



Meniscus tear. Source: Wikimedia Commons and Tim1965

Meniscal Tears Respond To Cell Injections

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Stem cells, injected into knee joints following surgery, appeared to be safe and to speed the healing process, according to a study presented at the American Academy of Orthopaedic Surgeons annual meeting in San Francisco. Reported on February 10 by John Gever, senior editor of *MedPage Today*, the study involved 55 patients who had medial meniscal tears and were scheduled for surgical resection. The researchers excluded patients with grade III or IV osteoarthritis.

Some of the subjects received a single injection of 50 million allogeneic mesenchymal stem cells (MSCs) one week after their meniscectomy and others received an injection of 100 million MSCs. Two years later, the patients who received the injection of stem cells—whether high dose or low dose—reported experiencing significantly less pain, compared with the patients who had received a placebo injection, according to C. Thomas Vangsness, M.D., of the University of Southern California in Los Angeles.

Vangsness reported that a few patients in the low-dose MSC group also showed evidence of meniscal regeneration in MRI scans taken after one year. Interestingly, this effect was not seen in the patients who had received the larger dosage of stem cells.

Since this was a Phase I/II trial, its primary purpose was to demonstrate safety. In that respect it was a big success, Vangsness said. "That's the most important message. We've looked closely at injecting stem cells into the human joint and I think we can feel comfortable."

The injections tested in the trial involved a product called Chondrogen, produced by Baltimore-based Osiris Therapeutics, Inc., which consists of allogeneic MSCs and hyaluronic acid. Osiris Therapeutics obtains the cells from young adults who donate bone marrow aspirates.

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