

Preliminary Results of Arthroscopic Superior Capsule Reconstruction with Dermal Allograft

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Summary:

Superior capsule reconstruction with dermal allograft provides functional outcome and patient satisfaction in the majority of cases at short-term follow-up

Abstract:

Purpose: Superior capsule reconstruction (SCR) with fascia lata autograft has been proposed as a joint-preserving solution for irreparable massive rotator cuff tears (MRCT). Dermal allograft limits donor-site morbidity, has been used previously in augmentation of rotator cuff repairs, and has been used clinically for SCR. However, no studies have reported on the outcomes of arthroscopic SCR with dermal allograft. Our purpose was to evaluate the short-term outcomes of arthroscopic SCR with dermal allograft.

Methods: A multi-center prospective study was performed on patients undergoing arthroscopic SCR for irreparable MRCTs. The minimum follow-up was 1 year. Range of motion and functional outcome according to VAS pain, ASES score, and SANE score were assessed preoperatively and at final follow-up. Radiographs were used to evaluate the acromiohumeral distance (AHD).

Results: 31 patients with a mean age of 61.7 years had a minimum follow-up of 1 year. Fourteen patients (45.2%) had a prior rotator cuff repair. Forward flexion improved from 129° preoperatively to 156° postoperatively, and external rotation improved from 32° to 43° respectively ($p < .05$). Compared to preoperative values, VAS decreased from 5.7 to 1.5, the ASES score improved from 44.9 to 83.0, and SANE score improved from 35.8 to 76.5 ($p < .05$). The AHD was 6.6 mm at baseline, and improved to 7.3 mm at the 2 weeks postoperative. Twenty-three patients (74.2%) were satisfied with the procedure. Five patients (16.1%) underwent a revision procedure including 3 reverse shoulder arthroplasties.

Conclusion: Arthroscopic SCR using dermal allograft provides functional improvement and patient satisfaction in the majority of cases. The preliminary results of this joint-preserving technique are encouraging in an otherwise difficult to manage patient population. However, further study is needed to examine the long-term outcome and need for secondary procedures, and evaluate the learning curve of the procedure as these results represent our initial patients.