Original Research Paper

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Pathology

PRIMARY SYNOVIAL CHONDROMATOSIS : A CASE REPORT

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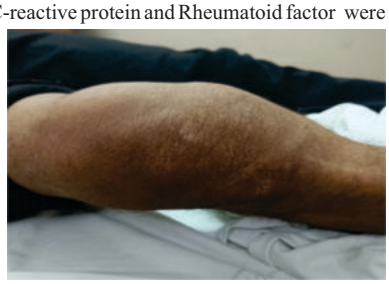
ABSTRACT Synovial chondromatosis is a rare benign condition of the synovial membrane of joints, bursae or tenosynovial sheaths characterized by the formation of multiple cartilagenous nodules or osseus loose bodies . It is usually a monoarticular disease, and 33 different localizations have been described until now.(1). It typically presents with large joint effusion, and joints may appear deformed due to swelling or synovial hypertrophy. Synovial chondromatosis can result in severe disability and dysfunction. However, most cases are benign , and this condition rarely undergoes malignant transformation. The initial diagnosis of synovial chondromatosis is made through a thorough history, physical examination and radiological evaluation of an affected joint.(2). Primary synovial chondromatosis (also known as Reichel syndrome or Reichel-Jones-Henderson syndrome), is a benign monoarticular disorder of unknown origin that is characterized by synovial metaplasia and proliferation resulting in multiple intra- articular cartilaginous loose bodies of relatively similar size, not all of which are ossified. Hence, the term synovial chondromatosis is preferred over primary synovial osteochondromatosis(3). Primary synovial chondromatosis typically affects the large joints in the third to fifth decade of life, although involvement of smaller joints and presentation in younger age group is also documented.(4). We present a review of the literature and report a case of primary synovial chondromatosis of the knee joint in a 32 year old male.

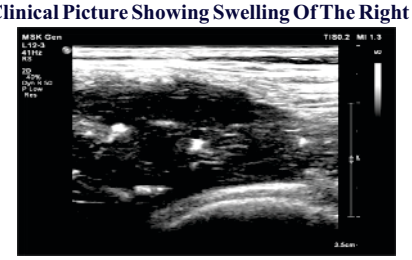
KEYWORDS : Synovium, chondromatosis, knee

INTRODUCTION

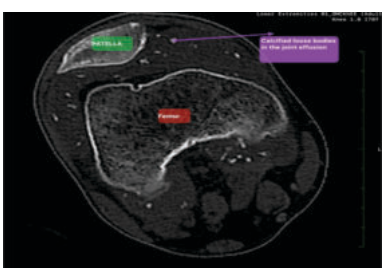
A 32 year old male presented to the Orthopaedic Out Patient Department (OPD) with pain and a gradual increase in the size of the right knee of three years duration. There was no previous history of trauma . ESR was within normal limits. Tests for both the biochemical markers – C-reactive protein and Rheumatoid factor were negative.



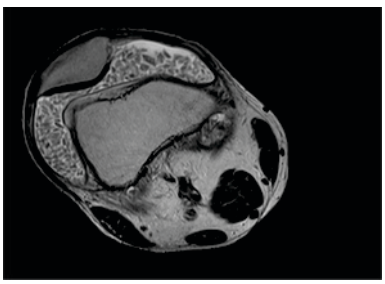
(Fig: 1): Clinical Picture Showing Swelling Of The Right Knee.



(Fig:2): Ultrasound Of The Right Knee Showed Joint Effusion With Multiple Echogenic Linear Loose Bodies Within The Effusion.



(Fig:3): CT Scan Revealed Moderate Joint Effusion With Extension Into Supra – Patellar Space. Multiple Loose Bodies Were Noted Within The Effusion, Some Of Which Showed Calcifications.

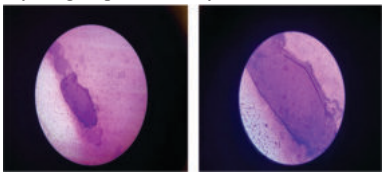


(Fig:4): On MRI Multiple Linear Loose Bodies Were Noted Within The Effusion, Following Cartilage Signal On MRI Sequences.

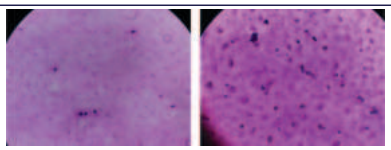
Imaging features raised possibility of primary synovial osteochondromatosis.

The intra-articular bodies in secondary osteochondromatosis are usually larger, lesser in number, vary in size and shape, and frequently ossify, compared with those of primary chondromatosis. A lamellated appearance has been ascribed to the nodules of secondary chondromatosis, resulting from their gradual evolution within the joint space. There is evident nearby joint pathology (including osteoarthritis) (3).

FNAC of the swelling was performed under local anaesthesia and 0.5 cc of mucoid material was aspirated. Smears showed amorphous material, RBCs ,macrophages, mononuclear cells, some having chondrocyte like appearance. Basophilic matrix was seen in the background. Cytologic opinion was synovial chondromatosis.



(Fig:5,6): FNAC Showing Basophilic Matrix In The Background.



(Fig:7,8): FNAC Showing Mononuclear Cells With Chondrocyte Like Appearance.

DISCUSSION

Synovial chondromatosis was first described by Jaffe (5) in 1958 as loose bodies in the synovium consisting of metaplastic chondroid tissue.(6). Milgram (7)classified the loose bodies by origin, as primary from synovial proliferation or secondary from osteophytes or osteochondral fractures. In addition, Milgram described 3 stages of synovial chondromatosis, early, transitional and late stages: active synovium without loose bodies in the early stage, active synovium with loose bodies in the transitional stage, and only loose bodies without active synovium in the late stage. (6).

The differential diagnosis associated with synovial chondromatosis should include synovial hemangioma, pigmented villonodular synovitis, synovial cyst, lipoma arborescence, and malignancies , such as synovial chondrosarcoma or synovial sarcoma. (8).

Men are affected twice as much as are women, usually in the fourth through sixth decades of life, and a mean age of 47.7 years. The SC occurrence rate in adults is 1:100,000. Patients typically present with insidious gradual mechanical symptoms , such as pain, swelling, and decreased motion in the affected joint.(8).

Synovial chondromatosis can mimic osteoarthritis or meniscal pathology. Because of a chance of malignant transformation, any patient with rapid late deterioration of clinical features should be evaluated for chondrosarcoma or synovial sarcoma. Close long-term follow-up is recommended , because although rare, there is a chance of malignant change.(8).

CONCLUSION

Synovial chondromatosis is an uncommon cause of knee pain and swelling and should be included in the differential diagnosis when evaluating any adult aged 30 years to 50 years with knee pain of insidious onset. Appropriate workup, intervention, and treatment will allow final diagnosis and correlating care to be administered to the patient.

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