Case report:

Synovial osteochondromatosis : Case report

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Abstract:
Synovial osteochondromatosis is a condition characterized by synovial membrane proliferation and metaplasia, with development of multiple cartilaginous or osteocartilaginous nodules within the joint, bursa or tendinous sheath. In spite of being less common than in other joints of the body, synovial osteochondromatosis may be found in the shoulder at the level of the joint recesses (including the tendon sheath of the biceps long head) and in the subacromial-deltoid bursa. The primary and secondary presentations of the disease may be suggested by the number, shape and size of the chondral nodules, as well as by the absence or presence of pre-existing joint disease. The diagnosis may be achieved only on the basis of typical imaging findings which, depending on the stage of the disease, may correspond to synovial membrane proliferation, presence of cartilaginous nodules (chondromas) and calcified or ossified nodules (osteochondromas).

Introduction
Synovial osteochondromatosis is a condition characterized by synovial membrane proliferation and metaplasia, with development of multiple cartilaginous or osteocartilaginous nodules within the joint, bursa or tendinous sheath[1]. It can be divided into primary and secondary forms[2]. The primary form is uncommon, has unknown causes, and is generally monoarticular. It is between two to four times more frequent in men, occurring at any age group, most frequently between the 3rd and 5th decades of life[1,4]. The secondary form is a common condition caused by mechanical injury of the intraarticular hyaline cartilage triggered by joint anomalies such as osteoarthritis, osteonecrosis, osteochondritis dissecans, neuropathic osteoarthropathy, trauma and rheumatoid arthritis[2,6].

Pathology
The development of synovial osteochondromatosis in the shoulder joint is uncommon, and its secondary presentation is most frequently found. Cartilaginous or osteocartilaginous nodules may be found within the joint or its recesses (subscapularis, axillary and along the tendon sheath of the biceps long head), and in the subacromial-deltoid bursa.
Imaging findings

Conventional radiography:

On conventional frontal radiograph of both shoulders there is increase in periarticular soft tissue thickness noted on right side. However there is no evidence of any calcifications noted.

High resolution ultrasonography:

High resolution ultrasonography reveals presence of moderate amount of free fluid collection noted within subacromial-subdeltoidbursal region with multiple hyperechoic loose bodies noted within suggestive of subacromial-subdeltoid bursitis with synovial proliferation.
On MRI imaging there is moderate to severe free fluid collection noted within subacromial-subdeltoid bursa appearing hyperintense in T2W and SIIR images with multiple loose bodies within appearing hypointense on all pulse sequences suggestive of subacromial-subdeltoid...
bursitis with synovial proliferation. It is displacing and compressing the deltoid, biceps brachii and coracobrachialis muscles laterally and infraspinatus muscle anteriorly. The rotator cuff is thinned out. On post contrast study there is enhancement of the bursal wall as well as proliferated synovium.

**Conclusion**

In spite of being less common than in other joints of the body, synovial osteochondromatosis may be found in the shoulder at the level of the joint recesses (including the tendon sheath of the biceps long head) and in the subacromial-deltoid bursa. The primary and secondary presentations of the disease may be suggested by the number, shape and size of the chondral nodules, as well as by the absence or presence of pre-existing joint disease. The diagnosis may be achieved only on the basis of typical imaging findings which, depending on the stage of the disease, may correspond to synovial membrane proliferation, presence of cartilaginous nodules (chondromas) and calcified or ossified nodules (osteochondromas).

**References**