**INTRODUCTION**

Schizophrenia is a multifactorial chronic disease characterized by heterogeneity of psychiatric manifestations. Among mental diseases, it is the most investigated one, the archetype of mental disease. It’s the twist from normal to very important disorder of mental functions, it’s leaving social community (P.Paruch). Three syndrome groups identify schizophrenia as a psychopathological dimension: Positive syndrome (Paranoid schizophrenia, delirium hallucinations, catatonic D2 dyskinesia in mesial cortic pathways) and Disorganization syndrome (disorganized schizophrenia, idioffective and behavioural disorganization, D3 alteration in nucleus caudate putamen).

Nowadays experts using a dimensional approach talk about schizophrenia as a spectrum disorder - a group of related mental disorders that show some symptoms.

In the past, genetics was used to define all of disorders having a common genetic abnormality. Today it’s been the FRAX ones which introduced the “Schizophrenic spectrum” definition after observing that children born from schizophrenic mothers but adopted in normal families had higher incidence in schizophrenia and personality disorders than control groups. The leads to think that more disorders, with different nosographic classification share a common morbide process, where genetics, age onset, and cause symptom manifestation have a specific pathophysiologic meaning.

DSM IV states as only one diagnosis group - Schizophrenia and other psychotic disorders - five schizophrenia subtypes: Paranoid, catatonic, undifferentiated and residual) based on the predominant symptom and disease.

A study examines the Schizophrenic spectrum in psychoses disorders. Schizophrenia, delirium, and major depressive disorder, Schizophrenic Psychotic disorder caused by a general medical condition, substances induced disorder and psychotic disorder not otherwise specified (DSM).

Schizophrenia etiology is not well defined, many theories have been suggested and the high heritable component can explain the heritability, based on several recent researches that relate schizophrenia to a low-grade chronic inflammation caused by several pathogen agents and autoimmune processes. In this context, the study uses the results of other researchers. The main focus of this work is to test the hypothesis that autoimmune processes and inflammatory markers levels, the presence of circulating auto-antibodies and auto-inflammatory cytokines may be a new biomarker of the disease.

**MATERIALS AND METHODS**

27 Patients aged 20-65 have been selected overall schizophrenia spectrum and patients who had a-psychosis were not get introduced into this research. Family members for psychotic disorders, past and recent drug treatment, indicating pharmacological response level and any occurrence of secondary autoimmune parameters were analyzed in order to test the hypothesis. Patients were enrolled on bases on automatic nucleic acids extractor and HLA typing for loci A, B, C, DRB performed by reverse SSO DNA typing assay.

MHC region is one of the most polymorphic areas in human genome and its position depends on several population variables: family history, ethnicity, and geography; to compare alleles frequency we chose our control group between healthy donors already used by our HLA team in different research work studies.

Table 1 compares HLA class I and II alleles incidence between these two groups.

Comparing patients’ group allele frequency and healthy controls we found:

- HLA-A*03, slightly more frequent
- HLA-A*11, slightly more frequent
- HLA-A*19 (A*03, A*19, A*31, A*33, especially HLA-A*19 and A*19 with higher frequency
- HLA-B*15, slightly more frequent
- HLA-B*27, B*32, B*38, B*51, B*51, B*58 alleles: higher frequency
- HLA-C*06, C*12, C*15 alleles: frequency is quite higher with HLA-C*06, C*12 significantly more frequent

Among to patients with positive family members for various autoimmune diseases, we found HLA-A*03 and HLA-C*06 with HLA-A*26 only one HLA-A*03 no particular association was found on loci B, C and DRB nor any haplotipic 3 patients resistant to common drugs used for Schizophrenia

Because of HLA’s role in immune response these alleles should be better investigated in their possible linkage with Schizophrenia if we consider the Schizophrenic Spectrum Disorders “inflammatory” etiopathology. From the point of view also HLA-A*03 allele is not in our study is slightly, but more frequent in patients’ group than in healthy controls and worths to be investigated about its linkage to hematological and endocrine disorders which since several studies demonstrated correlation between diabetes mellitus and schizophrenia, and its frequency in patients that develop post-vaccinations Central Nervous System pathologies.

No particular genetic linkage found both in I and II HLA classes alleles in patients with positive family members for various mental disorders, it seems to have a weak association.

In this study most of the enrolled subjects were outpatient so it has not been possible to obtain specific data on eventual autoimmune comorbidity, an extended research to autoantibodies and specific disease markers, attention to individual drug reactions might complete the results and have better research outcomes. In spite of little number of patients typed up today, data is interesting and confirmed by a larger individuals’ sample. HLA typing in schizophrenia patients in the near future could become a valid clinical tool to have a more accurate and personalized diagnostic and therapeutic route.

**CONCLUSIONS**

Scientific literature, especially in last decades, seems to have "rediscovered" the HLA and Schizophrenia itself, and many researches have been carried out; HLA-A9, A10, B5 serologic and B*04 allele seems to be more likely linked to Schizophrenia Spectrum Disorders.

Our study shows a higher frequency in schizophrenia patients group than in healthy controls of some HLA class I alleles, but no significant difference frequency differences were found between the two groups were found in HLA II class DRB alleles. Compiling with literature data we found frequent incidence of HLA-A11 (A*19, A*31, A*33, especially HLA-A*19 and A*19 with higher frequency

In terms of allele frequency in our schizophrenia patients group , the most frequent one was found with HLA-A11 (A*19, A*31, A*33, especially HLA-A*19 and A*19 with higher frequency, slightly higher frequency in HLA-A9 (A*03), HLA-B*51, B*15, and a slight prevalence of HLA-C*04 allele comparing to our healthy control group.

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