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**Keywords:** young age; religious delusion; manifest psychotic episode; religiosity in premorbid

## EPV1354

### Marker of schizophrenia with enduring negative symptoms

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**Introduction:** The relevance of this study is determined by the need to search for biological markers of schizophrenia. The detection and validation of such molecules can become the basis for the creation of additional paraclinical diagnostic methods or contribute to the creation of targets for individual pharmacotherapy, which is an important task of modern fundamental medicine.

**Objectives:** Comparative proteomic analysis of serum in schizophrenic patients with positive and negative symptoms.

**Methods:** The study includes 10 healthy donors and 27 patients with schizophrenia. Samples preparation included: serum purification from major proteins via affinity chromatography, 1D-PAGE proteins separation, in-gel tryptic hydrolysis, LC-MS/MS mass-spectrometry (Orbitrap Q-exactive HF mass spectrometer, Agilent Technologies). Identification of proteins was carried out using Mascot software Ver. 2.1 («Matrix Science», USA). Proteins for quantitative analysis were selected in view of the DISGENET database. Quantitative LC-MS-SRM analysis of selected protein was performed on QQQ TSQ Vantage (Thermo Scientific) with labeled peptide standards.

**Results:** Receptor-interacting serine/threonine-protein kinase 1 was selected for quantitative assessment. Significant differences were revealed in the RIPK1 concentrations in the serum of schizophrenic patients with negative and positive symptoms ( $p=0.02$ ). The serum concentration of RIPK1 in patients with negative symptoms is tenfold in patients with positive symptoms.

**Conclusions:** Receptor-interacting serine/threonine-protein kinase 1 can be considered a biomarker of negative symptoms of schizophrenia based on a significant increase in serum concentration. *Mass spectrometric analysis was carried out of the "Human Proteome" Core Facility of the Institute of Biomedical Chemistry Moscow. Support by Grant of RSF № 18-15-00053P.*

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**Keywords:** schizophrenia; proteomics; biomarker; negative symptoms

## EPV1356

### DNA-hydrolyzing catalytic IgGs from schizophrenia patients do not affect cell viability of the SH-SY5Y human neuroblastoma cell line

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**Introduction:** DNA-hydrolyzing catalytic IgGs have caspase-dependent cytotoxic effects in autoimmune diseases. Recently, DNA-hydrolyzing IgGs have been discovered in schizophrenia. However, their cytotoxic properties have not been studied.

**Objectives:** To assess the effect of serum IgGs with DNA-hydrolyzing activity of schizophrenia patients on the cell viability of the SH-SY5Y human neuroblastoma cell line.

**Methods:** Serum of 8 patients with paranoid schizophrenia in the acute phase and 7 mentally and somatically healthy persons were used. IgG was purified from serum by affinity chromatography on Protein-G-Sepharose columns. The DNA hydrolyzing activity of IgG was assessed by the degree of hydrolysis of the pBluescript plasmid. The cell viability of the SH-SY5Y human neuroblastoma cell line after exposure to purified IgG preparations was assessed by high-throughput screening on the CellInsight CX7 platform (Thermo Scientific, USA) using the fluorescent dyes propidium iodide and Hoechst.

**Results:** Of the 8 IgG preparation obtained, 4 drugs had high DNA-hydrolyzing activity. All tested IgG preparations from healthy donors were inactive. One-way ANOVA analysis of the proportion of dead cells of the SH-SY5Y line after exposure to antibodies (0.1 mg/ml) showed no significant differences in the proportion of dead cells ( $p=0.688$  after 24 hours;  $p=0.831$  after 48 hours). Similar results were obtained at a higher concentration of antibodies - 0.2 mg/ml.

**Conclusions:** Thus, it has been shown *in vitro* that IgGs isolated from the serum of schizophrenia patients with or without DNA-hydrolyzing activity does not exhibit cytotoxic properties against the SH-SY5Y human neuroblastoma cell line. *Support by Grant of RSF № 18-15-00053P.*

**Disclosure:** No significant relationships.

**Keywords:** neuroblastoma cell line; schizophrenia; DNA-hydrolyzing activity

## EPV1357

### Adjunctive treatment with aripiprazole for olanzapine-induced hyperprolactinemia

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**Introduction:** Hyperprolactinemia is a common unwanted antipsychotic-induced adverse effect, particularly in female patients, and can induce poor adherence to treatment. Aripiprazole

is an antipsychotic with partial agonist activity over the dopamine D2 receptors which can be effective in reducing hyperprolactinemia in patients treated with antipsychotics.

**Objectives:** We investigate the efficacy of adjunctive treatment with aripiprazole for olanzapine-induced hyperprolactinemia and related hormonal side effects (amenorrhea, oligomenorrhea) in female patients with schizophrenia.

**Methods:** Eight female patients (22 to 40 years old) participated in this study with a diagnosis of schizophrenia and hyperprolactinemia-related hormonal side effects (amenorrhea, oligomenorrhea). Patients were treated with aripiprazole 10 mg/day added to a fixed olanzapine dose of 20 mg/day. Serum prolactin levels were measured at baseline and after 2, 4, 6, and 8 weeks. Symptoms and side effects were assessed using the Brief Psychiatric Rating Scale, Clinical Global Impressions Severity scale, Barnes Akathisia Scale.

**Results:** Adjunctive treatment with aripiprazole resulted in significantly lower prolactin levels beginning at week 2. 87.5 % of patients at week 8 had prolactin levels normalize. Among 8 patients with menstrual disturbances, 75% of patients regained menstruation during the study. No significant changes were observed regarding psychopathology and adverse effect ratings.

**Conclusions:** Adjunctive aripiprazole treatment is effective for resolving olanzapine-induced hyperprolactinemia and reinstatement of menstruation in female patients, provides significant improvement and it appears to be safe with a lower risk of metabolic syndrome, without increased risk of adverse effects.

**Disclosure:** No significant relationships.

**Keywords:** Olanzapine; Hyperprolactinemia; Amenorrhea; Aripiprazole

## EPV1358

### Paranoia

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**Introduction:** Paranoid ideas occur very often in humans (prevalence of 0.2%). According to several studies, the origin could be found in a genetic predisposition to a selective hyperdopaminergia related to the D2 receptor and dopamine neurotransmitter dysfunction.

**Objectives:** To delve into this pathology, including origin and development, epidemiology, diagnostic criteria, clinical aspects, differential diagnosis, treatment, evolution and prognosis.

**Methods:** We conducted a literature review of delusional disorder.

**Results:** The disease appears in middle age, between ages 35 and 55, being slightly more frequent in women. It seems to affect more economically and educationally disadvantaged social strata, and it is more frequent in immigrants. The onset is usually progressive and insidious. Correct perception but delusional interpretation: the objectivity of what is perceived is disturbed by the subjectivity of what is registered. The delirium is usually logical, contagious, and frequently credible. Patients retain their lucidity. It is very important to make a correct differential diagnosis with schizophrenia. With regard to treatment, the therapeutic relationship with the

patient will be basic. If possible, psychotherapy should be combined with pharmacological treatment (second generation antipsychotics being the treatment of choice). In general, their evolution is compatible with out-of-hospital life, being considered "odd guys".

**Conclusions:** The risk of suffering from Delusional Disorder during the lifetime is between 0.05 and 0.1%. This pathology constitutes 1-4% of all psychiatric admissions. Therefore, it is essential to know it in depth in order to be able to manage it properly.

**Disclosure:** No significant relationships.

**Keywords:** Paranoid ideas; Epidemiology; diagnostic criteria; evolution

## EPV1362

### Negative and Cognitive Symptoms of Schizophrenia: Are there Adequate Pharmacological Treatments?

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**Introduction:** The ongoing debate regarding the treatment efficacy for negative and cognitive symptoms in schizophrenia is a subject of continuous frustration among psychiatrists. These symptoms are reputedly hard to tackle therapeutically and their impact on long-term functional prognosis made them an important target for the maintenance treatment.

**Objectives:** To review the literature in order to find the most adequate treatment options for negative and cognitive symptoms of schizophrenia.

**Methods:** A literature review was performed through the main electronic databases (PubMed, CINAHL, SCOPUS, EMBASE, www.clinicaltrials.gov) using the search paradigm "schizophrenia" AND "negative symptoms" AND "cognitive symptoms" AND "pharmacological treatment". All papers published between January 2000 and August 2021 were included.

**Results:** The efficacy of atypical antipsychotics over cognitive dysfunctions in schizophrenia decreases with time, without significant differences between the agents. Clozapine, amisulpride, olanzapine, and risperidone have superior efficacy over positive and negative symptoms, with small to moderate effect sizes. Meta-analyses show decreased severity of negative symptoms during treatment with atypical antipsychotics, especially with clozapine, amisulpride, olanzapine, zotepine, and risperidone. Atypical antipsychotics had a superior effect over neurocognitive domains when compared to the typical antipsychotics. Newer atypical antipsychotics, with partial D2/D3 agonism, are preferred to other atypical agents, although based on a low level of evidence. Antidepressants, especially mirtazapine, may be a solution for negative symptoms, while modafinil/armodafinil is also useful as an add-on.

**Conclusions:** Although new therapeutic options are explored, there is a paucity of encouraging results from the pipeline regarding the treatment efficacy over negative/cognitive symptoms.

**Disclosure:** No significant relationships.

**Keywords:** cognitive symptoms; schizophrenia; negative symptoms