Early Versus Delayed Weightbearing After Microfracture For Osteochondral Lesions Of the Talus: A Prospective Randomized Trial
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Introduction/Purpose: Bone marrow stimulation techniques, specifically arthroscopic microfracture, have become the therapy of choice for osteochondral lesions of the talus (OLTs) less than 15 mm² in size. Traditionally, the microfracture site is protected with a postoperative non-weightbearing period of 6-8 weeks. However, recent research has suggested postoperative early weight bearing (EWB) after microfracture may produce outcomes equivalent to delayed weight bearing (DWB). We performed a prospective, randomized trial to determine whether the results of EWB after microfracture for OLTs are equivalent to DWB.

Methods: We randomized 37 patients (37 ankles) undergoing arthroscopic microfracture for OLTs to either EWB or DWB protocols. The EWB cohort was allowed to bear weight as tolerated two weeks after surgery, while the DWB cohort was held non-weightbearing until six weeks postoperatively. We collected demographic data, mechanism of injury, lesion size and stage, Numeric Rating System pain scores (NRS), and American Academy of Orthopaedic Surgery Foot and Ankle Questionnaire (AAOS) functional scores preoperatively, then at 6 weeks, 3 months, 6 months, 1 year, and 2 years postoperatively.

Results: There were no differences between the two cohorts in terms of patient age, mechanism of injury, lesion size, or lesion stage. The mean age at surgery was 34.1 years (range 21-50 years). 70.4% of the lesions were lateral, 22.2% were medial, and the remainder were central. The EWB group demonstrated statistically significant improvement in AAOS scores at the six week follow-up appointment. There were no significant AAOS score differences at the other time points. NRS pain scores were not significantly different at any time point. Both groups showed mild deterioration of results over time.

Conclusion: Early weightbearing after microfracture for OLTs was associated with improved AAOS scores in the short term, without demonstrating poorer function or pain at 2 year follow up. This study supports early weightbearing after arthroscopic microfracture for osteochondral lesions of the talus.

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