Safety and efficacy of stem cell therapy in ambulatory and non-ambulatory children with duchene muscular dystrophy

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Duchenne muscular dystrophy (DMD) is the most common muscular dystrophy of childhood. This incurable disease is characterized by muscle wasting and loss of walking ability leading to complete wheelchair dependence by 13 years of age. Prolongation of walking is one of the major aims of treatment. This study is to investigate the effects of allogenic mesenchymal stem cell therapy in ambulatory and children with Duchene Muscular Dystrophy and determine its suitability as a form of treatment. This study was conducted on 35 myopathic children 12 ambulatory, 10 non-ambulatory and 13 control (seven ambulatory and six on-ambulatory) aged from 4-14 years. The control groups taken the traditional treatment (physiotherapy and medical treatment drugs) and the studied groups taken the same treatment with allogenic bone marrow mesenchymal stem cells intramuscular and systemic IV. Assesment was done by North Star ambulatory assessment CHAQ (Child Health Assessment Questionnaire) MRI/MRS Muscle Strength Assessment -Myogrip, Myopinch, and Moviplate, manual muscle strength testing using Medical Research Council strength scores, functional outcome measures before and after every three months for two years long and adverse effect and complications inspected. There were significant differences in assessment scores and quality of life questionnaire between studied groups vs. control group. There was minimal adverse effect and complications.

Biography

Wael Abo El-Kheir is currently works as Professor of immunology & Microbiology in military medical academy and he is the member of

the national committee for stem cells Egyptian ministry of health and also honor as secretary of the Egyptian society of stem cells.

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