



**IS ARTHROSCOPIC LOCALIZATION, REMOVAL AND TENDON DEFECT REPAIR OF CALCIFIC TENDENITIS ENUF OR SHOULD WE ALSO DO A SUBACROMIAL DECOMPRESSION?**  
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**Aim**

In this study we will evaluate the arthroscopic treatment of therapy resistant calcific tendinitis by removal of calcium and repairing the defect through end to end repair or transosseous closure with decompression in selected cases based on measuring the space between the anterior acromion and the cuff with a special device. Standards of decision making concerning the need of repair and or subacromial decompression after calcium removal and the results will be presented.

Surgical treatment of calcific tendinitis Calcium by arthroscopic calcium removal leaving a defect variable in size which is not always without symptoms. Only few publications dealt with the results of arthroscopic calcium removal and transosseous repair of the defect and if there is a need for subacromial decompression to be done.

**Methods**

Thirty-six patients with calcifying tendinitis were operated between 2012 and August 2016. This study retrospectively evaluated these cases with a preoperative duration of symptoms ranging between 6 months and 11 years. The average follow up was 5 years (ranging from 4 to 8 years). There were 22 women (61%) and 14 men(39%).The average age at the surgery was 56 years with a range of 42 to 73 years. Pre-operative radiographs (Supraspinatus outlet views) reveal average Anterior acromion-tendon distance of 8.6 mm ranging from 6 to 11 mm. An arthroscopic anterior acromioplasty was done if the measured space between the anterior acromion and the tendon after calcium removal was less than 12 mm, based on a previous study, and a trans arthroscopic calcium removal and arthroscopic cuff repair was done in all cases. There were 32 small defects and 4 medium-sized defects. An end-to-end arthroscopic repair was done in 17 cases and transosseous repair using the giant needle in 19. All cases were done in an outpatient setting. All patients had significant impairment before surgery despite conservative treatment.

**CASE 1**

Surgery was performed under general anaesthesia  
 Patient was placed in 80 degrees sitting position

**PORTALS**

Posterior medial  
 lateral posterior  
 Lateral anterior

**NEEDLE LOCALIZATION**

**Calcium excision**

- Using an arthroscopic curette and shaver for excision of the calcium and debridement of the edges of the cuff defect

**Debridement**

- Using an arthroscopic curette and shaver for excision of the calcium and debridement of the edges of the cuff defect

**Tendon Repair (Giant Needle)**

- Shaving of the insertion of the supraspinatus (footprint)

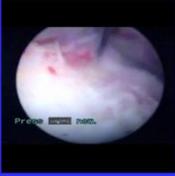
**Tendon Repair (Giant Needle)**

- Abrasion of the cortical bone



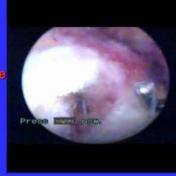
### Tendon Repair (Giant Needle)

- Pass the Giant Needles through the tendon
- And the hole in the cortical bone



### Tendon Repair (Giant Needle)

- Suture passes through the tendon, the bone and out through the shaft about 2 cm below the tendon insertion.



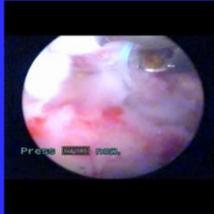
### Tendon Repair (Giant Needle)

- Pull out the lower limb of the suture through the instrumentation portal with a hook



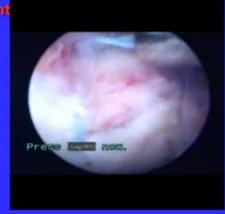
### Tendon Repair (Giant Needle)

- Pull the upper limb through the instrumentation portal with a ring forceps



### Tendon Repair (Giant Needle)

- Tie the suture (Giant knot is used)



## Results

There were no postoperative complications. All the patients returned to do active sport. According to Neer's classification 35 cases were rated excellent and one satisfactory. According to modified UCLA scoring 34 patients were excellent and two patients were good without fair or poor results. The improvement in the UCLA score was statistically significant. The average pre-operative total rating was 14.1 and the post-operative rating was 33.9.

## Conclusions

Calcium removal and tendon repair combined with subacromial decompression in cases of narrow subacromial space based on space measurement has proven to be a very reliable strategy of treatment in this series. There were no postoperative complications. All the patients returned to do active sport. According to Neer's classification 35 cases were rated excellent and one satisfactory. According to modified UCLA scoring 34 patients were excellent and two patients were good without fair or poor results. The improvement in the UCLA score was statistically significant. The average pre-operative total rating was 14.1 and the post-operative rating was 33.9.