

## **Return to Play Rates Following Arthroscopic Treatment of Elbow Osteochondritis Dissecans Lesions in Adolescent Baseball Players**

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### **Objectives:**

Osteochondritis dissecans (OCD) of the humeral capitellum is a common elbow injury in adolescent overhead throwing athletes likely secondary to the excessive valgus stress placed on the joint during the throwing motion. The purpose of this study is to retrospectively investigate the clinical findings and outcomes, including return to play rates, of overhead throwing athletes who underwent elbow arthroscopy for the treatment of osteochondral lesions of elbow.

### **Methods:**

Throwing athletes who underwent elbow arthroscopy over an eight-year period, 2010 to 2018, were identified and included in our analysis. From this cohort of patients, those who were treated for OCD of the elbow joint and were baseball players were selected for analysis. Non-baseball athletes and those who underwent a concurrent procedure that required an open approach were excluded. Patients were contacted via phone to complete the Kerlan-Jobe Orthopaedic Clinic Shoulder and Elbow Score (KJOC), the Mayo Elbow Score as well as a custom return to play and re-injury questionnaire. The minimum follow-up was 2 years from arthroscopic treatment.

### **Results:**

Twenty patients met the inclusion criteria and were assessed in this analysis. All of the patients were male with an average BMI of 24.7 (range, 17.8-36.6). The average age at the time of surgery was 15.8 years old (range, 11.7-19.9). All 20 athletes played baseball pre-operatively and had no injury history or previous elbow surgery. Two patients had complications post-operatively. One patient received surgery for contracture release and debridement 7 months post-operatively. The other patient had a repeat arthroscopic microfracture procedure 4 months post-operatively followed by placement of an osteochondral allograft 11 months post-operatively for continued symptoms. Furthermore, three patients sustained an injury to the throwing shoulder or elbow after the operation. Two patients reported that the post-operative injury was throwing-related. One sustained an elbow stress fracture which was treated non-operatively while the other had a UCL reconstruction at 48 months post-operatively. The last patient reported sustaining an acromioclavicular joint separation that was treated operatively but not related to baseball or throwing.

A total of 16 patients were available to complete the assessment. The average final follow-up was 5.5 (2.1-10.2) years with average KJOC of 64.6 (range, 13.9-97.0) and a Mayo Elbow Score of 90.0 (range, 60-100). Following surgery, 13/16 (81.2%) patients were able to return to their pre-injury sport and all returned to the same or higher level of competition. Seven patients reported improved symptoms, eight reported resolution of symptoms and one reported worsening of their symptoms after surgery. Overall patients were quite satisfied with their surgery, reporting an average 85.6% satisfaction rating.

**Conclusions:**

The results of this study indicate that elbow arthroscopy for osteochondral lesions in overhead throwing athletes is a reliable operation with 81.2% of athletes returning at the same or higher level of competition with low re-operation rates. In addition, these results boast a low complication rate and high patient satisfaction rate following elbow arthroscopy for OCD.

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