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Research Article

Place of Arthroscopy in the Treatment of Calcifying Tendinitis of the Shoulder

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Abstract

Calcifying tendinitis is a common pathology among women, responsible for chronic shoulder pain, its preferential location is in the supraspinatus and infraspinatus. Its long-term evolution proves that it is a transient affection from where the interest to continue the ongoing medical treatment and a long-term functional reeducation, the surgery especially arthroscopic had to be reserved for the failures of the adapted medical treatment, continued for more than a year.

We present the results of treatment under arthroscopy of two patients having calcifying tendinitis, with literature review.

Keywords: *Calcifying Tendinitis; Acromioplasty; Arthroscopy*

Introduction

Calcifying tendinitis is a frequent pathology, with an incidence of 7.3% of the general population and a predominance in women, cause of chronic shoulder pain, arthroscopy can accelerate the natural healing process, many studies have reported good results from arthroscopic treatment.

Materials and Methods

We present two cases of calcifying tendinitis of the shoulder in two patients aged 51 and 55 years respectively, with no significant history, calcifying tendinopathy concerned the right shoulder for the first patient and the left one for the second, all of them presented with painful symptoms. evolving for more than 06 months, additional examinations included standard front radiographs in neutral, internal and external rotation with Lamy's profile, accompanied by an ultrasound of the shoulder, there was no associated cuff rupture, the type of calcifications were type A for both patients (Figure 1 and 2), they were at the expense of the supraspinatus tendon, after failure of medical treatment and rehabilitation of about a year, they benefited from excision under arthroscopy with associated acromioplasty; the surgery was performed in a half-seated position without traction with prior drawing of the arthroscopic approaches (Figure 3), the procedure started with bursectomy, joint exploration and rotator cuff condition, identification of calcification using a needle, then an incision in the axis of the tendons of the cuff and excision using a Shaver or a curette and finally an acromioplasty was performed systematically (Figure 4).

The patients were discharged first day postoperatively with a prescription of analgesic and immobilization by sling for 7 to 10 days, the passive pendulum movements were started on the day of discharge and the active movements at 3 weeks and resumption of activities after 6 weeks.

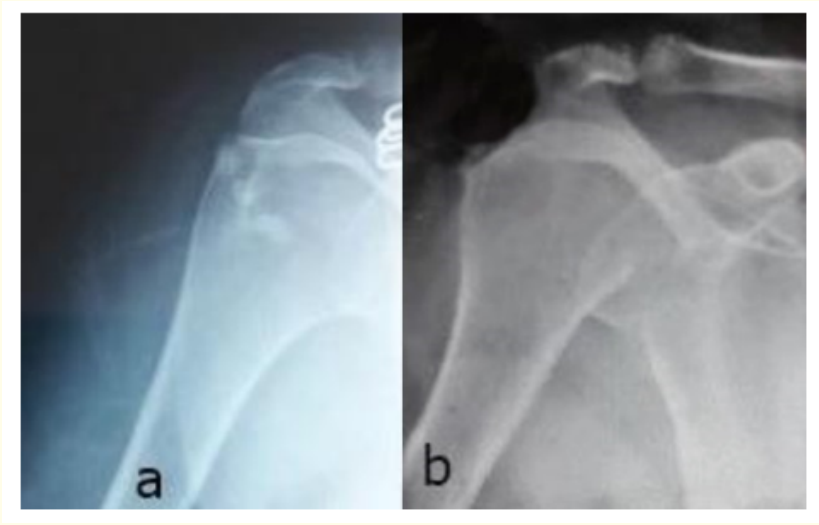

Figure 1: *Patient 1.*
a: Preoperative radiograph showing three calcifying tendinitis of the right shoulder.
b: Postoperative radiograph showing incomplete excision of calcifications.

Figure 2: *Patient 2.*
a: Preoperative radiograph showing calcifying tendinitis of the left shoulder.
b: Postoperative radiograph showing complete excision.

Figure 3: *Installation and principal arthroscopic approaches used: posterior, external and anterior*

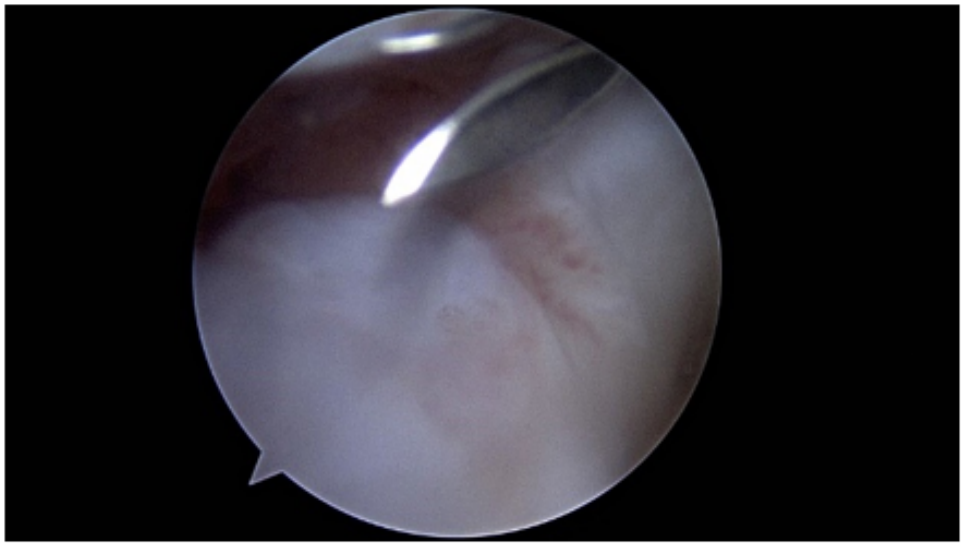

Figure 4: *Arthroscopic view of the calcification and its identification via a needle.*

Results

The patients were followed clinically according to the Constant score, a postoperative radiography was systematically performed which revealed complete excision of the calcifications for the first patient and incomplete for the second but significantly reduced in size. The preoperative Constant score was 64 and 67 respectively and at the last follow-up was 78 and 80 respectively.

Discussion

Calcifying tendinitis of the shoulder is a frequent affection which represents 7.3% of the general population, with a female predominance for the age group 30 to 50 years, with absence after 70 years and before 20 years according to Welfling., *et al* [1]. The involvement is bilateral in 20% of cases and the frequency is notably increased in diabetics, renal insufficiency and manual workers [2].

The identification of these calcium deposits is mainly based on standard radiography with mandatory realization of several incidences; a front radiographs in neutral, internal and external rotation (NR, IR, ER) with Lamy profile in good and due form which is the most important to specify the topography of the calcification, it sits above the spine of the scapula when it is born at the expense of the supraspinatus tendon, below it when it is at the expense of the infraspinatus and below the coracoid when they are born at the expense of the subscapularis tendon. The most common location is at the supraspinatus (80%) followed by that of the infraspinatus (15%) then the subscapularis (5%). They are rarely associated with a rupture of the cap [3,4].

The most widely used classification is that of Molé, which divides the calcifications of the rotator cuff into four stages. Stage A, the calcifications have clear, dense and homogeneous contours and represent 20%. Stage B, the calcifications have clear, dense, partitioned and multi-lobed contours and are the most frequent representing 40%. Stage C, the calcifications are scalloped clean and inhomogeneous and represent 32%. Stage D is calcifications of tendon insertion or enthesopathies, they are the rarest (4%) [5].

The clinical presentation of calcifying tendinitis is very varied, ranging from intermittent painful crises (acute hyperalgesic shoulder), a chronic painful shoulder or stiffness, this symptomatology is generally transient depending on the genesis of calcification which goes through four evolutionary phases; preformative, formative, quiescent then resorptive described by Uhthoff and Sarkar [6], from where the interest to continue a drug treatment and a functional re-education of long duration going up to a year, the surgery had to be reserved for the failures of the adapted medical treatment, continued for more than a year.

The interest of arthroscopy lies in the excision of calcifications whatever their sizes and to achieve a complete and non-invasive joint assessment with good results on pain and shoulder function. We must not operate in the acute and hyperalgesic phase and the postoperative persistence of small calcifications is not detrimental [7]. Acromioplasty is still a subject of debate, given that the functional results are identical, for some authors it should not be systematic and for others it should be reserved for type C calcifications with an aggressive acromion of Begliani type III or in case of associated lesion of the cap or simply if calcification not found [8].

The future essentially concerns treatment with extracorporeal shock waves, with more recent studies focusing on proving the effectiveness of radial shock waves therapy. The advantages of this technique are the absence of ultrasound or fluoroscopic exposition since the lesion is almost systematically included in the area of wave propagation, in addition the absence of anesthesia [9,10].

Conclusion

Calcifying tendinitis is frequent and transient pathology, the failure of well-conducted medical treatment may lead to consider surgical excision of the calcification provided that the shoulder remains flexible.

Arthroscopy has become the standard surgical technique for the treatment. The long-term prognosis is mainly conditioned by the state of the cuff at the beginning and by the occurrence of postoperative complications.

Disclosure of Interest

The authors declare that they have no competing interest.

Consent

Patients give informed consent for publication.

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