Stem Cell Treatment and Its Effectiveness for Multiple Sclerosis

by ERICA WILSON

Stem Cell Treatment for MS

Multiple Sclerosis (MS) is a disease that is considered autoimmune by some, immune-mediated by others. Either way, the immune system of a person with MS is compromised and attacks healthy cells in the central nervous system (CNS). The attack targets myelin, or the protective covering, of healthy nerve endings. It strips away the covering and exposes the nerve endings. As the body tries to heal itself from its own attack, it forms scars (or scleroses, hence the name multiple sclerosis), which disrupts signals from the brain. The fallout from this crazy cycle causes myriad life-altering symptoms that vary from person to person. Symptoms include mobility issues, cognitive dysfunction and muscle weakness, just to name a few.

Treatment Options

There are many treatment options available for MS. While there is no cure, there are medications designed to slow the progression of the disease. The most common form of MS is relapsing-remitting (RRMS). RRMS is described as having periods of active disease, followed by periods of remission that can be short or long lived. This is the type that has the most treatment options to choose from. The following are some of the available options:

- Oral: Tecfidera, Gilenya, Mayzent (the newest), and Aubagio. These are all once or twice per day pills that are touted to reduce relapse rate and slow disease progression.
- Infusion: Tysabri, Ocrevus, and Lemtrada. These are all given intravenously (IV) over the course of one to several hours, depending on which medication you and your doctor choose.

I am currently on Tysabri. It is a one-hour infusion given once every 28 days. Ocrevus is the only medication approved for RRMS and for primary-progressive (PPMS) forms of MS. It is a six to eight-hour infusion given twice per year. The first dose is split in half and given in a two-week time span. The next dose, which is a full dose, is given six months later and every six months thereafter.

What About Stem Cell Therapy?

Another treatment that is rapidly becoming more popular is stem cell therapy. For now, people with more aggressive forms of MS are considered for this treatment. I have mentioned RRMS and PPMS, but there is another type called secondary progressive (SPMS). Few patients are initially diagnosed with this form and there are very few medications available to treat SPMS, but some promise has been shown in the treatment of SPMS with stem cell therapy.

There are many types of stem cells that can be used in this treatment. It is still very early to know exactly how it works for MS and which cells to use. The National MS Society goes into great detail about the following types of stem cells:

- HSCs
- MSCs
- NSCs
- hESCs
- iPSCs

Stem cells are found in adults and embryos. They can be used to generate healthy cells and reprogram the defective immune system. They are thought to automatically go wherever repair is needed in the body.

I recently read an article by David Lyons who is an MSer who has tried stem cell treatments. He had this to say about his experience:

"Since 2014, I have had three stem cell treatments, each time hoping it would help fight off the progression of my multiple sclerosis (MS) symptoms. Because the procedures I've undergone do not have a very long history of use or many studies to support them, I've basically made myself a guinea pig by trying them.

So far, I've experienced failure and success, but overall, the positives have been life-changing for me. I am continuing down this path of healing because there is currently no cure for MS, and now that I'm 61, time is not on my side for a cure to be discovered!"

He has had both positive and negative outcomes but remains "cautiously optimistic".

"It's only been a few weeks, but I can already feel hot and cold in my left hand, which I have not been able to do since 2006, when I was diagnosed.

I am cautiously optimistic that I will get similar results in the areas I need them now. But only time will tell. All I can say is that this therapy has changed my life, and I am hopeful that an ongoing clinical trial of the stem cell treatment I received will provide evidence that it will also be helpful to others with MS."

A downside to stem cell therapy is that most insurance will not cover the cost which can range from $50,000-$200,000.

The Takeaway

MS is a difficult disease to diagnose and even more difficult to treat. Because it is so different for each individual, it is often called 'snowflake' disease. Research as much as possible before choosing a treatment. What works for one may not work for you. Clinical trials are a good way to try new treatments like stem cell therapy. Always share what you learn with your physician and together you can make the best choice. Treating MS is a process of trial and error. Be patient, remain hopeful, live your best life.