Stem Cells as the Next Step in MS Treatment

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Multiple sclerosis (MS) is an autoimmune disease that affects neurons of the central nervous system. The body’s own immune system attacks the myelin sheaths that surround the neuronal axons that send electrical messages through the brain. Around 200 people are diagnosed with MS in the United States every week, and there are around 2.5 million people affected by MS throughout the world1. That is why the recent news about a new stem cell transplant for multiple sclerosis is so exciting in the field of medicine: thousands of people could gain access to a potentially life-changing treatment.

Researchers and doctors involved with this recent medical event are stating that this new stem cell treatment can postpone the effects of MS. Since MS is known as incurable, this allows for patients of stem cell transplant trials to have the opportunity to increase their quality of life for a longer period before symptoms of the disease set in2. The treatment is called autologous hematopoietic stem cell transplantation (AHSCT), in which the patient’s own stem cells are collected for use3. After patients undergo chemotherapy to get rid of any remaining cells affected by the disease, their stem cells are returned to their bloodstream; the outcome doctors hope for is that blood cell production will return to normal3. While there are many risks associated with the stem cell treatment, there have been some hopeful results as well. Of the 281 patients in 13 different countries that received AHSCT between 1995 and 2006, 46% lived MS-progression-free for five years afterwards4.

It is treatments like AHSCT that give those affected by MS hope that medicine is moving towards a cure. Based on the progress being made by researchers and doctors with current stem cell treatments, they are moving in the right direction. Just in the past 11 years since 2006, technology used in treatments such as AHSCT has drastically improved. With the advances made in stem cell treatments and the research of autoimmune diseases, the potential for a cure for multiple sclerosis is becoming more and more in reach for the millions it affects around the world.

1 Higuera, V. & Pietrangelo A. Multiple Sclerosis by the Numbers: Facts, Statistics, and You

2 Roberts, M. Risky treatment can stop multiple sclerosis for years

3 Whiteman, H. Multiple sclerosis: Stem cell transplantation may halt disease progression

4 Reinberg, S. Stem cell transplants may help some with multiple sclerosis

Works Cited

Higuera, V., Pietrangelo, A. “Multiple Sclerosis by the Numbers: Facts, Statistics, and You.” *Healthline,* Healthline Media, 24 Mar. 2015, http://www.healthline.com/health/multiple-sclerosis/facts-statistics-infographic. Accessed 20 Feb. 2017.

Reinberg, S. “Stem cell transplants may help some with multiple sclerosis.” *Philly.com,* Philadelphia Media Network, 20 Feb. 2017, http://www.philly.com/philly/health/topics/HealthDay719851\_20170220\_Stem\_Cell\_Transplants\_May\_Help\_Some\_With\_Multiple\_Sclerosis.html. Accessed 20 Feb. 2017.

Roberts, M. “Risky treatment can stop multiple sclerosis for years.” *BBC News,* BBC, 20 Feb. 2017, http://www.bbc.com/news/health-39026117. Accessed 20 Feb. 2017.

Whiteman, H. “Multiple sclerosis: Stem cell transplant may halt disease progression.” *Medical News Today,* Healthline Media, 20 Feb. 2017, http://www.medicalnewstoday.com/articles/315938.php. Accessed 20 Feb. 2017.

Burton, Tyler. "Youth concussions on the rise since 2010, peaking in fall." *CNN*, Cable News Network, 11 Oct. 2016, www.cnn.com/2016/10/11/health/youth-concussions-on-the-rise/. Accessed 16 Oct. 2016.