

Images in Clinical Rheumatology

Arthroscopic Treatment of Synovial Chondromatosis, an Unusual Cause of Shoulder Pain[☆]



Tratamiento artroscópico de la condromatosis sinovial, una inusual causa de omalgia

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Introduction

Synovial chondromatosis is a benign idiopathic metaplasia of the synovial membrane. It affects one in 100 000 persons. It is 3 times more common in males, arising between 30 and 50 years of age and mainly affects large joints such as the knees (70%), hips (20%) and shoulders (19%). Its etiology is unknown, although it has been associated with chromosomal mutations (p21.3 and 12q13) that affect proteins, Milgram¹ described three stages: (1) active disease without intraarticular loose bodies, (2) transitional lesions with synovial proliferation and loose bodies, and (3) loose bodies without synovial disease. The objective of this paper is to review the pathology report of a patient who was treated arthroscopically.

Clinical Case

The patient is a 53-year-old male, with no previous trauma to the shoulder, with shoulder pain that did not subside with common anti-inflammatory treatments. After four months of rehabilitation treatment and steroid infiltration, there was initial improvement in relation to the persistent pain. The passive mobility arc was complete: 180° abduction and forward flexion. Blockages were not observed, although there was a limited arc of active mobility: 120° and 135° abduction of forward flexion. Examination revealed positive Yochum and Hawkins maneuvers. Constant test initially scored 34 points. A past X-ray revealed a decrease in subacromial

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space. There was no presence of loose bodies or calcifications. MRI: joint effusion, labral degeneration. Supraspinatus tendinitis. Ultrasound revealed joint effusion. No free bodies or chondromas were seen upon complementary testing. We performed an arthroscopy (Fig. 1), identifying nine loose bodies, which we extracted (Fig. 2). Labral degeneration was appreciated, with a stable labrum. There was no impairment of the long head of the biceps. Glenolabral synovitis. Subacromial impingement with subacromial bursitis, without rupture of the rotator cuff tendons. No chondrocalcinosis deposits were seen. The treatment was completed after synovectomy and subacromial bursectomy.

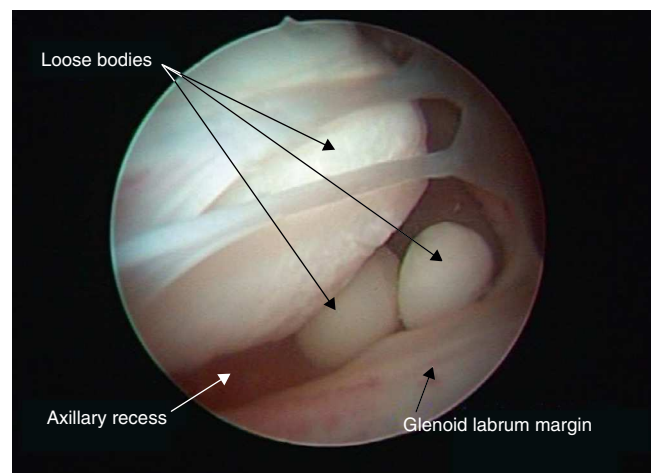


Fig. 1. Arthroscopic image identifying intra-articular synovial chondromatosis-related loose bodies.



Fig. 2. Removal of 9 loose bodies. Note the comparative size.

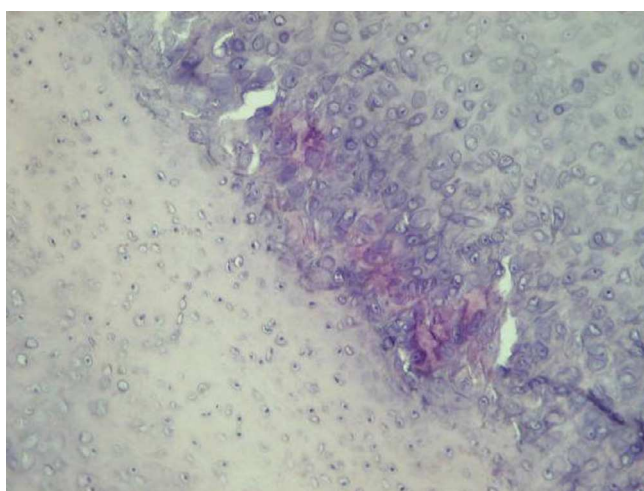


Fig. 3. Histological image. Chondroid metaplasia associated with weakly birefringent crystals and giant cells.

Diagnosis

Synovial chondromatosis (Milgram¹ stage 2) (Fig. 3).

Evolution

After 4 months rehabilitating functional reaches, the patient achieved a full arc without shoulder pain and a final Constant of 75 points. There were no recurrences of the problem after 2 years of follow-up.

Discussion

The treatment of synovial chondromatosis of the shoulder is removal of loose bodies (whether by open or arthroscopic surgery)

and synovectomy in recurrences.² For Sachs³ traditional open surgery with a deltopectoral approach leads to 23% of subscapularis insufficiency, reducing motor strength 27%, which can cause restricted mobility, which a less invasive intervention, such as arthroscopy, could avoid. Indeed, arthroscopy allows to avoid damaging the subscapularis and does not require dissection of tissues, improving the Constant test significantly according to Lunn⁴ ($P<.04$), without significant restrictions on mobility and a more satisfactory postoperative stage. On the other hand, it also can treat other labral lesions that might be missed with open surgery. However, there is a recurrence in 20%–50% of the cases,⁵ mainly in cases where there is large coexisting synovitis. In this regard, synovectomy, associated with the extraction of free bodies is the preventive treatment recommended in order to avoid recurrence. Malignant transformation to chondrosarcoma is suspected when there is a general worsening of the patient, bone invasion and radiologically evident invasion of the spinal canal on the MRI.⁶

In conclusion, in cases of synovial chondromatosis of the shoulder, arthroscopic treatment is proposed as a clear alternative to traditional open surgery.

Ethical Responsibilities

Protection of people and animals. The authors declare that no experiments have been performed on humans or animals.

Confidentiality of data. The authors state that no patient data appear in this article.

Right to privacy and informed consent. The authors state that no patient data appear in this article.

Conflict of Interest

The authors have no conflicts of interest.

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