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Embryonic stem cells in Duchenne muscular dystrophy

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78 patients aged 3-18 were treated for DMD. Diagnosis was confirmed by the genetic analysis. Patients were administered mesenchymal, ectodermal, and endodermal stem cells isolated from germ layers of 4-8 weeks old cadaverous embryos’ systems and organs; amounts administered - 0,5-3 ml, cell count - 0,1-100x10^5/ml.

In the course of the first two months after the treatment, strength of different muscle groups increased by 100-700% and was maintained for 8-15 months. Besides, reported was also ROM increase, within the limits of the patient’s stage: stage II patients reported improved gait quality, ability to step on the heel and walk the stairs, raise from the floor with more confidence, and endure bigger loads during the day. Observed were also decreased pseudohypertrophy and strain of forearms and calves, contractures of knee and ankle joints, subsidence of myocardiopathy manifestations and respiratory insufficiency, especially in stage IVa-IVb patients.

DMD patients require continuous treatment (at least, once every 6-8 months) aimed at aversion of muscular atrophy progression. Termination of the treatment results in further progression of the disease and limitation of physical activity. Transplantation of embryonic stem cells terminates DMD progression, notwithstanding the stage of the process, and results in marked improvements.