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Case Study

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BILATERAL ANTERIOR FRACTURE DISLOCATION OF SHOULDER: ABOUT A CASE

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ABSTRACT

Synovial chondromatosis is metaplasia of the synovial membrane of unknown origin and is a rare benign condition predominantly affecting the knee. We report in our work the clinical case of a patient who presents with late stage shoulder involvement with intermittent sensations of instability, blockage and creaking at shoulder mobilization. The diagnosis was made by simple x-ray demonstrating the presence of multiple clusters of calcified osteochondromas without osteoarthritis radiologic signs. He underwent extraction of foreign bodies through deltopectoral approach given the large number of osteochondromas and their multiple and diffuse locations associated with maneuvers of shoulder mobilization in circumduction and direct digital pressures, but without any synovectomy because of the late evolution stage of the ostechondromatosis in wich the synovial is quiescent. The first complication is the recurrence. it was not the case of our patient wich had good clinical and radiological outcomes. The ostechondromatosis should be treated as soon as possible before eventuel developpement of osteoarthritis.

KEYWORDS: Shoulder, osteochondromatosis, extraction.

INTRODUCTION

Bilateral dislocations of the glenohumeral joint with or without associated fractures are extremely rare lesions[1], although it is the most common dislocation of the whole body when it is unilateral and more frequently assumes its posterior form following an epileptic seizure when it is bilateral.[1–2]

OBSERVATION

We received in the emergency room at the Rabat University Hospital a 17-year-old patient, with no notable pathological history, victim of a public road accident, he was a motorcyclist collided with a car, with reception on the palmar face of both hands, the 2 arms in external rotation and abduction causing pain with total functional impotence of the 2 shoulders. On inspection, the signs of anterior dislocation were evident with bilateral vicious attitude of the arm in abduction-external rotation, sign of the epaulet, external ax blow, filling of the delto-pectoral groove by the projection in front of the humeral head and emptiness of the subacromial space. The lateral aspect of both shoulders were sensitive, radial pulses were present. The diagnosis of bilateral subcoracoid anterointeral fracture dislocation of the shoulder was made by X-ray (figure 1), the fracture involved the tuberosity on both sides. we completed the radiological assessment by a scanner (figure 2). The patient underwent bilateral reduction under sedation by the external abduction-external rotation maneuver. The fluoroscope confirmed the bilateral reduction of the glenohumeral dislocation but the fracture of the 2 greater tuberosities was not reduced after the reduction of dislocation with an interfragmentary gap of 2 cm on the right side and 1.5 cm on the left side. Sedation was converted to general anesthesia to proceed with surgery on the 2 shoulders with a double deltopectoral approach, reduction of the 2 trochiters and fixation by a bilateral screw plate (figure 3). The postoperative consequences were simple, without any paralysis of the axillary nerve. The patient was discharged from the hospital 48 hours after the operation with an orthosis immobilizing both shoulders in adduction and internal rotation. At three weeks, the immobilization was removed and the patient began rehabilitation sessions. At 6 months of follow-up, the patient fully recovered the range of motion of both shoulders with an antepulsion at 180 °, a retropulsion at 45 °, abduction at 150°, adduction at 50°, medial rotation at 70° and a lateral rotation at 90°. At 4 years of followup, the patient reported no recurrence.

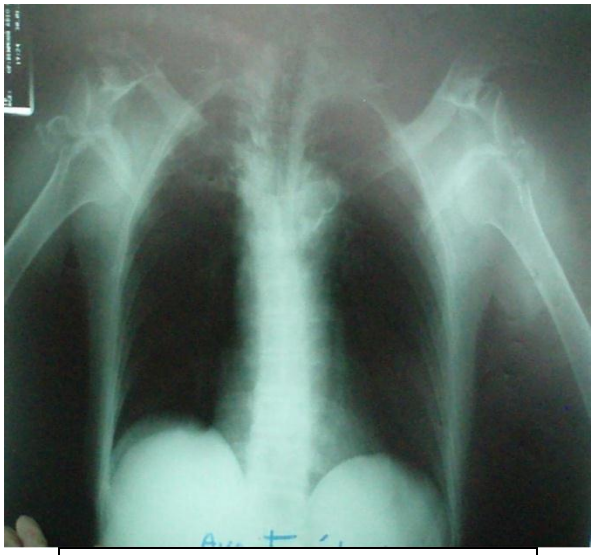

Figure 1: frontal view demonstrating bilteral shoulder dislocation.

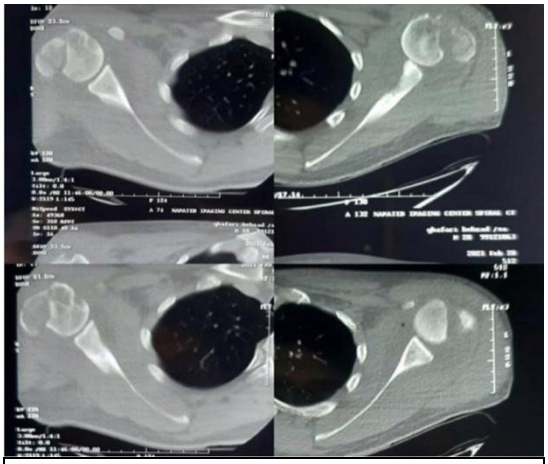

Figure 2: bilateral multifragmental greater tuberosities demonstrated by CT scan.

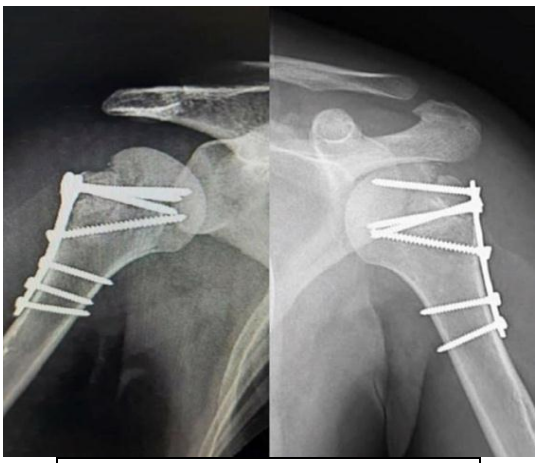

Figure 3: bilateral osteosynthesis.

DISCUSSION

Shoulder dislocation is the most common dislocation in the whole body (85% of cases).[3] Its anterointernal form accounts for 98% of dislocations.[3] Bilateral shoulder dislocations are rare lesions with few cases reported in the literature[1,4] of which The first case was described in 1902, adopting its posterior form.[5] Anterior bilateral shoulder dislocations with or without associated fractures are even rarer than the posterior form which is often secondary to seizures.[2,6] The main mechanism of this type of bilateral dislocation is identical to that of unilateral dislocation with external rotation and abduction, but the force acts in a symmetrical and synchronous manner at the level of the two glenohumeral joints, and this coincidence of symmetry of force bilaterally which is unlikely to occur to produce this type of dislocation. The reduction is done according to two main maneuvers: the Milch maneuver which consists of a lateral rotation and abduction progressively up to 150 ° then the humeral head is pushed back and the arm brought back in medial rotation elbow to the body;the second maneuver is Kocher maneuver in which the arm is placed in adduction and then lateral rotation. The Spaso technique[8] is another technique that involves exerting vertical traction on the traumatized limb, held by the wrist, before exerting progressive external rotation. In the event of an associated tuberosity fracture, it is usually reduced after the reduction of dislocation, which was not the case in our patient, who kept a posterior and superior displacement of more than 1 cm on both sides posing indication for surgery. The isolated fracture of the tuberosity is usually fixed by direct screws, in our patient the fracture was with several fragments in the 2 sides, the reason why we opted for a screwed plate for a better stability allowing to start the rehabilitation as soon as possible and subsequently reducing the risk of shoulder stiffness. The first long-term complication of shoulder dislocations is recurrence, which is closely related to young age.[7]

CONCLUSION

Bilateral anterior shoulder dislocation is a rare lesion that requires even more collection of cases reported in the literature to better study it. Its association with tuberosity fracture is usually reduced after reduction, otherwise surgery is indicated for internal fixation as described in our clinical case. The first complication is recurrence, the risk of which is inherent in young age.

Consent

The patient has given their informed consent for the case to be published.

Competing Interests

The authors declare no competing interest.

Authors 'Contributions

All authors have read and agreed to the final version of this manuscript and have equally contributed to its content and to the management of the manuscript.

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