Arthroscopic Posterior Labral Repair in Active-Duty Military Patients: A Reliable Solution for an At-Risk Population, Regardless of Anchor Type

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INTRODUCTION:

Active-duty service members are a population at-risk for the development of posterior shoulder instability. While short-term outcomes data following arthroscopic posterior labral repair for posterior shoulder instability are promising, there is a paucity of longer-term follow-up data for this procedure. The primary purpose of this study is to report on the mid-term outcomes following arthroscopic posterior labral repair in active-duty military patients for posterior shoulder instability without bone loss. The secondary purpose was to determine if outcomes varied between anchor types used.

METHODS:

Pre-operative and post-operative evaluations with minimum 3-years follow-up including visual analog scale (VAS), the Single Assessment Numeric Evaluation (SANE) score, the American Shoulder and Elbow Surgeons Shoulder Score (ASES Score) and the Rowe Instability Score were collected and analyzed. A separate subgroup analysis was performed comparing outcomes of patients who underwent repair with biocomposite anchors versus those who underwent repair with all-suture anchors. Figure 1 depicts arthroscopic confirmation of a posterior labral tear and Figure 2 depicts a repair performed with double loaded suture anchor.

RESULTS:

A total of 73 patients with mean follow-up of 82.55±24.2 months met the inclusion criteria and were available for analysis (Figure 3, Table 1).

As a whole, the cohort demonstrated statistically and clinically significant increases in outcome scores at minimum 3-years follow-up ($p < .001$) while pre- and post-operative range of motion did not vary significantly (Table 2). Outcomes were highly clinically significant as well, with a majority of patients achieving the minimum clinically important difference (MCID), reaching substantial clinical benefit (SCB) and meeting the patient acceptable symptomatic state (PASS) as defined for the VAS, SANE, ASES and Rowe Instability score (Table 3)

While the difference in final outcome scores between the two anchor types did not reach statistical significance, a statistically significantly larger proportion of patients who underwent repair with all-suture anchors met the PASS, as determined by both the SANE (p-value 0.018) and the ASES score (p-value 0.0171) (Table 4, Table 5). Overall, 70/73 (95.9%) of patients remained on active duty and were able to return to preinjury work and recreation activity levels. In three patients (4.1%), the repair did not heal.

DISCUSSION AND CONCLUSION:

Mid-term outcomes in this population of active-duty service members undergoing posterior labral repair for posterior labral instability without bone loss demonstrate a statistically and clinically significant improvement in outcomes, low recurrence rate and overall return to active-duty rate of 95.9%, regardless of anchor type used.