Hope for Back Pain Relief in the Use of Stem Cells

by JESSICA

Could Stem Cells Help Back Pain?

One out of every three people in the U.S. suffers from chronic pain. In fact, the number of diabetes, cancer and heart attack sufferers combined is still less than the number of those who suffer from chronic pain.

Stem cells now give new hope for a non-invasive method of pain management. Bobby Sydnor suffered from three degenerative discs because of a motorcycle accident. Now, two years into his treatment, he has managed to get some relief without resorting to surgery.

Dr. Tory McJunkin, MD, principal investigator at Arizona Pain Specialists, says that this treatment can change the state of the disease instead of just treating the symptoms.

According to McJunkin, stem cells can cause the tissue to regrow as normal. Studies conducted on sheep subjects have shown this as a likely possibility. The difference between a treated disc and a normal disc was hard to distinguish after the sheep subject received stem cell therapy.

Study of Stem Cells and Back Pain

In a recent study, over 70 percent of the patients who received even the lowest dose of stem cell therapy for back pain experienced a significant reduction in pain and improved restoration of normal function.

Only 20 percent of the patients in the control group showed any improvement. Stem cell therapy trials for back pain are currently being conducted in 15 states, and results will be released in the third quarter of this year. The stem cells used are obtained from adult donors who are in perfect health rather than coming from human embryos.

Approximately 80 percent of Americans suffer from back pain at some point during their lives. Persistent back pain is also the leading cause of missed work days.

Degenerative disc disease, arthritis, nerve disorders and muscular problems are the leading causes of this back pain. Fractures, sore tendons, injured muscles and herniated discs are among other reasons.

Additionally, some medical problems can cause chronic back pain, including injuries and mechanical issues. Accidents, falls, sprains and fractures can lead to fractured vertebrae and osteoporosis.

Intervertebral disc degeneration is a condition in which the movement of the spine can cause back pain. This is because aging may cause the discs between the vertebrae to break down.

Back pain can usually be treated by rest, although lying down in bed may further aggravate the pain.

Severe pain can be treated with therapy. A physical therapist can apply Ultrasound, electrical stimulation, heat and muscle release techniques. Injecting cortisone into the spinal cord spaces by a doctor can also work.

Stem Cells as an Additional Therapy

For those who need extra treatment or additional therapy, stem cells can help manage the back pain. Mesoblast is a company that has been studying the ability of stem cells to reduce pain.

In a recent study, 24 adult sheep had mesenchymal precursor cells (MPCs) injected into three adjacent lumbar discs. Chondroitinase was injected to induce disc degeneration, leaving the other discs untouched.

The researchers recorded 45 to 50 percent less height in these degenerative discs before treatment with MPCs. The discs managed to recover to normal height after hydrating, with the enlargement occurring at a very significant rate.

Dr. McJunkin says this breakthrough is quite exciting, as these cells can repair the damage even when used in the lower stem cell dose. Limitless further treatments are possible using these regenerative stem cells in the future.