Embyronic stem cells in rheumatoid arthritis

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Under observation (9 years) was a group of patients with 1.5-20-year history of confirmed rheumatoid arthritis (RA) presenting drug intolerance or inefficiency of routine methods, and marked limitation of functional capacity. For treatment, used were cryopreserved embryonic stem cell (ESC) suspensions containing hematopoietic and non-hematopoietic mesenchymal stem cells. ESC suspensions were prepared from organs of 4-8 weeks old embryonic cadavers obtained from legal abortions. Total nucleated cell count ? 10-400x106/ml, mononuclear cell count ? 10-100x104/ml. After the treatment, all patients reported the Syndrome of Early Post-Transplantation Improvements manifested by decreased general weakness, subsidence of pain, improved and more optimistic mood, improved appetite and normalized sleep formula. This method of treatment allowed for the decrease of the degree of the inflammatory activity, from high (14 points) to minimal (3 points), and achievement of clinical remission in 85% of cases.

Within 1 year, patients under observation reported decrease of pain, joint, and inflammatory indices - main clinical criteria of RA, functional capacity increase manifested by the ability of performing everyday activities impossible prior to this treatment, improved gait, ability to use public transport and continue full-time work. Subsequent transplantations were performed in 62% of cases: 80% of them were aimed at functional capacity and life quality improvement, and only 20% were performed for the decrease of the disease activity.

Immunocorrecting effect of ESC was observed in all the patients. Reported was increase of T-suppressor count (CD8+); helper-suppressor ratio CD4+/CD8+ decreases over a period of 360 days. Prior to the treatment, rheumatoid factor titer amounted to 3.2 U, and within 360 days, it decreased to 1.02 U. Bioethical principles on application of embryonic cell suspensions were strictly adhered to at all the stages of the research.