

- Abstract No. : F-0086
- Category : Shoulder
- Detail Category : Rotator cuff

Does Biceps Rerouting Improve Outcomes After Patch Augmentation for Large and Massive Rotator Cuff Tears?

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Introduction and Background

Large and massive rotator cuff tears (LMRCTs) remain challenging because of high retear rates. Patch augmentation may improve healing, and biceps rerouting has been proposed to enhance anterior cable stability. We compared clinical, functional, and structural outcomes between patch augmentation alone and patch augmentation with concomitant biceps rerouting.

Material and Method

We retrospectively reviewed 81 patients with large or massive RCTs treated arthroscopically with patch augmentation (Patch, n=63; Rerouting, n=18). Outcomes (ASES, Constant, VAS pain, forward flexion and external rotation, and isometric strength) were assessed preoperatively and at 1 and 2 years. Retear was evaluated with MRI or ultrasound and classified as type I (footprint failure) or type II (medial cuff failure). Logistic regression examined associations between retear, Goutallier grade, and treatment group.

Results

Both groups showed significant improvements in all clinical and functional measures at 1 and 2 years (all $p < 0.01$). Between-group differences were not significant except for a higher Constant score in the Rerouting group at 2 years (81.4 ± 7.3 vs. 76.5 ± 13.3 , $p = 0.046$). Retear occurred in 23 of 81 shoulders (28.4%), with similar rates between Patch (30.2%) and Rerouting (22.2%) groups ($p = 0.717$). Retear pattern differed: type I failures predominated in the Patch group, whereas type II medial failures were more frequent in the Rerouting group. Higher preoperative Goutallier grade was associated with retear (2.65 vs 2.22 , $p = 0.042$) and independently predicted structural failure (OR 1.99; 95% CI 1.06–3.71; $p = 0.031$), while biceps rerouting did not (OR 0.43; $p = 0.226$).

Conclusions

Both techniques provided significant improvement for LMRCTs, with overall outcomes comparable between groups. Biceps rerouting did not reduce retear rates but was associated with a shift in failure pattern. Tendon quality, particularly fatty degeneration, remained the strongest predictor of healing. Further stratified studies are needed to clarify the clinical value of adding biceps rerouting to patch augmentation.



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KSES 2026

The 33rd Annual
International Congress of the
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March
27(Fri) ~ 28(Sat), 2026
BEXCO, Busan, Korea

Figure & Table 1.

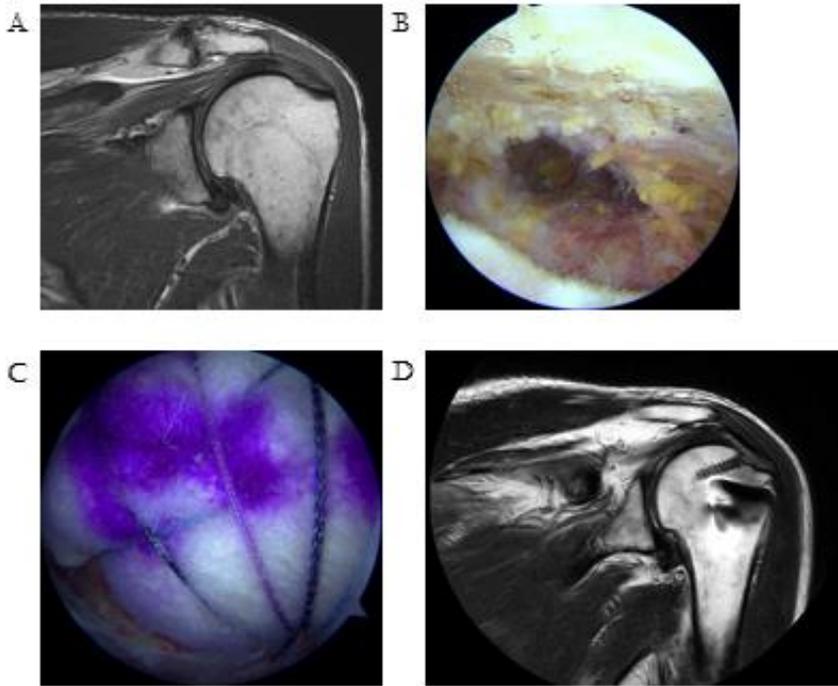


Figure & Table 2.

