INTRODUCTION

Superior labral tears anterior to posterior (SLAP) lesions were first described by Andrews et al in 1985. A descriptive classification system and the term “SLAP” was later coined by Snyder and Karzel. Since the recognition of these injuries, the diagnosis and resultant arthroscopic treatment has steadily increased. In fact, recent studies raise the concern that an unnecessary number of SLAP repairs are being performed with resultant complications. We present a case series of five patients that presented with persistent pain and stiffness following arthroscopic repair of a Type II SLAP lesion. Additionally, MRI demonstrated edema in the bicepital groove consistent with biceps tendinitis. These patients were treated with a biceps tenodesis. We followed their postoperative course and present their outcomes.

METHODS AND MATERIALS

A retrospective chart review was performed in four patients treated with a biceps tenodesis for poor outcome following Type II SLAP repairs. All of the patients were male and were aged from 32-48 years old. SLAP tears were deemed to be failed if symptoms persisted greater than six months and all conservative measures had failed. Preoperative pain, function, strength and range of motion were compared to postoperative outcomes following arthroscopy and biceps tenodesis. Patient satisfaction scores were obtained as well.

RESULTS

A chart review was performed for the four patients treated with a biceps tenodesis after a failed SLAP repair. The presenting complaint for three out of four patients was persistent anterior shoulder pain. The fourth patient stated that his primary complaint was stiffness, although he did have associated pain. All patients reported pain significant enough to disrupt their sleep at night andlimit activities of daily living. All were active duty military or manual laborers. A diagnosis of biopsy long term outcomes as well as on the basis of MRI findings of biceps tendon edema with or without diagnostic and therapeutic biceps tendon injection.

Intraoperative findings demonstrated all shoulders to have healed SLAP repairs, with previous anchors in place. However, there was significant erythema, synovitis, fraying, and in one tendon, a longitudinal split found in the biceps tendon. The first patient in the study underwent an open biceps tenodesis using the Arthrex SwiveLock slide kit, the remainder had an arthroscopic biceps tenodesis using the Arthrex SwiveLock system.

Improvement in pain was seen as early as the 4-week postoperative visit. Although two of the four patients reported occasional, cramping pain early on, they had no pain by ten and twelve weeks postoperatively. In regards to range of motion, all patients had returned to their preoperative forward flexion by four weeks and continued to improve. All patients demonstrated overall satisfaction as indicated by their request to move forward with rehabilitation at 10-12 weeks. The operating surgeon did stress the importance of following the protocol to allow for proper healing at the tenodesis site despite full pain relief. We will continue to monitor these patients long term outcomes as well as add patients to the study group.

SLAP lesions were originally described in overhead athletes, but as diagnostic tests and imaging have advanced, the incidence in non-athletes has been recognized as well. This has resulted in increased arthroscopic management of these lesions, particularly Type II lesions. Repair of SLAP tears is not without complications and in fact a recurrent theme in recent literature suggests a very narrow subset of patients that will benefit from actual SLAP repair. Suggested treatment options for older patients, for which the age group is constantly narrowing, are biceps tenotomy or tenodesis. Additionally, SLAP lesions are rarely found in isolation in the older patient and the literature suggests addressing comorbid pathology as vitally important to success of the surgery.

DISCUSSION

In fact some of the less optimal results were in overhead athletes, who were in the past the targeted population for SLAP repair. Even when the indications and patient population are strictly adhered to, there is a failure rate of up to 37%. Among these failures Katz et al report that only 29% will improve with conservative treatment, and of those that undergo revision surgery, 32% will continue to have suboptimal results. It should be noted that it is rare for failure to be a result of re-tear and is usually due to stiffness and pain.

CONCLUSIONS

We are reporting on a series of patients who have had persistent pain and stiffness after their index SLAP repair. Initial conservative management consisted of six months of physical therapy and injections. When the work-up for failure was performed and advanced imaging suggested biceps tendon pathology as indicated by bicipital grove edema on MRI, the patients were offered arthroscopic biceps tenodesis. All patients have had a decrease in pain and stiffness relatively early in their postoperative course and demonstrated greater satisfaction after tenodesis than their index procedure. We therefore suggest that biceps tenodesis is a viable option in failed SLAP repairs suggestive of biceps pathology.

REFERENCES

7. Schroder CP, Skare O, Gjengedal E, Uppheim G, Reikeras O, Brox JI. Long-term Results After SLAP Repair: A 5-Year Follow-up Study of 107 Patients with Comparison of Patients Aged Over and Under 40 Years. Arthroscopy 2012 (in press, available online only)