Short Communication

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Amyotrophic Lateral Sclerosis patients treated with Pluripotent autologous adipose stem cells, case reports

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Abstract

Amyotrophic Lateral Sclerosis (ALS) a devastating neurodegenerative and autoimmune disease that until today there is no cure for. Currently, there are multiple clinical trials with different drugs and stem cell treatment trying to find a cure for ALS.ALS is a disease that attacks the central nervous system, specifically motoneurons and myelin. These cells are going through apoptosis, and rapid demyelination occurs. This translates into the patients as a loss of muscles and weight in a short period of time. The patients lose the capability to control movements. Usually, when this disease starts, it is more prominent on one side of the body. As the disease progresses, all muscles are compromised.In our study, we have followed 6 ALS patients for more than one year. They are treated with Pluripotent autologous adipose stem cells (PAASC) via intravenous and intra spinal. The PAASC are obtained through a small liposuction with a local anesthesia. The fat tissue is washed with saline and centrifuged. The PAASC are separated from the tubes, as described in the article C.Bertolotto, et al. Journal of Stem Cell and Developmental Biology. December 2018 Volume 1, Issue 1. Article ID: 100003)The ALS treatment protocol is based on trying to: 1_ avoid the advance of the disease; 2_regenerate motoneurons and damage of the nerve tissue; 3_ repair the collateral damage that this disease can create.In addition to the treatment with PAASC, we added daily physical therapy to our protocols in order to stimulate the nervous system to create and maintain neuro-muscular synapses. We developed a diet for our patients. This anti-inflammatory diet helps the patient maintain body muscle mass and stimulates the nervous system with foods that keep our nervous system alert. The PAASC treatment is repeated on each patient every three to six months.We saw improvements in our patients' symptoms. Their equilibrium, range of the movement, muscle strength, and muscle body mass improved. We also saw a deceleration of the advances of the disease. The patients assure that their disease is not advancing as rapidly as it was before the stem cell treatment. In order to have objective data, the dietician and our team closely follow all the anthropometrics measurements, and we look at the body muscle mass compared to the body mass. We also communicate with the physical therapist, which looks closely at all the body muscle strength and can tell us if the patient maintains their muscle strength. Conclusion: the PAASC treatment is effective in patients with ALS. The treatment at least slows down the evolution of this disease and keeps the patients in good and stable condition. There is so much to learn and study in this area, and specifically with this type of stem cells. We strongly believe that our contribution to this devastating disease is very important for patients with ALS.

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Biography

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