

Treatment of osteoarthritis with mesenchymal stem cells.

Wang W¹, Cao W.

Author information

Abstract

Osteoarthritis (OA) is one of the most prevalent joint diseases with prominent symptoms affecting the daily life of millions of middle aged and elderly people. Despite this, there are no successful medical interventions that can prevent the progressive destruction of OA joints. The onset of pathological changes in OA is associated with deviant activity of mesenchymal stem cells (MSCs), the multipotent precursors of connective tissue cells that reside in joints. Current therapies for OA have resulted in poor clinical outcomes without repairing the damaged cartilage. Intra-articular delivery of culture-expanded MSCs has opened new avenues of OA treatment. Pre-clinical and clinical trials demonstrated the feasibility, safety, and efficacy of MSC therapy. The Wnt/ β -catenin, bone morphogenetic protein 2, Indian hedgehog, and Mitogen-activated protein kinase signaling pathways have been demonstrated to be involved in OA and the mechanism of action of MSC therapies.

PMID: 24849513 DOI: [10.1007/s11427-014-4673-7](https://doi.org/10.1007/s11427-014-4673-7)

[Indexed for MEDLINE]



Publication type, MeSH terms 

LinkOut - more resources 

PubMed Commons

[PubMed Commons home](#)

 0 comments

[How to join PubMed Commons](#)

