

A Case Of Primary Intra-Articular And Extra Articular Synovial Chondromatosis Of Ankle And Foot

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Citation

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Abstract

Synovial chondromatosis is a cartilaginous lesion arising from the synovial connective tissue, which may occur intraarticularly or extraarticularly. We report a case of intra plus extra articular synovial chondromatosis of ankle and foot. A 32-year-old male patient presented to us with pain, restricted dorsiflexion and frequent locking of the left ankle joint. X ray and clinical examination confirmed diagnosis of intra plus extra articular synovial chondromatosis. Intra-articular pathology was treated with arthroscopic excision of loose bodies and synovectomy, while extraarticular lesion was treated with open excision. Histopathological examination confirmed the diagnosis. Such combination of synovial chondromatosis is very rare and clinically very significant due to its tendency for local recurrence and potential malignant transformation. We reported this case considering its rarity and clinical significance in view of diagnosis and management.

INTRODUCTION

Synovial chondromatosis is a cartilaginous lesion arising from the synovial connective tissue, which may occur intraarticularly or extraarticularly. It is a rare benign condition that involves the synovial lining of joints, bursae or tendon sheaths. When it is intra articular it is called synovial chondromatosis and when it is extra articular it is called tenosynovial chondromatosis. We report a case of intra plus extra articular synovial chondromatosis of ankle and foot. Such combination is very rare and clinically very significant due to its tendency for local recurrence and potential malignant transformation.

CASE REPORT

A 32-year-old male patient presented to us with pain, restricted dorsiflexion and frequent locking of the left ankle joint. The patient had no history of trauma, fever and other joint pains. The patient was apparently alright 6 years back when he developed insidious onset pain in left ankle. Pain was dull aching in nature localized to ankle and used to get aggravated with long walk or climbing stairs. The patient had difficulty in sitting in the squatting position. He took some treatment in the form of oral analgesics and local ointment. The pain was the same for 6 years.

Since 1 year, the patient started getting sudden locking of ankle while walking. He used to manipulate on his own to release locking. He felt some loose body moving inside the

joint. Locking episode was followed by severe pain for some time.

Clinically patient had joint line tenderness anteriorly. There was mild tenderness on the posterior aspect of the ankle joint and along the peroneal tendon sheath. There were no signs of infection or inflammation. 2 loose bodies could be palpated on the anterior aspect of the ankle joint, which were freely mobile. Terminal 10-degree dorsiflexion was restricted on affected side as compared to normal side. Plantar flexion, eversion and inversion movements were full.

The patient was subjected to radiological investigations-X ray ankle AP and Lateral.

X ray revealed multiple radio-opaque bodies in the ankle joint as well as extraarticular area in the posterior aspect of the ankle joint and foot along the tendon sheath of peronei muscle. (Refer to Fig 1. & Fig 2).

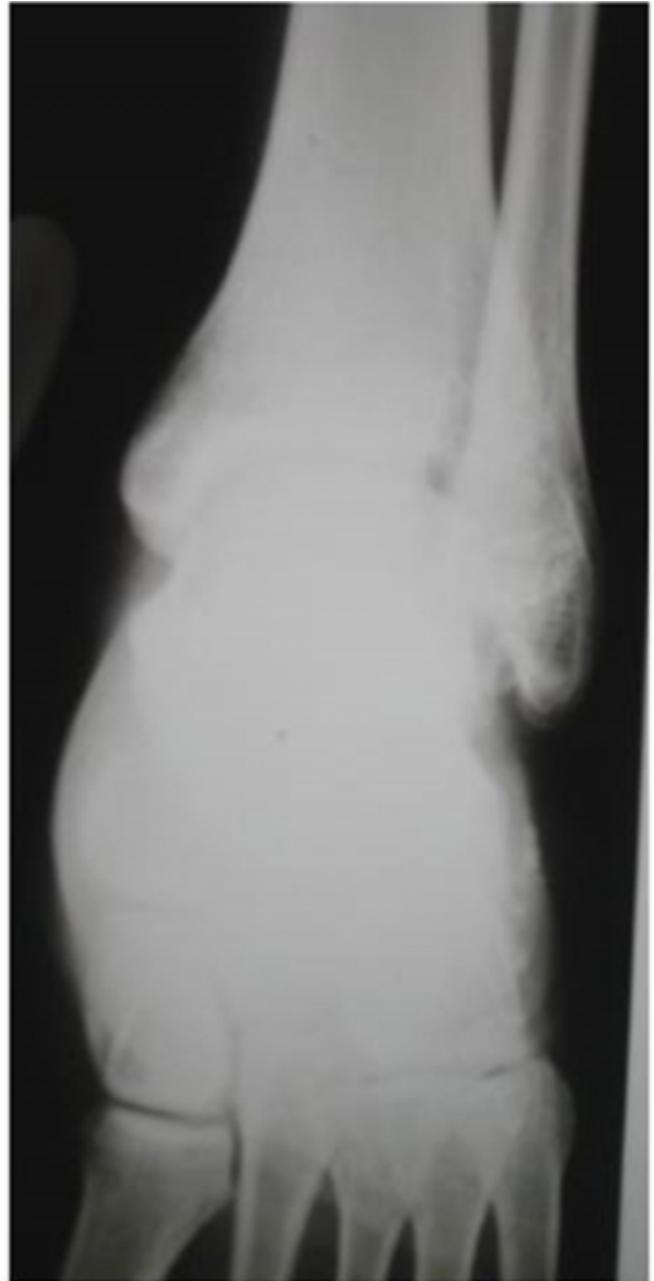
Figure 1

Figure 1: Xray lateral view ankle-showing intraarticular and extraarticular synovial chondromatosis



Figure 2

Figure 2: X ray AP view showing intraarticular and extraarticular synovial chondromatosis



There were 2 bigger loose bodies measuring about 1x 0.5 cm and 0.5 x 0.5cm. on the anterior aspect of the ankle.

The patient was treated in the form of arthroscopic synovectomy of ankle and removal of loose bodies. Anterolateral and anteromedial portals were used to carry out arthroscopic synovectomy and removal of loose bodies. Arthroscopic evaluation showed 2 bigger (1x0.5cm and 0.5x0.5 cm) and multiple small 2-3 mm size osteochondral bodies in the ankle joint. (fig.3)

Figure 3

Figure 3: Arthroscopic view of loose body in the ankle joint

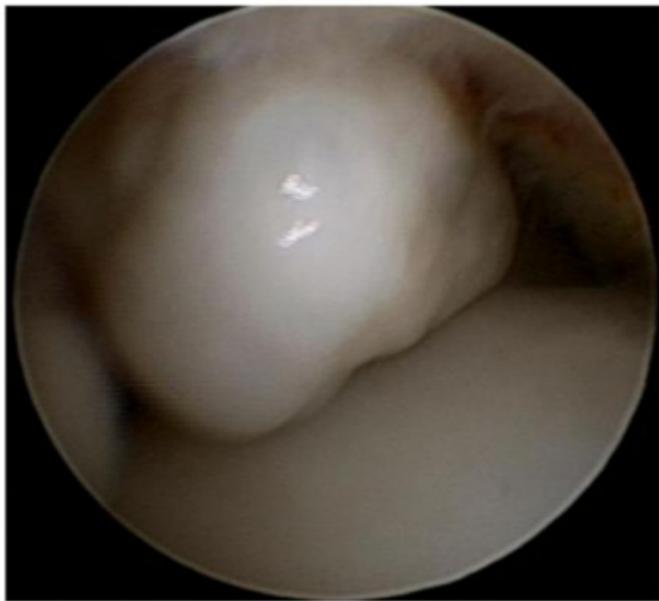


Figure 5

Figure 5: Arthroscopic view of ankle synovitis



Figure 4

Figure 4: Arthroscopic view of loose body engulfed in synovium



Few were loose while the rest were engulfed in the synovium (fig.4). There was synovitis with synovial hypertrophy. (fig.5)

Extrasynovial chondromatosis of peroneal sheath was treated with open excision of the synovial chondromatosis and affected peronei tendon sheath. Removed loose bodies were pale white in colour and bony hard in the consistency. (fig.6)

Figure 6

Figure 6: Loose bodies – osteochondral

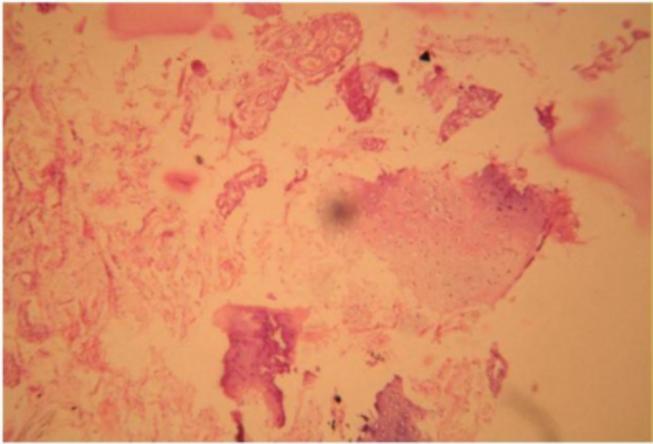


Incision was taken starting from the posterior aspect of the ankle to base of fifth metatarsal to expose peronei sheath.

Excised material was sent for histopathological examination. It confirmed diagnosis of synovial chondromatosis (fig.7) without any evidence of malignant changes.

Figure 7

Figure 7: slide showing cartilage, synovitis



Patient was followed up for 1 year after the surgery without any clinical or radiological evidence of local recurrence. Patient had pain free full range of ankle movement at follow up visit.

DISCUSSION

Synovial chondromatosis is characterized by formation of multiple osteochondral loose bodies. It is a process whereby the synovium undergoes metaplasia and ultimately forms cartilage loose bodies. These loose bodies may go on to ossify. The etiology of synovial chondromatosis is not known. This is usually a monoarticular disease with a benign course. The pathogenesis shows three stages 1) active synovial disease; 2) transitional lesions with both active intrasynovial proliferation and free loose bodies; and 3) multiple free osteochondral bodies with no demonstrable intrasynovial disease.¹ It is more common in age group of 20-40 with predilection for males. Clinical course is also benign. Patient usually complains of mild pain and stiffness of the affected joint. Patient typically becomes symptomatic when loose bodies are formed and cause locking of the joint. Intraarticular presentation is more common. In order of frequency the knee joint is the most commonly affected joint followed by, elbow, shoulder and hip.² Few cases of intraarticular chondromatosis of ankle have also been reported.³ The differential diagnosis of primary synovial chondromatosis includes secondary reactive synovial chondromatosis and synovial chondrosarcoma.⁴ In the secondary form, some other joint pathology leads to joint disintegration, production of intraarticular fragments,

synovitis and eventually, to synovial metaplasia.

X ray picture is very typical for synovial chondromatosis. It shows multiple radio opaque bodies intra or extraarticularly as a cluster. MRI is also very useful tool to see the extent of the lesion. Treatment of intra articular chondromatosis is removal of chondromatous bodies with extensive synovectomy. Earlier arthrotomy and extensive synovectomy was the treatment of choice. Now arthroscopic approach has many advantages over open technique. Arthroscopy helps to do better evaluation of ankle with less morbidity and early rehabilitation. Literature reports equally good results with arthroscopic excision.⁵ Extra articular synovial chondromatosis is treated with open excision of the lesion. This condition especially extraarticular synovial chondromatosis is clinically very significant considering its tendency of local recurrence.⁶ Hence extraarticular chondromatosis should not be neglected and should be treated aggressively with aim of thorough synovectomy. Few reports in the literature mention malignant transformation of chondromatosis into a chondrosarcoma.⁷

We reported this considering its rarity and clinical significance in view of diagnosis and management.

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