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Arthroscopic treatment of chronic calcific tendonitis with rotator cuff tendon repair

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Background

Relatively large calcific materials on shoulder with persistent symptom after long duration of conservative treatment can be selected for operative treatment. Arthroscopic removal has been popular due to less invasiveness, however complete removal of the calcific material sometimes leaves surgeon with a large hole in the rotator cuff tendon, especially the supraspinatus tendon. Repair of this tendon might be essential since this hole is too large to heal itself.

Purpose

The purpose of this study is to evaluate the clinical results of complete arthroscopic removal of calcific deposits with or without repair of the rotator cuff tendon and to compare any difference in suture anchor repair group with side-to-side repair or debridement group

Methods

From 2005 to 2006, 28 consecutive patients were operated for resistant calcific tendonitis. Among them 3 were dystrophic type calcification with combined rotator cuff tear, one had combined preoperative infection, and one was lost at final follow up, so total of 23 were included for study. Preoperative and postoperative radiographs, the Constant score, Pain visual analogue scale (PVAS), and pain-relieving time were assessed. All patients received arthroscopic surgery, in which complete excision was attempted in all cases with or without suture anchor repair of the defect in the rotator cuff tendon

Results

There were 5 men and 13 women. The mean symptom duration prior to surgery was 49 month. Preoperative radiograph showed 14 type A (61%) and 9 type B (39%) calcification, according to French Arthroscopy Society classification. All patients had calcification greater than 5 mm in any one diameter. The mean postoperative follow-up was 12.6 months (3-20 month) Thirteen patients had calcific material removal and complete tear in rotator cuff tendon (mainly supraspinatus tendon) who needed a suture anchor repair. Ten patients received either side-to-side repair or simple debridement. Complete excision was possible in 20 patients (87%) and 3 (9%) showed some remaining calcific deposits after surgery. The Constant score improved from 63.1 to 87.3 ($P=0.0002$). Seven patients developed secondary stiff shoulder (suture anchor group 5 and non-suture anchor group 2). There were no statistically significant differences between two groups in terms of stiffness or the final outcomes. Pain relief was seen within 6 months after surgery

Conclusions

Arthroscopic complete removal of calcific deposit with or without suture anchor repair can result good to excellent outcome at postoperative 1 year. There were no difference between suture-anchor repaired group and non-suture anchor repaired group in terms of postoperative stiffness and clinical outcome score. Pain relief was seen within 6 months postoperative period

Key Words: Calcific tendonitis, Arthroscopic removal, Suture anchor repair