

Efficiency of Autologous Chondrocyte Implantation in Microfracture Treatment

Sayed Alireza Mirsane ¹, Sayed Mojtaba Mirsane ², Nasrin Oraei ²

1. Student of Surgical Technology, School of Nursing and Midwifery, Kashan University of Medical Science, Kashan, Iran

2. Education Office, Khansar Town, Esfahan, Iran

Corresponding Author: Sayed Alireza Mirsane, E-mail: alireza.seyed70@gmail.com

ABSTRACT

Background: Autologous chondrocyte implantation (ACI) is a biomedical treatment that repairs damages in articular cartilage. ACI provides pain relief while at the same time slowing down the progression or considerably delaying partial or total joint replacement (knee replacement) surgery. The goal of ACI is to allow people suffering from articular cartilage damage to return to their old lifestyle; regaining mobility, going back to work and even practicing sports again

Material and Methods: We did a systematic review of studies identified by searching PubMed, Ovide and Elsevier, ProQuest

Results: Studies characterized clinical benefit ACI for long-term is very good for microfracture treatment and also those showed repair tissue formed by ACI is as possible. results supported this way is invasive and simpler surgical technique and likewise this method can be useful for microfracture betterment. studies indicated that ACI has not yet been shown to give better clinical outcome than microfracture at short-term or medium-term.

Conclusion: clinical benefit ACI for long-term was superior structural outcome in treatment of microfracture with chondrocyte implantation but ACI has not yet been shown to give better clinical outcome than microfracture at short-term or medium-term also it seems fair to conclude that the repair tissue formed by ACI is as good or possible slightly better than a less invasive and simpler surgical technique 1–2 years after the surgery.