

Immunological markers of long-term effects of cerebrolysin treatment in patients with mild cognitive impairment

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The aim of the study was to study the effect of the course therapy with Cerebrolysin on the systemic inflammation factors level in patients with amnesic MCI (aMCI) depending on the clinical effect of treatment. Materials and methods: The study included 20 aMCI patients, 16 women and 4 men aged from 54 to 84 years (mean age 72 years). The patients underwent one course 20 intravenous infusions of Cerebrolysin therapy (30 ml in 100 ml of physiological solution once a day). Evaluation parameters were measured at the beginning of the study and after 3, 6 and 12 months the end of Cerebrolysin treatment. Evaluation of the effectiveness of therapy was measured on the following scales: CGI, MMSE, MoCA-test. An immunological examination included determination of level of IgA, IgM, IgG, cortisol, C-reactive protein (CRP), IL-2, IL-4, IL-8, TNF α by enzyme immunoassay method. Results: The level of proinflammatory proteins decreased after Cerebrolysin therapy and the changes persisted for a long time. Progression of cognitive impairment in aMCI patients after 1 year of follow-up was associated with the presence of systemic inflammation in combination with IgG level decrease after 6 and 12 months of follow-up. After a year of the study 3 patients had Alzheimer's disease and 4 patients were with severe negative dynamics of cognitive functions, the patients had signs of systemic inflammatory response (the increase of C-reactive protein and proinflammatory cytokines IL-1 β , IL-8, TNF α). Thus, the presence of systemic inflammation at the beginning of therapy was prognostically unfavorable sign in aMCI.