

Microfracture Of The Hip: A Two-year Follow-up With A Matched-pair Control Group

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Objectives: Full thickness chondral defects have been suggested to portend poor prognosis in hip arthroscopy. Although there is a small amount of data suggesting favorable outcomes with microfracture for such cases, no comparative studies have been performed to assess outcomes of full thickness chondral defects treated with microfracture. The purpose of this study is to compare two-year clinical outcomes of patients treated with microfracture to a matched control group that did not have full thickness chondral damage.

Methods: During the study period, between June 2008 and July 2011, data were collected on all patients treated with hip arthroscopy who underwent microfracture. A matched-pair control group of patients who did not undergo a microfracture procedure was selected in a 1:2 ratio. Matching criteria were age within 5 years, sex, surgical procedures, and radiographic findings. All patients were assessed pre- and post-operatively with 4 patient-reported outcome (PRO) measures: the modified Harris Hip Score (mHHS), Non-Arthritic Hip Score (NAHS), Hip Outcome Score-Activities of Daily Living (HOS-ADL), and Hip Outcome Score-Sport Specific Subscales (HOS-SSS). Pain was estimated on the visual analog scale (VAS), and satisfaction was measured on a scale from 0 to 10.

Results: Forty-nine hips were included in the microfracture group and 98 in the control group. There was no significant difference in pre-operative PRO scores between the groups. For the microfracture group, the score improvement from preoperative to 2-year follow-up was 57.5 to 75.4 for mHHS, 53.6 to 71.8 for NAHS, 59.5 to 79.1 for HOS-ADL, and 35.5 to 55.5 for HOS-SSS. For the control group, the score improvement from preoperative to 2-year follow-up was 59.2 to 79.5 for mHHS, 54.4 to 76.2 for NAHS, 60.6 to 80.4 for HOS-ADL, and 38.6 to 64.2 for HOS-SSS. Both groups demonstrated statistically significant postoperative improvement in all scores ($p < .05$). All post-operative PRO scores, and all improvements in PRO scores, were found to be similar between the study and control groups.

Conclusion: Our study demonstrated that patients receiving microfracture during hip arthroscopy did not show a statistically significant difference in PRO scores when compared to a matched-pair control group at two year follow-up. Both groups demonstrated significant improvement in all PRO scores. These results show that microfracture appears to be a viable treatment option for grade IV cartilage damage identified at the time of hip arthroscopy. Furthermore, full thickness chondral defects may not necessarily portend an inferior functional prognosis when treated with microfracture

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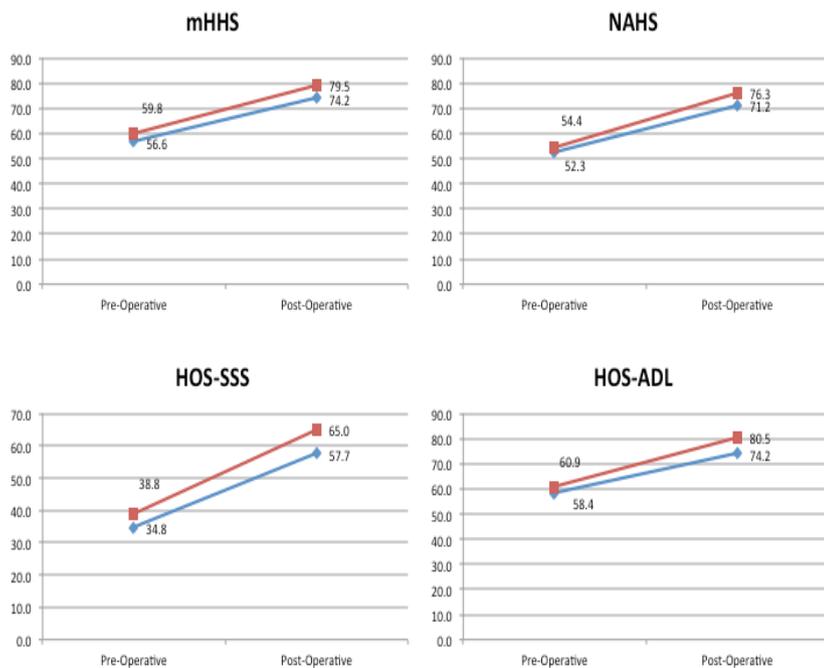


Figure 1. Average preoperative and postoperative patient-reported outcome scores of Microfracture and control groups.