

SYNOVIAL CHONDROMATOSIS OF KNEE JOINT IN A YOUNG FEMALE- A RARE CASE

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ABSTRACT

Synovial chondromatosis is a rare condition arising from the synovial membrane of the joints. In this case report we aim to present clinical symptoms and features of synovial chondromatosis in a rare age group in a female patient and also shed some light on how to differentiate it from other pathologies with similar clinical presentation

KEYWORDS : Synovial chondromatosis

INTRODUCTION

Synovial chondromatosis is a rare benign condition arising from the synovial membrane of the joints, synovial sheaths or bursae around the joints(1,2). Primary synovial chondromatosis usually affects the large joints. More commonly affected population is in males as compared to females. Age of presentation is generally in the third to fifth decade, rarely involvement of smaller joints and presentation in younger age group is also seen(3-5)

CASE REPORT

A 24year old female presented with one year history of gradually progressive pain, swelling and restriction of left knee joint. Patient's symptoms were insidious in onset and increased over a period of one year. There was no history of antecedent trauma, loss of appetite and fever. Patient use to take over the counter analgesics for pain relief but since the last 2 months pain increased in intensity following minor blow by blunt object to her left knee and therefore, she came to our hospital for further management. On examination, the left knee was kept in 10degree knee flexion. There was fullness on inspection around the popliteal and parapatellar fossa. Quadriceps wasting was noted around the left knee. On palpation - No local rise of temperature around the knee joint. Diffuse tenderness was present over the knee joint. Range of motion of left knee was 10-30degree associated with pain and spasm. Tests for instability were negative and distal neurovascular examination was normal. Plain x-ray of the patient showed calcification around the knee joint. MRI of the knee joint showed features of synovitis. Patient was admitted and after pre-operative workup arthroscopic synovectomy and biopsy was planned. Patient underwent the procedure at our institute and the sample collected for biopsy was suggestive to be a case of synovial chondromatosis. Post-operatively patient was followed up at 1month and 3 months interval. Patient reported an improvement in pain and range of motion of the knee joint improved to 0-90degree active movement. There were no other complaints at three months follow up.



Fig 1 showing Pre-op X-ray left knee joint having calcification around the knee joint

Fig 2-6 showing Patient's pre-op MRI of knee joint having synovial hypertrophy



Fig 2



Fig 3

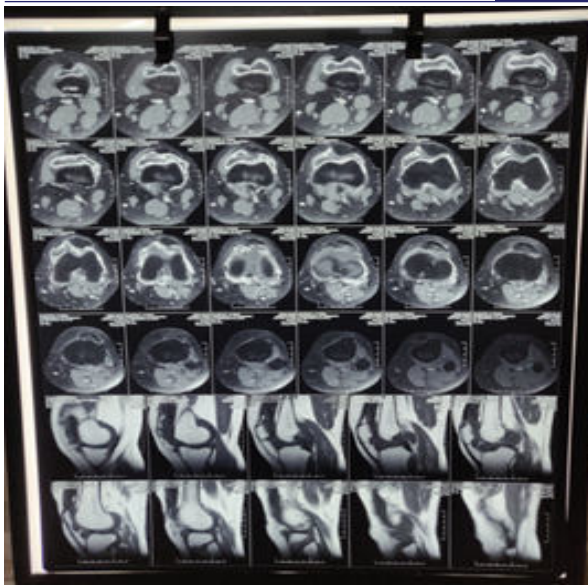


Fig 4



Fig 5

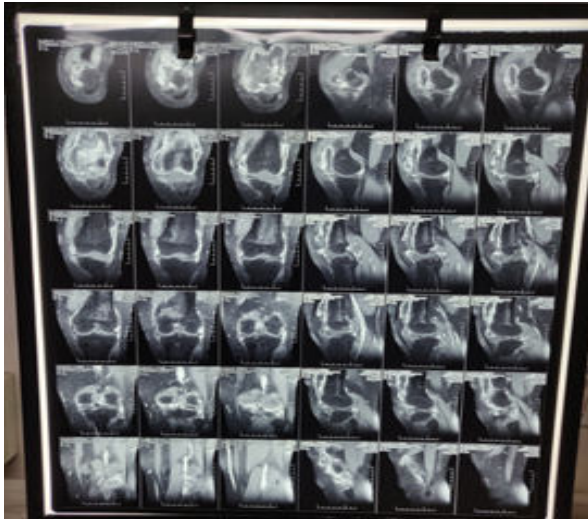


Fig 6

Fig 7-10 showing intra-op knee Arthroscopy pictures depicting loose body removal by arthroscopic shaver and grasper



Fig 7



Fig 8



Fig 9



Fig 10

DISCUSSION

Synovial chondromatosis can arise in any joint in the body, but most commonly occurs in the knee. In synovial chondromatosis, the synovium produces nodules made of cartilage(1,6). These nodules can sometimes break off from the synovium and become loose inside the joint. The size of the loose cartilage bodies inside the joint can be big or small. The synovial fluid nourishes the loose bodies and they may grow, calcify (harden), or ossify (turn into bone). The loose bodies may grow large enough to occupy the entire joint space or penetrate into adjacent tissues, these loose bodies can damage the smooth articular cartilage that covers the joint, causing osteoarthritis(7).

This disease may mimic features of synovitis in many individuals and primary osteoarthritis in elderly patient. There are also a few other pathologies with resemble synovial chondromatosis like lipoma arborescens, pigmented villonodular synovitis and synovial hemangioma(8). It is important to always keep in mind the differential diagnosis of synovial chondromatosis in patients with gross restriction of movement and knee pain. In our report, the patient was thoroughly examined and with the adjunct of adequate investigations, she was diagnosed with the pathology at a relatively early stage.

Once diagnosed generally mild and asymptomatic patient are treated with conservative line of management whereas symptomatic patients usually need surgical option for removal of the abnormal loose bodies causing the symptoms. This can be achieved by open synovectomy or by arthroscopic procedure and in severe cases replacement surgeries can be considered(9,10). In our patient we treated her with arthroscopic debridement of the synovium to make the procedure less morbid and preserve the biology of knee joint. The patient had improved pain score on visual analogue scale from initial score of 8 to post-operative score of 2, as well as improved range of movement of knee joint (Fig 11-12).

Although our patient did not have any complications post-operatively, there are a few complications which need to be kept in mind in a case of synovial chondromatosis such as secondary osteoarthritis, malignant transformation and recurrence of the lesion(1,7,9)

knee joint in the patient



Fig 11



Fig 12

CONCLUSION AND TAKE-HOME MESSAGE:

Synovial chondromatosis is rare in an adolescent female and should always be kept as a differential diagnosis in young patients with knee pain. Adequate open or arthroscopic debridement should be done as early as possible to prevent the complications and recurrence

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Fig 11-12 showing post-operative improved range of motion of