

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 50th 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

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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.

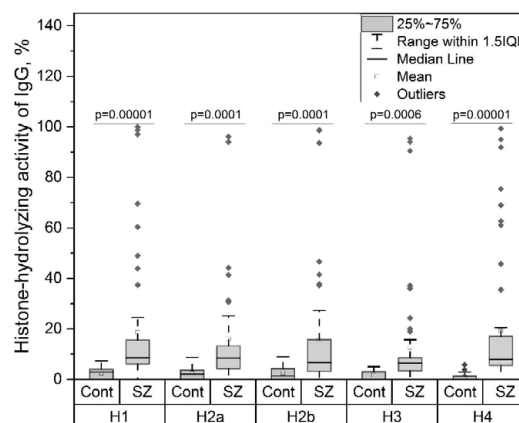


Fig.1. Histone-hydrolyzing activity of IgG.

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.

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Keywords: schizophrenia; Inflammation; Histones; Humoral immunity

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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.