



Using Donated Stem Cells to Treat Osteoarthritic Dogs

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Results: Researchers find that stem cells from unrelated donors safe for use in dogs

The use of stem cells as therapy for arthritis in dogs has exploded in the last two decades. Stem cells are harvested from the affected patient in need, processed in the laboratory to increase the number of purified stem cells, then given back to the donor. One drawback of this process is the need for general anesthesia for the cell harvesting procedure. For some dogs that might benefit from stem cell therapy, anesthesia may be risky.

Morris Animal Foundation-funded researchers at the University of Minnesota tackled this problem by studying if stem cells from a donor dog could be given to an unrelated dog. The team purified stem cells from healthy dogs undergoing elective procedures, and then administered them to dogs with osteoarthritis. They also had one placebo-treated group of control dogs for data comparison. Treatment efficacy was measured via gait analysis or via activity monitors depending on how the stem cells were administered (either intravenously or directly into the joint), as well as by having owners complete pain perception surveys.

The University of Minnesota team recorded no adverse events in the stem cell-treated group, and high client satisfaction with the procedure. The alternative therapy using stem cells from donor dogs shows promise for dogs with arthritis with limited treatment options, including high-risk dogs for anesthesia.

The researchers also noted that, although some dogs receiving stem cell treatment showed remarkable improvement, there was no statistical difference in improvement between the stem cell-treated and placebo-treated dogs. To explore this finding further, the team plans on using the large data set generated from this clinical trial to learn more about why some dogs benefit from therapy and show major improvement while other dogs are non-responsive to the same therapies, important questions to help push the field of stem cell therapies forward.