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Research of the last decade established that inflammatory reactions are involved in the pathogenesis of Alzheimer's disease (AD) and schizophrenia (Sch).

The aim of this paper to carry out a comparative analysis of some inflammation mediators [activity of leukocyte elastase (LE) and alpha 1-proteinase inhibitor ( $\alpha$ 1-PI), the level of CRP, IL-6 and IL-10] in the blood serum in patients with AD and in old aged patients with schizophrenia in comparison with healthy control of the same age.

There were a significant increase in activity of  $\alpha$ 1-PI, level of CRP, IL-6 and IL-10 ( $p < 0.0001$ ,  $p < 0.05$ ,  $p < 0.01$ ,  $p < 0.01$ , respectively) and significant decrease of LE activity ( $p < 0.0001$ ) in the group of patients with AD compared to control. The activity of LE was positive correlated with MMSE scores ( $r = 0.34$ ,  $\chi^2 = 0.0487$ ) and the IL-6 level was negative correlated with MMSE scores ( $r = -0.46$ ,  $\chi^2 = 0.0077$ ), ie cognitive decline was associated with decreased activity of LE and increased levels of IL-6. The group of patients with Sch was characterized only by a significant increase in activity  $\alpha$ 1-PI and level of CRP compared to control ( $p < 0.0001$ ,  $p < 0.01$ , respectively). LE activity and IL-6 level in patients with AD significantly differ from patients with schizophrenia ( $p < 0.05$ ,  $p < 0.01$ , respectively).

Thus, the low activity LE and high levels of IL-6 are observed only for patients with AD, but not for patients with schizophrenia. These parameters may serve as biological markers of the severity of AD.