

Franceschi F, Longo UG ,et al. No Advantages in Repairing a Type II Superior Labrum Anterior and Posterior (SLAP) Lesion When Associated With Rotator Cuff Repair in Patients Over Age 50 A Randomized Controlled Trial, Am J Sports Med 2008;36(2):247-253.

Design: Randomized clinical trial

Study question: In patients over 50 with Type II SLAP lesions and rotator cuff tears, do the outcomes of repairing both the rotator cuff and the SLAP lesion differ from the outcomes of repairing the rotator cuff and performing a tenotomy of the long head of the biceps (LHB)?

Population/sample size/setting:

- 63 patients (33 men, 30 women, mean age 63) treated for rotator cuff tears and Type II SLAP lesions in a university orthopedics department in Kent, England
- Eligibility criteria were age over 50 with rotator cuff tear diagnosed clinically, MRI evidence of a cuff tear and a Type II SLAP lesion, symptoms lasting at least 3 months, inadequate response to NSAIDs, PT, and at least one steroid injection, and absence of shoulder instability
- Exclusion criteria were radiographic signs of glenoid fracture or fracture of the greater or lesser tuberosity, inflammatory joint disease, prior surgery on the affected shoulder, an arthroscopic diagnosis of subscapularis tendon tear, or inability to complete questionnaires

Main outcome measures:

- All patients underwent a diagnostic arthroscopy to ascertain the status of the rotator cuff and the SLAP lesion, at which time the patients who met eligibility criteria were randomized by opening a sealed envelope
 - o Rotator cuff repair was done in all patients by the same surgeon, who debrided the tendon margins, prepared the bone bed with a shaver, and placed suture anchors to repair the lesion
 - o Postoperative management was the same for both groups, with passive external rotation started on the first postop day, a sling for 6 weeks, and strengthening initiated 10-12 weeks after the surgery and lasting 6 months
- Randomization was to rotator cuff repair plus SLAP repair (n=31) or cuff repair plus tenotomy of the LHB (n=32)
 - o SLAP repair was done with suture anchors whose placement was determined by the findings of the diagnostic arthroscopy
 - o LHB tenotomy was done by a simple resection as close as possible to the superior labrum
 - o SLAP repair took longer (mean 90 minutes) than LHB tenotomy (mean 60 minutes)

- No patient had complications arising from infection, neurologic, or vascular injury
- The main outcome was a modified UCLA score which was measured at an average of 5.2 years (range from 2.9-7.8 years) after surgery
 - The classical UCLA score (10 points for pain, 10 points for function, 5 points for active forward flexion, and 5 points for strength, was modified by adding a patient satisfaction score worth 5 points
 - An excellent result was considered to be 34-35 points; a good score was 28-33 points, a fair score was 21-27 points, and a poor score was 0-20
- Both groups had substantial improvements in UCLA scores at the final followup
 - The SLAP group improved from a baseline UCLA score of 10.4 to a final UCLA score of 27.9
 - The LHB tenotomy group improved from a baseline UCLA score of 10.1 to a final UCLA score of 32.1
 - The LHB group UCLA scores were judged to be statistically superior to the SLAP repair group ($p < 0.05$), but group differences and confidence intervals are not reported
- In the SLAP repair group, 8 patients had been active in sports, and 3 returned to their preinjury level of participation; in the LHB tenotomy group, 6 had been active in sports, and all 6 returned to their preinjury level of participation
- No patient in the SLAP repair group had a Popeye sign at final followup; 19 patients in the tenotomy group had a Popeye sign, but none were bothered by it
- ROM measured by goniometer improved in both groups on forward flexion, external rotation, and internal rotation, with somewhat greater ROM in the tenotomy group at final followup

Authors' conclusions:

- The combination of LHB tenotomy with rotator cuff repair provides better clinical outcomes than SLAP lesion repair with rotator cuff repair in patients who have both a rotator cuff tear and a Type II SLAP lesion
- A power calculation was not done, but sample size was planned according to the capacity of the treating facility to enroll and treat patients within the time allocated for the study
- It is unlikely that there are any advantages to repairing a SLAP II lesion in patients over 50 when a rotator cuff undergoes repair; LHB tenotomy provides better results and requires less operating time

Comments:

- Randomization at the time surgery is underway guarantees that allocation concealment has been preserved and that intention-to-treat analysis will coincide with as-treated analysis, protecting the study from two potential sources of bias
- The ROM measurements are not clearly blinded, and the group differences are susceptible to bias; the greater ROM of the tenotomy group may be biased
- The overall UCLA scores depend more on patient report than examiner bias, and the better UCLA scores in the tenotomy are less susceptible to bias than the ROM scores
- Outcomes are reported numerically in terms of means and ranges rather than means and variances, and the group differences in outcomes are not presented; the conclusion that tenotomy is at least as good as SLAP repair is still likely to be supported by the data
- There is a wide variation in the total followup time, and 7 patients (2 in the SLAP group and 5 in the tenotomy group) did not return for the final followup
 - o All patients were included in the final analysis, but it is not clear whether there were interim examinations from which the scores of the 7 lost patients were taken; if the analysis was done by a last observation carried forward, those last observations may have had lower UCLA scores than the final scores, which would make it unlikely that the final analysis would be biased in favor of the tenotomy group

Assessment: adequate for some evidence that in patients over 50 who have both rotator cuff repairs and Type II SLAP lesions, the outcomes of a tenotomy of the long head of the biceps are at least as good as those of repairing the SLAP lesion, and the operating time is likely to be shorter