

## The Management of the Long Head of the Biceps in Rotator Cuff Repair: Prospective Cohort Study of High Versus Subpectoral Tenodesis

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### Summary:

The open subpectoral tenodesis is an easy and reproducible technique, leading to better clinical and cosmetic results when compared to the high arthroscopic tenodesis. On the other hand, the arthroscopic high tenodesis is a less expansive and faster procedure.

### Abstract:

**Background:** Tendinopathy and lesion of the long head of the biceps are common causes of pre- and postoperative pain in patients undergoing arthroscopic rotator cuff repair. Therefore, the management of the LHB is a key-point in shoulder arthroscopy, as it may have a strong influence on the final outcome of surgery. The purpose of this study is to compare the clinical results of arthroscopic high tenodesis (incorporated into rotator cuff repair) versus open subpectoral tenodesis of the LHB.

**Methods:** Forty patients with a rotator cuff tear and associated LHB lesion (tendinopathy, partial tear, SLAP 2, subluxation) were divided in two groups. Twenty patients underwent arthroscopic high tenodesis and twenty underwent open subpectoral tenodesis. Postoperative patient evaluation included VAS, Constant score, the Simple Shoulder Test (SST) score, the LHB score and the cosmetic results with a minimum follow up of 12 months.

**Results:** At early (3 months), intermediate (12 months) and final follow up (24 months) both groups showed a significant improvement in Constant score and SST score. At 24 months, Constant score improvement was better in the second group 70 vs. 81.5,  $p < 0.05$ , especially considering the Pain subscale (7 vs. 13,  $p < 0.05$ ). No statistical significance was achieved for the SST score, while LHB score was statistically better in the subpectoral tenodesis group (75 vs. 90,  $p < 0.05$ ). Moreover, the open subpectoral group showed better cosmetic results, with one popeye deformity in the high tenodesis group. Immediate post-operative pain assessed by the VAS scale was comparable in the two groups.

**Conclusions:** The open subpectoral tenodesis is an easy and reproducible technique, leading to better clinical and cosmetic results when compared to the high arthroscopic tenodesis. On the other hand, the arthroscopic high tenodesis is a less expansive and faster procedure.

Level of evidence: cohort study. Level of evidence 2.