

# Postoperative Triamcinolone Injection Can Improve the Shoulder Range of Motion without Capsular Release during Arthroscopic Rotator Cuff Repair in the Patients of Rotator Cuff Tear with Stiffness: A Prospective Randomized Clinical Trial

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## INTRODUCTION:

This study is to investigate whether postoperative corticosteroid injection after arthroscopic rotator cuff repair (ARCR) in rotator cuff tear (RCT) patients with stiffness would improve the clinical outcome of the operated shoulder without capsular release during ARCR.

## METHODS:

From March 2020 to September 2021, a total of 73 patients who had RCT with stiffness and were scheduled for ARCR was enrolled prospectively and randomly allocated into 2 groups. The patients who underwent ARCR with capsular release were allocated to group 1 (n = 37). The patients who underwent ARCR without capsular release and were injected with 1mL triamcinolone acetate (40mg/1cc) and 1.5mL of 2% lidocaine hydrochloride into the glenohumeral joint 2 months after surgery were allocated to group 2 (n = 36). The American Shoulder and Elbow Surgeons scale (ASES), Constant score, Korean Shoulder Scale (KSS), visual analog scale (VAS) pain score, and shoulder range of motion (ROM) were evaluated before surgery; 3, 6, and 12 months after surgery; and at the last follow up. Magnetic resonance imaging was performed at postoperative 12 months.

**RESULTS:** The mean follow-up period was 20.5 months. The functional and VAS pain scores in both groups were significantly improved at the last follow up ( $P < .05$ ). The postoperative 3-month VAS pain score of group 2 was significantly lower than that of group 1 (group 1;  $3.4 \pm 1.5$ , group 2;  $2.1 \pm 1.0$ ,  $P < 0.0001$ ). VAS pain scores were not significantly different between the 2 groups at postoperative 6 months or 12 months or at the last follow up ( $P > .05$ ). Functional scores and ROM were not significantly different between the 2 groups at postoperative 3, 6, or 12 months or at the last follow up ( $P > .05$ ). The retear rate of repaired rotator cuff during follow up was not significantly different between the 2 groups ( $P = 0.71$ ).

## DISCUSSION AND CONCLUSION:

Corticosteroid injection in the glenohumeral joint performed 2 months after ARCR in RCT patients with stiffness is as effective as capsular release during ARCR for improving clinical outcome of the operated shoulder.