

Return to Racket Sports after Shoulder Arthroplasty

Austin Vegas, Hans Enrique Lapica, Dylan Cannon, Hugo Cesar Rodriguez¹, Jose Rafael Garcia, Steven Patrick Lewis, Jonathan Chad Levy

¹Holy Cross Orthopedic Institute

INTRODUCTION:

Tennis and other racket sports remain popular amongst active patients considering shoulder arthroplasty. While the ability to return to tennis following hip and knee arthroplasty has been previously studied, the capacity to participate following shoulder arthroplasty is less well known, especially following reverse shoulder arthroplasty, which alters shoulder kinematics. This study aimed to evaluate patients treated with shoulder arthroplasty who identified tennis and racket sports as a preferred sport. We hypothesize that shoulder pain and performance will improve during racket sports similarly after both anatomic and reverse total shoulder arthroplasty, with a preserved capacity to participate.

METHODS: This is a retrospective cohort study of 43 patients identified as playing a racket sport recreationally before undergoing either anatomic total shoulder arthroplasty or reverse shoulder arthroplasty. All patients were cleared to return to racket sports activities beginning 3 months following surgery. Patients were contacted by phone or email and a racket sport-specific questionnaire was administered to patients focusing on their experience returning to racket sports after shoulder arthroplasty. The results following total shoulder arthroplasty (TSA) were compared with those who received reverse shoulder arthroplasty (RSA).

RESULTS:

The median age at surgery was 68 (46-80) years, with 26 (60%) total shoulder replacements and 17 (40%) reverse shoulder replacements. Of the 43 patients, 4 (3 RSA, 1 TSA) stated that they were unable to return to sport due to a shoulder-related complaint. The dominant arm was treated in 13 (50%) TSA and 10 (77%) of RSA patients. Regarding the 39 patients still able to play 18 (46%) returned within 6 months and 31 (79%) patients returned by 12 months following surgery, with no differences in time to return among cohorts. Overall self-perceived sport performance following surgery stayed the same or improved in 82% of the patients. Improvements in forehand, backhand, serving, ability to sustain a volley and ball speed were observed in a majority of patients. Similarly, overall enjoyment of racket sports either improved or stayed the same in 31/39 (79%) of patients. Pain experienced during racket sport improved significantly from a median VAS pain score of 6.8 to 1.3 ($p < 0.001$) with no significant difference seen when comparing RSA and TSA.

DISCUSSION AND CONCLUSION: Return to racket sports following both reverse and anatomic total shoulder arthroplasty is a realistic expectation, with significant improvements in pain and sport-specific function while playing. Patients treated with anatomic and reverse shoulder arthroplasty can expect similar racket sport experiences following surgery.