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Chronic Shoulder Pain in a Young Person: Think of SLAP lesions

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ABSTRACT

SLAP lesions remain a rare entity of the painful pathology of the shoulder under the labrobicipital complex, of difficult diagnosis given the atypical clinical symptomatology often vague with tests of different reliability although directing towards a strong positive presumption.The advent of imaging by injection of contrast product (arthro scanner and especially arthro MRI) has allowed a better understanding of this type of lesion but there are still variants of this complex which are radiologically limited between what is normal or pathological Arthroscopy has allowed an unequalled precision of diagnosis with the possibility of adequate therapeutic management and very satisfactory results.Through this clinical case of a young patient with a chronically painful shoulder, we draw attention to this type of pathology, which is rare but not negligible.

Introduction

Lesions of the labro-bicipital complex at the superior pole of the glenoid, first described by Andrews in 1985[1], remain a rare and mysterious pathological entity as a cause of chronic shoulder pain in the young subject. It was not until 1990 that Snyder established the first classification of these lesions, describing 4 types which he named <<SLAP lesion>> (superior labrum anterior to posterior).

This pathology remains of difficult and atypical clinical diagnosis, the characterisation of which has been improved by the advent of arthro CT and arthro MRI.

Currently, arthroscopy remains the gold standard for diagnosis and treatment.

We describe the case of a young patient suffering from a chronically painful and disabling shoulder with a type III SLAP lesion whose arthroscopic surgical management significantly improved her pain and functional experience.

Clinical observation

M.F, 35 years old, notion of trauma of the right shoulder 5 years ago with progressive installation of a mechanical pain, of moderate intensity calmed initially by analgesics and NSAID. The evolution was marked by the aggravation of the pain, which became mixed and had a significant impact on the activities of daily living.

The clinical examination did not reveal any amyotrophy of the supraspinous and subspinous fossa, nor of the deltoid or trapezius. There was pain on palpation of the right shoulder reliefs and the acromioclavicular joint.

All mobility was painful with reduced active joint ranges and minimal passive gain and positive subacromial impingement manoeuvres (Fig.1).

Rotator cuff testing revealed a positive JOBE for the supraspinatus, a positive palm up for the long portion of the biceps.

The Cross arm test, O'brien test, Speed's test, Yergason test, Crank test were positive(Fig.1).

The examination did not reveal any laxity or instability.

At the end, a preoperative Constant Score was established: 25/100.

The patient underwent a radiological assessment consisting of a standard frontal X-ray with different rotations and a Lamy profile returning without abnormalities and an MRI of the shoulder showing a type III SLAP lesion (a bucket-shaped lesion of the superior labrum with an intact biceps (Fig.2).

The decision to perform a shoulder arthroscopy was imperative for diagnostic confirmation and treatment.

Arthroscopic approaches: posterior, anterolateral and anterior. Exploration showed a bucket-shaped detachment of the superior labrum (SLAP lesion type III) with insertion of the long portion of the biceps (LPB) intact, but subluxated on its anterior course(Fig.3).

The bucket handle was regularised, the rotator interval debrided and the subacromial bursa resected. LPB tenodesis was then decided upon using an absorbable interference screw on the bicipital groove (Fig.3).

The postoperative course was simple, with an elbow immobilisation for 4 weeks and the authorisation of pendular movements, followed by passive and active rehabilitation with limited external rotation for the first two months.

The evolution after 6 months was marked by an almost complete disappearance of pain with very satisfactory functional recovery (Fig.4), postoperative Constant score established at 81/100.

Discussion

The SLAP lesion entity groups all lesions of the superior labrum around the area of insertion of the long biceps tendon on the glenoid. Snyder et al [2] have classified the four main lesions in this area:

Type I: frayed upper pad, degenerative in appearance, without long biceps detachment. Many authors consider this to be a subnormal, degenerative appearance, without pathological character and requiring no treatment.

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Type II: avulsion of the superior bulge and insertion of the long biceps.

Type III: bucket-handle lesion of the upper pad with an intact biceps.

Type IV: tear lesion of the long biceps associated with a large disinsertion of the pad.

This has been extended by other authors. Maffet and Gartsman [3] then described three other types of lesion that do not fit into the previous classification (types V to VII). Finally, Morgan and Burkhart [4] subdivided type II into three sub-varieties (types VIII, IX and X).

SLAP lesions have a traumatic origin (traction, fall, dislocation) [5-6-7].

Micro-traumatic lesions are also to be noted, particularly in patients practising throwing sports through "peel back" phenomena [8-9].

The clinical picture is often crude in the form of internal derangement of the affected shoulder, vague pain and a snapping sensation when throwing or during overhead activity. No clinical signs are pathognomonic of this injury.

The main tests used to assert SLAP lesions are: O'brien test, Speed's test, Crank test, Yergason test, Cross arm test... but none of these tests offer superior sensitivity/specificity [10].All of these tests were noted to be positive in our patient.

For the radiological assessment, standard radiography is of limited interest.

Imaging by injection of contrast medium, there is mainly the athroscanner or especially the arthro-MRI which has demonstrated a sensitivity of 82-100%, a specificity of 71-98% and an accuracy of 83-94% [11-12].

The diversity of lesions and anatomical variants sometimes makes interpretation difficult despite the progress of modern imaging [13], the definitive diagnosis and characterisation of the type and lesion associations will be made during arthroscopic exploration.

Depending on the type of SLAP lesion, arthroscopic debridement, anchor reinsertion, tenodesis/tenotomy of the long portion of the biceps can be performed.

Brokmayer proposed in 2015 an algorithm for the management of SLAP lesions with a still open discussion for type 2 where he proposes tenodesis or tenotomy of the biceps alongside prior reinsertion of the bulge [14].

The immobilisation is for 4 weeks with the elbow to the body, pendulum exercises can be started immediately without external rotation work before the 6th postoperative week. Rehabilitation is then started in autopassive and pendular exercises, with the main focus on antepulsion at the beginning. Active rehabilitation should begin in the second month postoperatively, with emphasis on no external rotation work during the first month [15].

Conclusion

SLAP lesions are a poorly known pathology with several anatomical-clinical aspects making diagnosis difficult and imaging interpretation likewise.

Arthroscopy is the mainstay of management of SLAP lesions with an open discussion on the appropriate therapeutic choice for these lesions.

Figure.1. Clinical examination: antepulsion, abduction, O'brien test, Speed's test

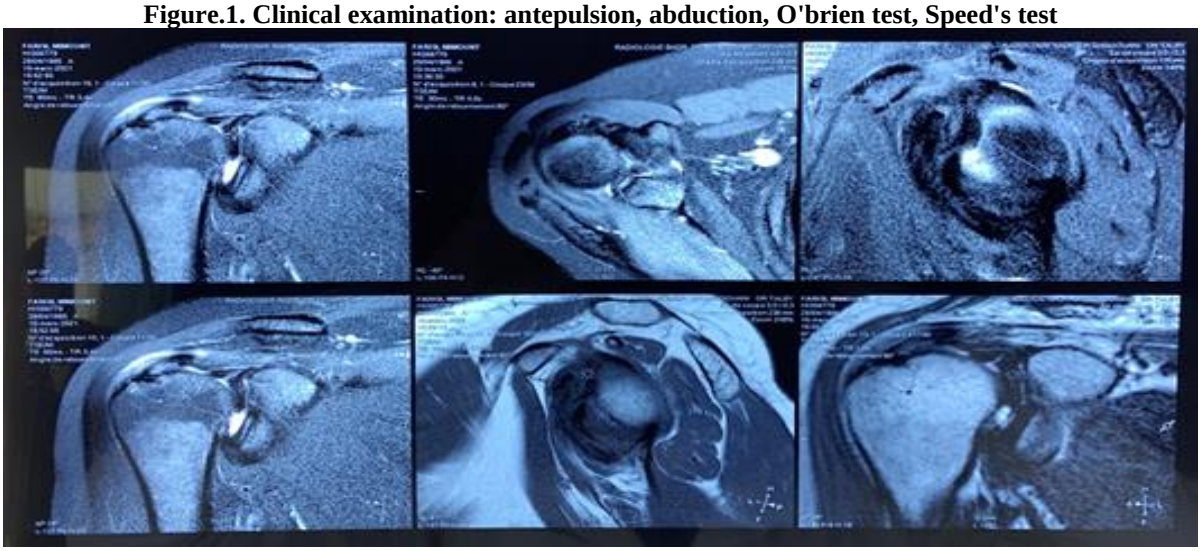

Figure.2. MRI of shoulder showing SLAP lesion type 3

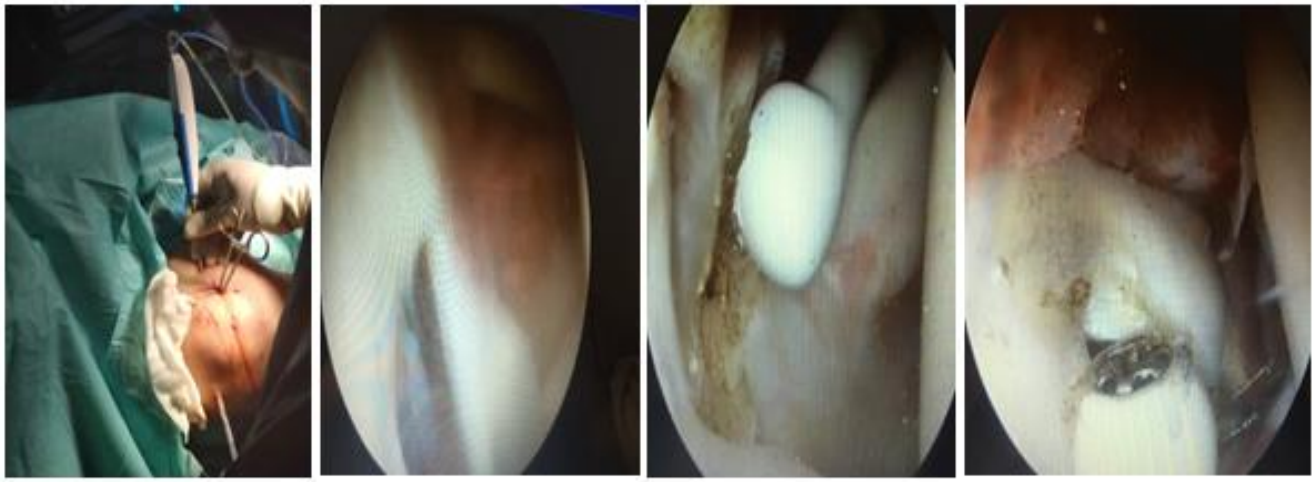

Figure.3. Different arthroscopic approaches, SLAP lesion type 3, Regularization of the superior bead, Tenodesis of the Long Biceps.

Figure 4. Functional recovery at 6 months: Antepulsion, Abduction, Internal Rotation

Declaration of interest

The authors declare that they have no conflicts of interest in relation to this article.

Authors' contributions

All authors contributed to the conduct of this research work and read and approved the final version of the manuscript.

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