

Massive Synovial Osteochondriomatosis of the Shoulder: A Case Report and Review of the Literature

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CASE REPORT

INTRODUCTION

Synovial chondromatosis is a generally monoarticular disorder characterized by multiple benign nodular cartilaginous formations, arising as a result of metaplasia of synovial tissue. Other names by which this entity is known are synovial osteochondromatosis, primary synovial chondromatosis, synovial chondrometaplasia. The most frequent location is the knee, hip, shoulder, elbow, wrist and temporomandibular joint. It can be primary or secondary to a pre-existing chondromatosis. 1-8

It is an uncommon entity with a worldwide incidence of 1:100,000 with greater involvement of males up to 3 times higher. It usually affects people between 30 and 50 years of age, and although its etiology is unknown, it has been associated with chromosomal effects. In studies published between 1996 and 2002, structural alterations were found, which showed a rearrangement of bands 1p13-p22. 1, 2, 3, 9, 10, 11

The clinical symptoms are nonspecific, among which we can find pain, signs of local inflammation, limitation in range of

The injured tissue can be seen macroscopically as ovoid bodies or blue-white nodules, and its size can vary from millimeters to centimeters in diameter. Histologically, hyaline cartilage covered by a fibrous cap and synovial lining cells can be found. Chondrocytes may have thick nuclei with moderate nuclear pleomorphism and common binucleated cells. 8, 15

Open excision surgery or arthroscopic surgery is considered the treatment of choice, despite being the treatment of choice there is a recurrence rate of up to 23%. The use of different radiopharmaceuticals in colloidal form for radiosynovectomy depends on the size of the joint. It is used as a complementary therapy to surgical procedures to obtain optimal results, reducing the use of analgesics in addition to facilitating intraoperative en bloc resection of the affected synovial membrane. 1, 7, 16, 17.

CLINICAL CASE

A 38-year-old male patient, with a history of Chronic Kidney Disease, was sent to evaluate a rapidly growing shoulder injury. He presented a 2-year-old tumor in the right shoulder, accompanied by pain and with significant volume increase during the last month, almost completely limiting the range of movement of the right shoulder.

Imaging studies such as radiography and tomography were requested, finding lesions in the right shoulder compatible with chondromatosis of significant size

Motion, blockage of the affected joint, so it can be confused with other joint pathologies, in rare cases a mass can be found of soft tissue adjacent to the joint. Radiography can show effusion, or calcification of nodules within the joint, as can MRI. Damage to the joint surfaces can result in secondary degenerative joint disease. 1, 8, 12, 13, 14, as well as smaller lesions in the left shoulder (Fig.1)

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Therefore, it was decided to perform a positron emission tomography, finding significant occupation of the joint (Fig 1).



Figure 1. Left: Full body positron emission tomography/computed tomography (PET/CT), showing abnormal concentration of radiopharmaceutical in both shoulders. Right: Tomography with calcifications at the muscle level, thick without affecting bone structures, lesions were also observed in the contralateral shoulder.

Treatment with open surgical resection of the right shoulder was decided, obtaining a surgical piece (Fig. 2) and sending it to pathology, reporting findings compatible with synovial chondromatosis. (Fig 3) After surgery, the patient had a favorable evolution with full recovery of mobility.



Figure 2. Surgical piece is obtained after open surgical resection.



Figure 3. Extracted piece compatible with synovial chondromatosis.

DISCUSSION

This pathology represents a diagnostic challenge, due to its slow progress and will require clinic as well as therapeutic; that arose from both the affected area, the extent of the injuries and the involvement of the joint in question.

This particular patient had a late diagnosis, which led to the excessive growth of the lesions and even made many of them not macroscopically recognizable. The treatment of choice is still arthroscopic surgery, however in exceptional cases the use of open surgery should be considered to ensure complete removal of the the lesions involved as well as avoiding injuries to adjacent structures thus causing undesirable sequelae.

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