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*Case Report*

# Arthroscopic treatment for calcific tendinitis; a case report

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**Abstract**

Calcific tendinitis is a common cause of shoulder pain, peaking in the fourth and fifth decades of life. The excruciate pain; especially during the night is the symptom who brings patient to the doctor. In many cases conservative treatment is the best choice. Sometimes it doesn't work and is necessary operative treatment.

It is presented a case of 60 years old women who had calcific tendinits for several years and accused pain few months with absence of improvement after conservative treatment. The patient was treated surgically with removal of calcium deposit arthroscopically. After surgery, pain relief was dramatic and movement increased rapidly. Results were very good with no complications.

As a conclusion, arthroscopic evacuation of calcific deposit could be considered the best solution for patients whose symptomatology fail to improve after conservative treatment.

**Keywords**: arthroscopic, therapy, calcific tendinitis

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## Introduction

Calcific tendinitis is responsible for a sever shoulder pain in patients with age between 40-60 years. The symptoms are located on, or within the supraspinatus tendon adjacent to the insertion on the greater tuberosity and can lead often to frozen shoulder. The cause of this pathology remains unknown. Some authors belief that the calcifications begins with an area of hypoperfusion in distal portion of the supraspinatus tendon, just near the insertion on greater tuberosity. The hypoperfusion is believed to initiate degenerative changes. Others think is related to minimal degenerative changes (1-4).

Sarkar and Uhthoff described three phases of the calcification process, usually termed "formative', "resorptive' and "chronic". In phase I (formative) calcium is deposited into matrix vesicles and appears chalk-like if removed. In phase II (resorptive) vascular channels appear at the periphery of the deposit and begin the calcium resorption. This stage is exceedingly painful and many patients seek treatment at this time. The calcium deposit is like cream or toothpaste. The phase III (chronic) is characterized as persistent symptoms and radiographic evidence of calcific tendinitis that does not resolve within 6 months (5-7).

The nonoperative management is the initial treatment of choice for all patients. This includes physical therapy, exercises, anti-inflammatory medications and steroid injections, needling and shock-wave therapy. If this treatment fails, the surgery should be considered (8-11). There are few contraindications for surgery and these include: medical preoperative status incompatible with surgery, local skin infection and a level of symptomatology that do not warrant surgical treatment (12-14).

## Case Report

We present a case of 60 years old woman with big calcific tendinitis at left shoulder (Figure 1) for a few years, with acute symptomatology for many months.

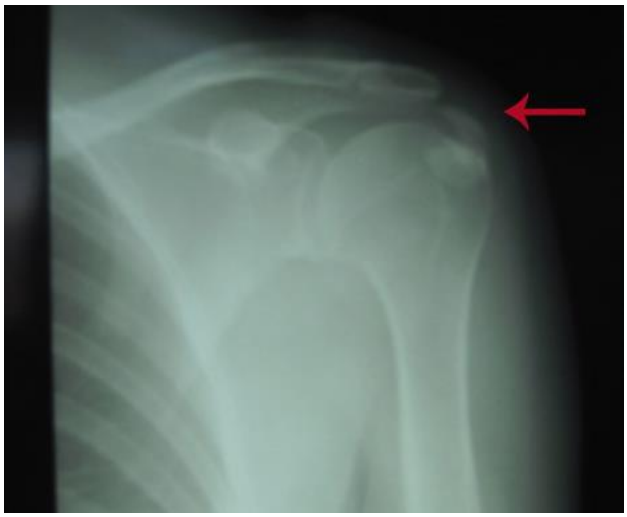

**Figure 1.** Calcific tendinits at left shoulder

She tried to manage symptomatology with conservative treatment, but this failed, the symptoms didn't disappeared. She could not sleep during the night; the range of motion was very limited and painful and anti-inflammatory medication were without any effect (Figure 2).


**Fig 2**. Range of motion preoperative; a) frontal view, b) lateral view

At clinical examination, abduction was 35 degrees, flexion less than 40 degrees, external and internal rotation imposible. She felt pain at the insertion of supraspinatus, at the level of calcification.

Because her condition, we consider surgical intervention to be the optimal solution. An arthroscopic intervention was chosen for the avantages of this procedure: good evaluation of the joint and rotator cuff, protection of deltoid with less morbidity, minimal invasive evacuation under direct vizualization of the calcic deposit.

**Figure 3.** Beach-chair position; bony landmarks and portals marked with steril marking pen

Equipment includes the standard arthroscopic equipment, a spinal needle, a curette and a shaver. We performed the procedure with patient in beach-chair position. All bony proeminences were carefully padded. An antibiotic was administrated preoperatively. The bony landmarks of the shoulder (acromion, acromio-clavicular joint and coracoid) as well as the planned portal sites were marked on the skin with a marking pen. For surgical intervention we used posterior, anterior and lateral portals (Figure 3). After a careful inspection of the gleno-humeral joint, the scope was moved in subacromial space. We performed a rutine bursectomy and subacromial decompresion. Under direct visualisation the calcium deposit was evacuated. Because the hol resulted was no big, a secondary suture of muscle was not necessary (Figure 4).

**Figure 4.** Arthroscopic visualisation of joint and subacromial space

After the operation the patient was imobilised for a few hours in a sling and begun immediately full passive range -of- motion exerses and active- asssited range of motion exercises. Because patients with calcific tendinitis can develop stiffness, we encouraged to perform these exercises frequently (four, or five times daily). For our patient full range of motion was regained quikly, in a few weeks (**Figure 5**). The follow up was at 2 weeks, 6 weeks, 6 months and one year.

**Figure 5.** Postoperative range of motion at one year

## Discussion

Calcific tendinitis is a common cause of shoulder pain, peaking in the fourth and fifth decades of life. Sometimes de calcium deposit is discovered at routine imaging investigation. If is symptomatic, determines patient to go to the doctor. Often symptomatology is severe, especially during the night, limiting range of

motionand developing stiffness. In majority of cases the management of this condition is conservative consisting from nonsteroidal or steoirdal anti-inflammatory medication, and physical therapy (15).

If this fails, surgical intervention is chosen solution. Although open technique have been successful, the arthroscopic technique has some advantages: a better visualization of glenohumeral joint and subacromial space, possibility to perform, when is necessary, decompression and less deltoid morbidity which allows patient to begin rehabilitation as soon as possible (next day after surgery). Hospitalization was very short (24 hours) and patient begun range of motion immediately (16).

## Conclusions

Results were very good with no complications. We consider arthroscopic evacuation of calcific deposit the best solution for the patient whose symptomatology fail to improve after conservative treatment.

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