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The Duchenne muscular dystrophy: Pathology regression after stem cell treatment

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The Duchenne Muscular Dystrophy (DMD) is a progressive degeneration of the striated muscles of the body. It is caused by a genetic defect that prevents the production of a protein called dystrophin. DMD is the most common form of neurodegenerative disease. At the cellular level, this can be explained as muscle necrosis that exceeds the regenerative capacity of muscles. To endure the severities of every muscle contraction, muscle fibers have specialized cytoskeletal protein complexes, dystrophin. These complexes make it possible for myocytes to endure mechanical stress of the muscle contraction. In DMD, abnormalities in the dystrophin gene lead to non-expression of the protein, dystrophin. The lack of dystrophin causes the muscles to become fragile and easily damaged. Over time, the degeneration is such that the body cannot repair and muscles degenerate, causing disability in patients. The main strategies based on stem cells are: 1. Generate healthy muscle fibers; if stem cell implant in the muscles of the affected patients is made, they may generate functional muscle fibers that replace the damaged ones, 2. Reducing Inflammation: The muscles damaged by muscular dystrophy suffer a lot of inflammation. Inflammation process accelerates muscle degeneration. Certain types of stem cells can liberate chemical agents that reduce inflammation by reducing disease progression. In this clinical case, the patient (female) arrived in the clinic diagnosed as DMD. Treatment proposed with Stem Cell Implant (Mesenchymal Autologous): Stem cells are implanted through the release of growth factors and the act of vascular stromal cells to prevent the death of motor neurons. They feed the motor neurons or make them healthier, slow the degenerative process and reduce inflammation.

Biography

Decio Basso headed the Federal University Santa Catarina at Florianópolis - Brazil where he earned a Medical Degree. He then attended Pontifical Catholic University of Rio Grande do Sul - Brasil to pursue a specialization Medical Degree in Geriatric and Gerontology. After graduation, he accepted an internship, continuing education at Harvard Medical School in Boston, USA. He has been an integral part of Medical Staff at The Department of Immunology at the University of British Columbia – MBvax Canadá. He is serving as a Professor at Universidad Privada Del Este, Paraguay. He launched his own medical research organization known as the Gerobasso Medical Research Center. He is also a member of the scientific committee SOLCEMA (Sociedad Latinoamericana Stem Cell).

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