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CORRELATION OF SERUM AUTOANTIBODIES TO NEUROTRANSMITTERS AND THE DEVELOPMENT OF COGNITIVE DISORDERS IN EPILEPSY

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Objective: To investigate the immunoreactivity of neurotropic autoantibodies against S100, GFAP, NF-200, myelin basic protein (MBP) and to establish their relationship with the development of cognitive impairment.

Materials & Methods: The level of AAB in 59 patients of clinical groups: 1st 17 patients with idiopathic epilepsy (IE); 2nd 42 patients with symptomatic epilepsy (SE). Control 16 clinically healthy persons. The work used neurological examination with inclusion of neuropsychological tests, immunological studies with the determination of autoantibodies to the main proteins of the nervous tissue using the multicomponent system Eli-Neuro-Test-12 (Immunculus).

Results: The correlation analysis of the patients with SE has established a strong relationship between the rates of "clock drawing" tests (r=-0.753 and -0.755) and MMSE (r=-0.806 and -0.892), with tests for speech activity (r=-0.736, -0.540 and r=-0.562, -0.642), memorizing the words (r=-0.679 and r=-0.753, respectively) and repeating the numbers in the reverse order (r =-0.568 and r=-0.695, respectively). The relationship of the level of AAB to the receptors of neurotransmitters and cognitive disorders in patients with SE was weak. The only significant inverse correlation in patients with AE was found between the level of AAB to GFAP and MBP and the indices of neuropsychological tests. Analyzing the correlation in patients with IE, weak relationships between AAB to GFAP and MBP and cognitive parameters were revealed. The most significant indicators of the inverse correlation relationship were recorded when assessing the test of drawing hours (r=-0.361 and r=-0.355) and the speech activity test (r=-0.322 and r=-0.298).

Conclusions: The obtained data indicated that circulating AAB to neurotropic proteins and receptors of neurotransmitters can be used as additional prognostic "immunobiochemical" criteria for the course of the disease and the effectiveness of antiepileptic treatment.

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