Title: Incidence and Return to Play after Biceps Tenodesis in Major League Baseball Players

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Objectives: Superior labral anterior-posterior (SLAP) tears are a common source of inability to play among baseball players of all levels. SLAP repair is unpredictable and thus biceps tenodesis (BT) has been proposed as an alternative. Furthermore, tenodesis may be indicated for pain isolated to the biceps tendon. The incidence of BT among professional baseball players is unknown, as are the rates of return to play (RTP). The purpose of this study was to determine RTP rates after BT among professional baseball players.

Methods: Major League Baseball (MLB) has maintained a prospective database containing all major and minor league baseball players who have undergone shoulder surgery since 2010. Using this database we determined the incidence, demographics, position, prior surgical history, concomitant procedures, RTP rates, time to RTP, and performance upon RTP for professional baseball players following BT. Minimum follow-up was 2 years.

Results: Between 2010 and 2013, 17 professional baseball players underwent BT, of which 71% were pitchers, and 29% were in the major league. Forty-seven percent had a history of prior shoulder surgery and 47% underwent concomitant labral repair. Overall RTP after BT was 35%. RTP for isolated BT was 44% in 0.8±0.5 years while RTP for those who underwent both BT and labral repair was 25% (p=0.620). All players who RTP were able to return to at least ten games at their pre-operative level of play. Return to professional play was significantly more common among position players than pitchers (80% vs. 17%, p=0.028). RTP was less common among players with prior shoulder surgery, but this was not statistically significant (56% vs. 13%, p=0.131). For those players who did RTP, pre-operative and post-operative performance was unchanged.

Conclusion: Professional baseball players who undergo biceps tenodesis have a 35% rate of return to their prior level of play. While pitchers have only a 16% rate of return to play, position players have an 80% rate of return to play. Furthermore, 100% of those who returned to baseball played at least 10 games at their pre-operative level with no significant change in performance statistics. Professional baseball players who choose to undergo biceps tenodesis should be counseled regarding the low rates or return to play. Pitchers in particular may have a poor prognosis following tenodesis. However, given the small sample size and concomitant procedures, further study is needed before definitive conclusions can be made.