

Unusual Case of Long Head of Biceps Tendon Synovial Chondromatosis

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Learning Point of the Article:

Extra articular synovial chondromatosis is a rare unusual cause of shoulder pain.

Abstract

Introduction: Synovial chondromatosis is a rare benign tumor involving the major joints. This condition results from metaplasia of synovium into chondrocytes leading to formation of multiple loose bodies. Extra articular glenohumeral joint synovial chondromatosis involving long head of biceps is very rare.

Case Report: A 38-year-old male presented with history of insidious onset, dull aching pain in right shoulder for 6 months. Clinicoradiological examination revealed calcific mass around the long head of biceps tendon. The calcific mass and loose bodies were removed en bloc. Histopathological examination concurred to be synovial chondromatosis.

Conclusion: We hereby report a rare case of long head biceps tendon synovial chondromatosis of shoulder which was successfully treated by combined arthroscopic and open method. The results of surgical excision are excellent.

Keywords: Long head biceps, synovial chondromatosis, metaplasia.

Introduction

Case Report

Synovial chondromatosis is a rare benign condition involving major joints where synovium undergoes metaplasia into chondrocytes [1]. This metaplasia leads to formation of intraarticular cartilaginous nodule and loose bodies [2]. It is commonly seen in middle age and 3 times more common in males than females. Although it is a rare and monoarticular, commonly involves knee, hip and elbow joints. To best of our knowledge very few cases of synovial chondromatosis involving shoulder have been reported in literature. We hereby report a unusual case of long head of biceps tendon synovial chondromatosis in a 38-year-old male treated successfully.

A 38-year-old male presented with history of insidious onset, dull aching pain in right shoulder for 6 months. He also had difficulty in carrying out activities of daily living and restriction of movements of same shoulder. He had no constitutional symptoms and rest pain.

On examination diffuse swelling on anterior aspect of shoulder along the bicipital groove. Terminal restriction of both active and passive movements of shoulder. Speed test and Yargasson test were positive. The strength of rotator cuff muscles were normal.

Plain radiographs of shoulder revealed calcific mass around the long head of biceps tendon. The glenohumeral joint seems to be free of calcification and loose bodies (Fig. 1 and 2). Magnetic

Author's Photo Gallery



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Figure 1: Anteroposterior radiograph of shoulder before surgery.



Figure 2: Axial lateral radiograph of shoulder before surgery.

up there is no clinical or radiological evidence of recurrence (Fig. 7).

Discussion

Synovial chondromatosis is a rare benign tumor. It is usually monoarticular involving large joints and knee joint is the most commonly involved joint. In pathogenesis synovium undergoes metaplasia into chondrocytes [3,4]. This Metaplasia leads to formation of Intraarticular cartilaginous nodule and loose bodies.

Two types of synovial chondromatosis have been described in literature, primary and secondary types. Etiology for secondary type of synovial chondromatosis are trauma, infection,

resonance imaging (MRI) confirmed chondroid calcification and loose bodies around long head of biceps tendon (Fig. 3 and 4). Routine laboratory investigations were unremarkable and alkaline phosphatase levels were normal.

Diagnostic arthroscopy revealed normal glenohumeral joint and loose bodies in the bicipital groove. Deltopectoral approach made and the long head of biceps exposed (Fig. 5). The calcific mass and loose bodies were removed en bloc. The synovium around the long head of biceps excised. Histopathological examination concurred to be synovial chondromatosis (Fig. 6).

Postoperatively patient was put on shoulder immobilizer for 2 weeks and mobilized later. At 3 months post-surgery patient painless joint with complete Range of motion. At 2 year follow

degeneration or inflammatory arthritis [5, 6]. The exact etiology in primary type is not known. The clinical manifestations of disease are usually nonspecific and most commonly disease is self-limiting. Most common symptoms are pain, swelling and restriction of movements. Although natural history of disease is generally self-limiting, Davis et al. reported 5% relative risk of malignant transformation in primary synovial chondromatosis [7].

The standard radiographs usually demonstrate calcifications around the lesion and multiple loose bodies with various sizes are seen within the capsule [8]. MRI is usually preferred in cases where there is strong clinical suspicion and no calcification or loose bodies are seen on radiographs.



Figure 3: Magnetic resonance imaging picture coronal section.



Figure 4: Magnetic resonance imaging picture axial section.



Figure 5: Intraoperative picture.

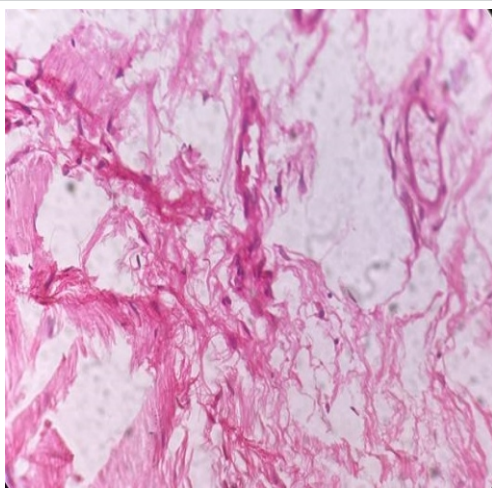


Figure 6: Histopathological examination slide.

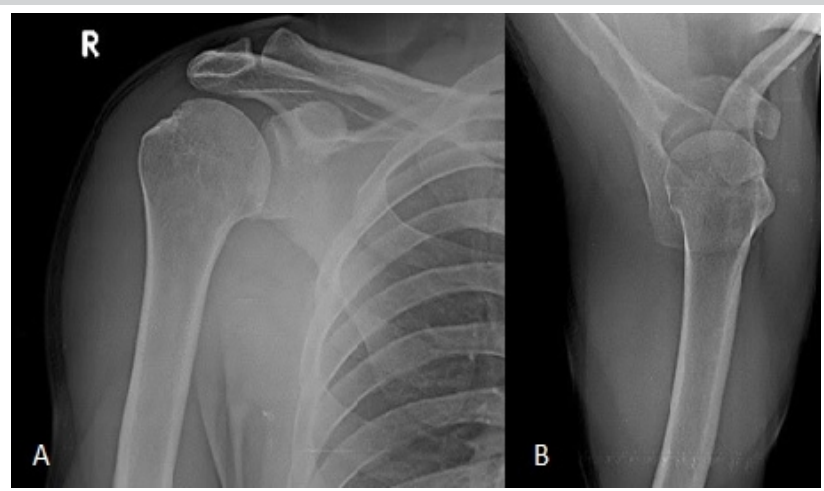


Figure 7: Shoulder radiographs at 6 months of surgery.

The goal of surgical management of synovial chondromatosis is removal of loose bodies and synovium excision [9, 10]. The recurrence rates after successful surgery are 3–23%. Our patient underwent combined arthroscopic and open excision of the tumor. At 2 years of post-operative patient is free of symptoms and without recurrence.

Conclusion

In conclusion we hereby report a rare case of long head biceps tendon synovial chondromatosis of shoulder which was successfully treated by combined arthroscopic and open

method. Synovial chondromatosis usually presents with nonspecific symptoms affecting large monoarticular joints. The results of surgical excision are excellent.

Clinical Message

Synovial chondromatosis is a rare unusual cause of shoulder pain. Surgical excision has good clinical outcomes.

Declaration of patient consent: The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given the consent for his/ her images and other clinical information to be reported in the journal. The patient understands that his/ her names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

Conflict of interest: Nil **Source of support:** None

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