

Arthroscopic Subacromial Decompression

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Abstract

Original Research Article

Introduction: Arthroscopic subacromial decompression is an alternative to open acromioplasty, described by Neer in 1972. It combines a resection of the anterolateral beak of the acromion with a section of the coracoacromial ligament. **Materials and methods:** In this retrospective study, we report the experience of the department of orthopaedic surgery and traumatology II of the Mohamed V Military Hospital of Rabat, in the treatment of the chronic sub-acromial impingement by arthroscopic subacromial decompression on 27 cases collected between January 2012 and September 2017. This study involved 17 women and 10 men with an average age of 52 years. We recorded a type 2 acromion according to Bigliani and Morrison's classification in 63% of patients and a type 3 acromion in the rest of patients. All our patients have had arthroscopic subacromial decompression. To evaluate our patients we used the U.C.L.A. (University of California at Los Angeles) score. **Results:** The results were satisfactory (very good and good) in 80% of cases. The average U.C.L.A. score was 30.5 post-operatively while it was 11.5 preoperatively. **Conclusion:** Arthroscopic subacromial decompression is indicated mainly in previous painful conflicts after medical treatment failure. The advantages of arthroscopy are the absence of disinsertion of anterior deltoid fibres and scars associated with the possibility of joint exploration.

Keywords: Arthroscopy; Subacromial decompression; Bursectomy.

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INTRODUCTION

Subacromial pain accounts for up to 70% of all shoulder-pain problems [1] and can impair the ability to work or do household tasks [2, 3]. Subacromial decompression is a surgical technique that combines resection of the anterolateral beak of the acromion with a section of the coracoacromial ligament [4]. The absence of scars associated with the possibility of joint exploration is one of the advantages of arthroscopy [4].

MATERIALS AND METHODS

The authors report a retrospective study of 27 cases of subacromial conflict treated with arthroscopic subacromial decompression. These patients are collected in the department of orthopaedic surgery and traumatology II of the Mohamed V Military Hospital of Rabat, over a period of five years, from January 2012 to September 2017.

Patients with associated rotator cuff lesions were excluded. This study involved 17 women and 10 men with an average age of 52 years. The dominant side was reached in 70% cases. According to Bigliani

and Morrison's classification, we have recorded 17 cases (63%) of acromion type 2 and 10 cases (37%) of acromion type 3.

The average duration of symptomatology is 16 months. Shoulder ultrasound was performed in 17 cases while shoulder MRI was performed in 10 patients to eliminate a rotator cuff lesion.

Our patients have been operated on by several operators, using the same surgical technique which consists of: Debridement of the subacromial bursa with a shaver and/or electrocoagulation, followed by the resection of the bony spurs and projecting anterolateral undersurface of the acromion by a shaver as described by Ellman [5] (Fig1, Fig2, Fig3, Fig4).

Clinical results were evaluated according to the U.C.L.A. score [6]. Radiologically, the absence of subacromial conflict and the absence of foreign bodies, and the occurrence or not of glenohumeral osteoarthritis have been checked.

The study methods were based on the exploitation of medical records with data collection on clinical examination, radiological, surgical and evolution data in these patients.

RESULTS

According to the U.C.L.A. score, there were 20% excellent results, and 60% good results. By

comparing the average U.C.L.A. score before and after the procedure, we noted an increase in the score from 11.5 to 30.5, indicating an improvement in the functional status of our patients. All our patients were painful before the operation, all our patients were relieved, 22 totally and five partially. In our study, no septic or arthritic complications were noted.

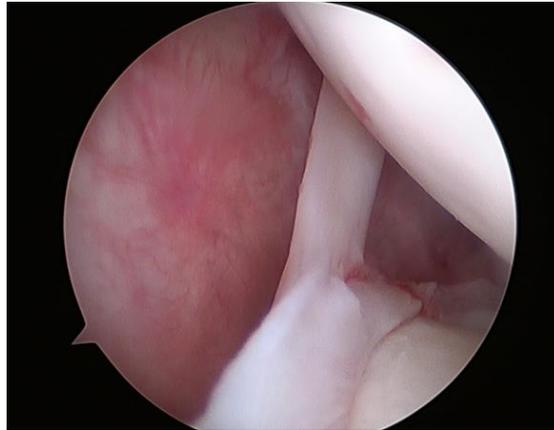


Fig-1: Exploration of the glenohumeral joint

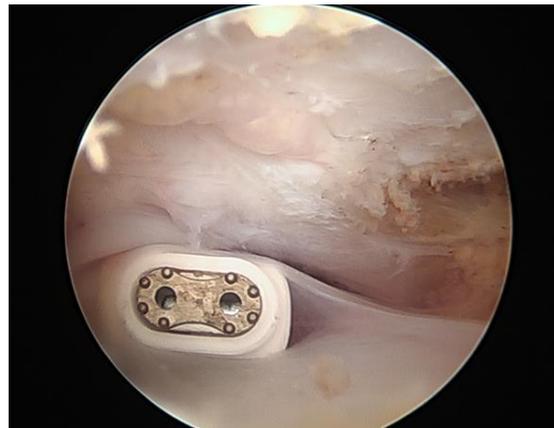


Fig-2: Debridement of the subacromial bursa with electrocoagulation



Fig-3: Detachment of the coracoacromial ligament with electrocoagulation from the antero-lateral edge of the acromion



Fig-4: Resection of the anterolateral beak of the acromion by a shaver

DISCUSSION

Subacromial decompression is one of the most frequently performed procedures in orthopaedics [7, 8]. It is carried out to treat patients with shoulder pain attributed to subacromial impingement syndrome (SIS). Conventional wisdom dictates that SIS is caused by impingement of the rotator cuff between the humeral head and the overlying acromion while lifting the arm [9]. An open or arthroscopic acromioplasty is still a widespread therapeutic option after failed conservative management in clinical orthopedic practice [10, 7] although inconsistent results have been reported regarding the optimal surgical technique, [11-13]. The essential advantage of arthroscopic subacromial decompression is that it is possible to carry out a complete intra-articular check-up to exclude an associated intra-articular lesion, at the same time as the acromioplasty procedure [4]. Preservation of the deltoid during arthroscopy has been claimed to result in superior function and faster recovery, but consensus on this topic has not been reached yet [11-13]. The higher cost of arthroscopic equipment makes it more expensive than open surgery, but allows the patient to return to work more quickly. An acromioplasty failure can only be confirmed after 6 to 12 months after surgery because some patients remain painful for six months [14]. Among the causes of failure are: insufficient bone resection, especially at the outer edge of the acromion or at the medial part, an unknown clavicular osteophyte, incomplete resection of the acromioclavicular ligament and postoperative fracture of the acromion.

CONCLUSION

Arthroscopic subacromial decompression is a common surgery for subacromial shoulder pain. Acromioplasty is considered a successful surgical option in subacromial pain syndrome to reduce mechanical impingement and optimize shoulder function.

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