

Ability to Return to Play After Arthroscopic Shoulder Surgery in Professional Female Tennis Players

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Summary:

This study demonstrates in professional female tennis players, a high return to play rate following arthroscopic shoulder surgery is also associated with a prolonged and often incomplete return to previous level of performance

Abstract:

Introduction:

Recent publications have highlighted the relatively poor outcome of other overhead athletes, particularly baseball players, with regard to return to sports at the same or higher level after shoulder surgery. Thus, the need for shoulder surgery is particularly stressful to professional overhead athletes. However the outcomes following shoulder surgery in professional tennis players is not reported. We studied professional women's tennis players who underwent shoulder surgery, utilizing, among other factors, their ability to return to play based on the singles rankings as objective measure of return to preoperative function than simple 'return to play'.

Methods:

All female tennis players on the Women's Tennis Association (WTA) professional tour between January 2008 and June 2010 were reviewed to identify players who underwent shoulder surgery on their dominant (serving) shoulder. Details of the surgery including date, procedures performed, and complications were recorded. The primary outcomes were ability and time to return to professional play, and if they were able to return to their previous level of function, as determined by singles ranking. Pre and post-operative singles rankings were used to determine rate and completeness of return to preoperative function, thus their highest ranking pre-injury and post operatively and the timing of achieving the ranking post operatively were evaluated.

Results:

During the study period eight players underwent shoulder surgery on their dominant arm. All surgery was performed arthroscopically, 7 out of 8 players had more than one procedure performed during the surgery. In total, 3 players underwent debridement of a partial rotator cuff tear and 2 players underwent repair of a complete supraspinatus tear. Three players had an anterior labral repair or reconstruction for anterior instability, and one player underwent repair of a SLAP lesion. Two players underwent neurolysis of a suprascapular nerve, and three players in total underwent a subacromial decompression.

All players (100%) returned to professional play. The mean time to return to play was 6.7 months after surgery. However, only 25% (2 out of 8) players had achieved their pre-injury singles rank or better by 18 months post operatively. In total, three players (35%) returned to their pre-injury singles ranking, with their peak singles ranking being attained at a mean of 2.5 years post operatively.

Discussion:

This represents the first study to assess the outcomes of shoulder surgery in professional tennis players. This data is similarly concerning about the effect of shoulder surgery in professional overhead athletes, but somewhat better than professional baseball players. In our study while 100% of players returned to professional play, only 2 out of 8

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players achieved their previous singles ranking by 18 months post operatively. Ultimately, however, only 38% were able to achieve their pre-surgical singles ranking.

This study demonstrates in professional female tennis players, a high return to play rate following arthroscopic shoulder surgery is also associated with a prolonged and often incomplete return to previous level of performance. It is important to realize that it took approximately 2.5 years to return to prior ranking in those that ultimately did return to the same level. Thus, counselling the patient to this fact is important to manage their expectations.