

Arthroscopic Biceps Augmentation for Bridging the Gap in Massive Rotator Cuff Tears

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Purpose

To evaluate the outcome of massive rotator cuff tears repaired using arthroscopic biceps augmentation technique, and compare clinical results between patients with and without it.

Methods

Between January 2001 and September 2006, sixty eight shoulders with massive rotator cuff tears were included. Arthroscopic repairs with biceps augmentation technique were performed in 37 patients (Group A) while 31 patients underwent those without biceps augmentation (Group B). The mean follow-up period was 21 months (range, 14 to 78 months) in Group A and 20 months (range, 13 to 63 months) in Group B.

Results

The mean preoperative Constant score, which was 38.5 points (range, 19–63 points) in Group A and 35.8 points (range, 19–58 points) in Group B, improved to 82.6 points (range, 69–96 points) in the former and 81 points (range, 55–96 points) in the latter. The UCLA score improved from preoperative means of 14.1 points (range, 6–21 points) and 13.9 points (range, 7–22 points) to 32.6 points (range, 22–35 points) and 30.3 points (range, 20–35 points), respectively. Analysis of the postoperative repair integrity with use of a magnetic resonance imaging showed complete healing in 58.3% (14 out of 24 cases) of Group A and 26.3% (5 out of 19 cases) of Group B ($p=0.036$).

Conclusions

Arthroscopic augmentation using a tenotomized biceps tendon was effective in achieving a good tendon to bone repair by reducing the tendon defect in massive rotator cuff tear. We would also like emphasize that this technique was particularly useful in bridging the gap in immobile massive rotator cuff tears with posterior defects and retraction.

Key Words: Shoulder, Long head of biceps tendon, Massive rotator cuff tear, Arthroscopy, Rotator cuff repair