

## Lymphocytes in schizophrenic patients under therapy: serological, morphological and cell subset findings

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Keywords: lymphocytes, schizophrenia, morphology, therapy.

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### SUMMARY

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There is a growing body of opinions affirming schizophrenia is a spectrum disease covering several conditions of different aetiology. Various studies have recently shown immunological changes in schizophrenia, and an immune pathogenetic hypothesis has gained acceptance. In the present study, we analyse with a relatively wide approach the immunological dysfunction in schizophrenia, focusing in particular on lymphocytes morphology and subset distribution.

We performed in peripheral blood samples of 24 schizophrenic patients: 1) haemochromocytometric evaluation; 2) in serum C-Reactive Protein (CRP) quantitative assay; 3) analysis of lymphocytes subset by flow cytometry with specific monoclonal antibodies (MoAb); 4) morphological evaluation with light microscopy (LM), transmission electron microscopy (TEM) and scanning electron microscopy (SEM).

All patients were under treatment and were divided in group 1 with good, and group 2 with low response to treatment. Five healthy volunteers were enrolled in the study as control group.

The present study showed: a) increased serum CRP concentration (mg/ml); b) higher CD4<sup>+</sup>/CD8<sup>+</sup> ratio ( $P < 0.003$ ) than healthy controls; c) decrease CD8<sup>+</sup> percentage ( $P = 0.006$ ); d) P type compatible atypical lymphocytes (13.7% in LM) with irregularly shaped nucleus, often showing a lobulation or deep indentation and cytoplasmic basophilia.

TEM analysis showed, for the first time in schizophrenic patients, fine morphological features of 6 different types of lymphocytes, and the prevalent type presented a cytoplasm rich in free ribosomes and polysomes. Surface morphology observed by SEM presented different characteristics if compared with lymphocytes from control group. Some cellular immune parameters are related to the therapeutic outcome.