

The Effect of Concomitant Glenohumeral Joint Capsule Release During Rotator Cuff Repair: A Comparative Study of 195 Arthroscopic Rotator Cuff Repairs

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Summary:

This study showed that patients who have an arthroscopic rotator cuff repair concomitantly with a glenohumeral joint capsule release for frozen shoulder experience very similar clinical outcomes to rotator cuff repair-only patients with the exception that their repairs heal with superior integrity.

Abstract:

Background: There is debate as to whether to operate or defer surgery on patients with concomitant rotator cuff tear and shoulder stiffness. The purpose of this study was, therefore, to compare the outcomes in those patients who had both their rotator cuff tear and shoulder stiffness treated with patients who had a rotator cuff repair but no stiffness.

Methods: 1232 primary arthroscopic rotator cuff repairs were performed during the study period, including 44 patients who received a concomitant glenohumeral joint capsule release for ipsilateral shoulder stiffness, forming the stiffness group. A chronologically matched group of four rotator cuff repair-only patients before and after each stiffness patient were chosen from the consecutive list of rotator cuff repairs. Twenty-five patients from the stiffness group and 170 patients from the non-stiffness group met the inclusion criteria, leaving a total cohort of 195 patients. Patients completed modified L'Insalata Questionnaires for patient-ranked pain and function scores pre-operatively, intra-operatively, and at one week, six weeks, 12 weeks, six months and two-years post-operatively, while examiners recorded range of motion, strength, and presence of impingement signs.

Results: Patients from both groups had significantly improved clinical outcomes at the two-year follow-up as compared to pre-operative values. Range of motion was similar between groups at two-years for forward flexion, abduction and external rotation, while the non-stiffness group had a superior range of internal rotation ($p < 0.02$). Stiffness patients had 0/25 (0%) re-tears at two years, significantly less ($p = 0.009$) than the non-stiffness patients (34/170 [20%]).

Conclusions: This study showed that patients who have an arthroscopic rotator cuff repair concomitantly with a glenohumeral joint capsule release for frozen shoulder experience very similar clinical outcomes to rotator cuff repair-only patients with the exception that their repairs heal with superior integrity. The good outcomes of rotator cuff repair with capsular release suggest that there is no advantage in delaying surgical repair of a rotator cuff tear to allow for stiffness to resolve. In contradistinction, the data presented in this paper suggests that shoulder stiffness with glenohumeral joint capsule release, confers an advantage in terms of repair integrity.