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Embryonic stem cells in multiple sclerosis

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Treated and observed (2-8 years) were patients (14 women, 10 men) with 2-3-year history of relapsing-remitting multiple sclerosis, mean age being 31.2±3.8, duration of remissions 3.4±1.2 months. Most often, observed were pyramidal and sensory disturbances, and ophthalmological symptoms. Indications for stem cell treatment were as follows: ineffective medicinal therapy, Interferon intolerance, development of the new foci, aggravation of neurological symptoms. For treatment, used were embryonic stem cell suspensions (ESCS) containing stem cells of mesenchymal and ectodermal origin obtained from active growth zones of 4-8 weeks old embryonic cadavers’ organs. Suspensions were administered in the amount of 1-3 ml, cell count being 0.1-100x105/ml. In the course of treatment, applied were 2-4 different suspensions, mode of administration being intracavitary, intravenous, and subcutaneous. After treatment, syndrome of early post-transplant improvement was observed in 70% of patients, its main manifestations being decreased weakness, improved appetite and mood, decreased depression. In the course of first post-treatment months, positive dynamics was observed in the following aspects: nystagmus, convergence disturbances, spasticity, and coordination. In such symptoms as dysarthria, dysphagia, and ataxia, positive changes occurred at much slower rate. In general, the treatment resulted in improved range and quality of motions in the extremities, normalized muscle tone, decreased fatigue and general weakness, and improved quality of life. Forth, 87% of patients reported no exacerbations, no aggravation of neurological symptoms, and no further progression of disability. MRI performed in 1-2 years after the initial treatment, showed considerable subsidence of focal lesions, mean by 31%, subsidence of gadolinium enhanced lesions by 48%; T2-weighted images showed marked decrease of the foci’s relative density.