

Hip Arthroscopy in High Level Baseball Players

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Summary:

This study reports favorable outcomes of hip arthroscopy among high level baseball players and indicates how hip disorders affect the kinematic linkage as reflected by the 62% incidence of associated ulnar collateral ligament surgery among major league pitchers.

Abstract:

Introduction:

Hip disorders are known to be especially problematic in sports that place a premium on kinematic rotational velocity such as baseball with its intricate kinetics of the throwing motion and batting. There have been no studies reporting specifically on the role of hip arthroscopy in this population. The purpose of this study is to report the outcomes of hip arthroscopy in high level (college & professional) baseball players.

Methods: All patients undergoing hip arthroscopy are prospectively assessed with a modified Harris hip score performed preoperatively and then postoperatively at 3, 12, 24, 60 and 120 months. From this prospectively gathered database, 41 athletes including 45 hips (3 bilateral) were identified who competed at the scholarship intercollegiate or professional level and had achieved minimum one-year follow-up. This cohort represents the substance of this report.

Results:

There was 100% follow up at an average of 44 months (range 12-120 months). The average age was 23 years (range 18-34 years). There were 23 collegiate (1 bilateral) and 18 professional baseball players (2 bilateral) including 10 who competed at the major league level. There were 19 pitchers, 8 outfielders and 14 infielders (6 third basemen; 6 catchers). Among the pitchers, the push leg was involved in 12, the stride leg in 6, and 1 both. Also, among 8 major league pitchers, 5 (62%) had ulnar collateral ligament surgery of the elbow. The average improvement was 11 points (preop 81; postop 92). These players successfully returned to baseball following 42 of the 44 procedures (95%) at an average of 4.3 months (range 3-8 months). There were numerous diagnoses including: labral tears 32, cam FAI 16, combined FAI 12, pincer FAI 1, acetabular chondral lesion 36 (grade IV 12; grade III 17; grade II 1; grade I 6), femoral chondral lesions 1 grade IV, loose bodies 7, ruptured ligamentum teres 8, posterior acetabular fractures 2, and 1 snapping iliopsoas tendon; and there were various procedures performed including femoroplasty 28, acetabuloplasty 13, labral refixation 9, labral repair 1, labral debridement 30, chondroplasty 27 (10 microfractures), loose body removal 7, and 1 iliopsoas release. There were no complications although 2 players underwent repeat arthroscopy.

Discussion and Conclusion:

The hip is an essential element in the complex kinematic linkage of the throwing and batting mechanics in baseball. This is partly reflected by the 62% incidence of associated ulnar collateral ligament surgery among major league pitchers undergoing hip arthroscopy. Thus, hip disorders can be a significant cause of dysfunction and source of disability. This data spans more than a dozen years, spanning numerous technical advancements but demonstrates that hip arthroscopy in properly selected athletes can be successful in terms of improved outcome scores and return to baseball.