrus, which are parts of PFC, ( $p=.005$ ). There was also a significant difference in task response accuracy, where, participants with high suicidal behaviour made more accurate responses compared to low group ( $t(3) = 3.65$ ,  $p = .035$ ).

**Conclusions:** This is an exploratory study, investigated the differences in brain activity in patients with schizophrenia who are at risk of completed suicide and, therefore might provide new insights into the underlying mechanisms. Further work should address how PFC activity changes with risk over time and its potential utility as a biomarker in suicide.

**Keywords:** suicidal behaviour; schizophrenia; FEP; prefrontal activity

## EPP1250

### Sociodemographic, lifestyle and clinical factors associated with good performance in paired associates learning (PAL) test in patients with schizophrenia

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**Introduction:** Memory and learning deficits are central among cognitive deficits in schizophrenia. However, to a varying proportion ca. 20-25% of patients could not be considered deficit.

**Objectives:** Description of sociodemographic, lifestyle and clinical factors related to good performance in PAL-test in schizophrenia patients.

**Methods:** Participants (N=4500) were members of the Finnish SUPER study on the genetic mechanisms of psychotic disorders (SUPER). The database of the Northern Finland Birth Cohort 1966 (NFBC 1966) was utilized as a reference data. Visual memory and new learning were assessed using Cambridge Neuropsychological Test Automated Battery (CANTAB) Paired Associates Learning (PAL) test. The 50<sup>th</sup> percentile scores (10 error score or less) for outcome measure total errors adjusted (TEA) of NFBC 1966 was used as a cut-off for good performance in PAL test.

**Results:** The sociodemographic and lifestyle factors related good performance for both sexes were: younger age ( $p < .001$ ), higher basic education ( $p < .001$ ), independent form of dwelling ( $p < .001$ ), hazardous drinking ( $p < .001$ ), cannabis use ( $p < .001$ ) and being married (females  $p = 0.009$ , males  $p = 0.049$ ). The clinical factors related to good performance for both sexes were not using antipsychotic medication regularly ( $p < .001$ ), not using all psychotropic medication (females  $p = 0.05$ , males  $p < .001$ ), less hospitalization times due to psychosis ( $p < .001$ ), younger age at first hospitalization due to psychosis ( $p < .001$ ), lower number of hospitalization days ( $p < .001$ ) and lower percentage of time in hospital after first psychosis episode ( $p < .001$ ).

**Conclusions:** Several factors related to good performance in the PAL-test in the crude analysis without any confounders.

**Keywords:** schizophrenia; visual memory and new learning

## EPP1252

### Natural catalytic immunoglobulins hydrolyzing histones as a link between inflammation and humoral immunity in schizophrenia

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**Introduction:** Schizophrenia pathogenesis is known to be associated with chronic low-grade inflammation. Inflammation can be caused by extracellular histones that are released from cells due to apoptosis dysfunction. It can also be accompanied by the formation of natural catalytic immunoglobulins that bind and hydrolyze histones.

**Objectives:** To investigate the ability to hydrolyze various histones by polyclonal IgGs from serum of patients with schizophrenia.

**Methods:** We recruited 50 patients (28 men and 22 women) with a verified diagnosis of paranoid or simple schizophrenia and 25 healthy individuals (13 men and 12 women) in our study. IgG preparations were obtained by affinity chromatography and analyzed by SDS-PAGE and MALDI MS. Catalytic activity of IgGs were revealed by the degree of hydrolysis of five histones using SDS-PAGE. To prove that antibodies exhibit histone-hydrolyzing activity, we used rigorous generally accepted criteria. Statistical analysis was performed in Origin 2019.

**Results:** IgGs of patients are shown to bind and hydrolyze various histones with high efficiencies. The IgGs histone-hydrolyzing

activity level, depending on the type of histone (H1, H2a, H2b, H3, H4), was statistically significantly 6–20 times higher than that of healthy individuals (Fig. 1). However, only 21% of patients with schizophrenia had IgGs with very high activity. The IgGs activity level correlated with PANSS General scale.

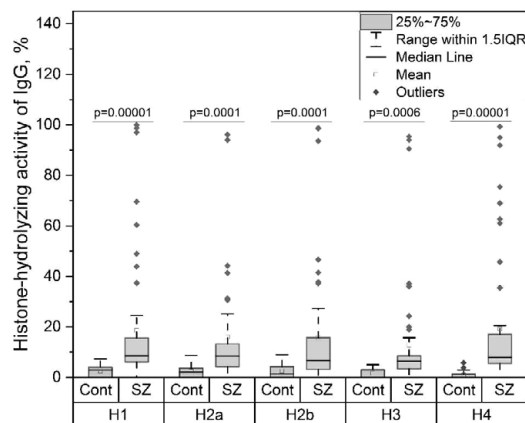


Fig. 1. Histone-hydrolyzing activity of IgG.

**Conclusions:** We suggest that histone-hydrolyzing antibodies may play a compensatory role in schizophrenia because removal of extracellular histones minimizes the inflammatory responses. Therefore, such IgGs may be the link between inflammation and humoral immunity, and also be a promising biomarker.

**Conflict of interest:** This work was supported by Russian Foundation for Basic Research under grant 20-015-00156. E.A.E. is the recipient of the fellowship of the President of the Russian Federation (SP-2258.2019.4).

**Keywords:** schizophrenia; Inflammation; Histones; Humoral immunity

## EPP1253

### Catatonia induced by abrupt discontinuation of clozapine - case report

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**Introduction:** Catatonia is characterized by a bizarre and severe psychomotor change. According to DSM-5, the presence of three or more symptoms is necessary to affirm the diagnosis: stupor, cataplexy, brain flexibility, mutism, negativism, posturing, mannerisms, stereotypes, agitation not influenced by external stimuli, grimaces, echolalia or echopraxia. The association between first- and second-generation antipsychotics (AP) and the onset of catatonia is well established in the literature. In contrast, clozapine is one of the second-generation APs that is recognized for its effectiveness in treating catatonia, rather than inducing it. However, it has been documented that abrupt discontinuation of clozapine can induce rapid clinical deterioration with multiple presentations including: psychoses, cholinergic rebound states, serotonergic syndromes and catatonia.

**Objectives:** Review the literature on catatonia associated with abrupt interruption of clozapine. Describe a clinical case.