Results of Arthroscopic Treatment of SLAP Tears in the Throwing Athlete

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The purpose of this study is to retrospectively review the results of surgical treatment of superior labral anterior to posterior (SLAP) tears in a group of throwing athletes. Over the 3 year period from January 1999 to December 2001, 67 baseball players underwent arthroscopic repair of a SLAP lesion. Average age of the players was 22.5 years (range 16-31). Nineteen professional, 32 collegiate, and 16 high school players were included. Sixty of 67 were pitchers. There were 3 catchers, 2 infielders, and 2 outfielders. There were 54 Type II tears, 10 Type III tears, and 3 Type IV tears. All Type II and IV tears were treated by debridement and repair using bioabsorbable suture anchors (range 2 – 7 anchors). All Type III tears were treated by debridement alone. Forty-seven of 67 (70%) had associated pathology, most commonly partial thickness undersurface rotator cuff tears. All associated rotator cuff pathology was treated by simple debridement as none required formal repair. No patient demonstrated gross (3+) anterior instability. Patients were followed for a minimum of 24 months and an average of 30 months (range 24 – 40). All players were examined at 1 year post-op. At final follow-up 49 of 67 (73%) were examined with the other 18 reporting by telephone survey. The main outcome measurements included return to the same level of play, shoulder range of motion, and O'Brien's sign.

At one year post-op 56 of 67 (83.5%) had returned to the same level of throwing at any average of 10.25 months post-op (range 8-16) Of those returning to play 50 had no pain with throwing and 6 had only mild pain that did not limit their performance. At the time of final follow-up 52 of 67 (77.6%) were still competing at the same level or higher. Of the 4 who had dropped out of baseball none had done so as a direct result of his shoulder. Two were high school or college players who graduated and did not continue in baseball and 2 were minor league players released by their organizations. Post-op the average loss of shoulder external rotation in the abducted-externally rotated position was 3 degrees (range -5-18) Loss of external rotation in the 90-90 position correlated with poor outcome as all 5 patients with a post-op loss of ER of 10 degrees or more failed to return to play. Four players required re-operation with 2 revision repairs, 1 capsular release, and 1 repeat debridement. Only 1/4 undergoing re-operation was able to return to play. O'Brien's sign was positive in 54/67 (80.5%) pre-op and 11/67 (16.4%) post-op but did not correlate with outcome as on 2/7 failures had a positive post-op O'Brien's sign. The presence of rotator cuff pathology did not correlate with results as 4/7 (57%) had associated partial thickness cuff tears.

In conclusion, the surgical treatment of SLAP tears in throwing athletes yields a relatively high success rate in returning the athlete to baseball participation. Loss of external rotation in the throwing position correlates strongly with a poor outcome.