



Synovial Chondromatosis of The Knee- a Case Report

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ABSTRACT

Synovial chondromatosis of synovial joints is a rare benign disease of unknown etiology of middle aged persons, mostly male. We are reporting a case of synovial chondromatosis of knee involving lateral & inferior part which was diagnosed clinically, radio logically & confirmed histopathologically. Patient was treated with subtotal synovectomy & removal of loose bodies by open lateral parapatellar approach. Post operatively, the patient had pain relief, lightness in knee with improved ROM. Patient showed no signs of recurrence on regular follow up.

KEYWORDS

synovial chondromatosis, knee joint, synovium, loose bodies

INTRODUCTION

Synovial chondromatosis also known as synovial osteochondromatosis/ synovial chondrometaplasia/ Reickel's syndrome/ Reickel's Jones Henderson syndrome is a rare disease of unknown etiology. In this, the synovial membrane undergoes metaplasia and starts forming cartilaginous mass which can calcify or ossify secondarily. This is benign and monoarticular in nature and mostly occurs in 3rd to 5th decade of life and is twice as much common in males than females. It commonly involves knee, hip, elbow, shoulder, ankle, and wrist joint in decreasing frequency. Malignancy & polyarticular involvement is, however, extremely rare. Patients usually present with pain, gradually increasing swelling with limitation of joint movements. Treatment is surgical removal of loose bodies with synovectomy either arthroscopically or by open technique.

CASE REPORT

A 50 year old male patient presented with complains of pain, swelling & limitation of movements of left knee for 5 years. Symptoms were insidious in onset & gradually progressive in nature without any associated history of significant trauma, anorexia, weight loss, evening rise of temperature, altered bowel & bladder habits or other joints involvement. He was taking on & off pain killers. On examination, left knee was in 25-30° of fixed flexion with generalized swelling more in infero-lateral aspect of patella without any redness, scar mark or puckering of skin. On palpation of left knee, temperature was normal, skin was normal in texture without any adherence. A bony hard swelling was palpated on lateral aspect of patella extending inferiorly with slight mobility and tenderness. Fixed Flexion Deformity was of 25° and extension till 115° was possible (Fig 1a, 1b). There was no neuro-vascular deficit.

X-Rays showed large irregular bony growth inferolateral to patella (Fig 2a). 3D-CT scan showed- multiple ossified loose bodies in joint with multiple osteophytes in articular surface of femur, tibia & patella, also multiple cystic lesions in periarticular soft tissue of knee joint was seen (Fig 2b).

Surgery was done by open technique and joint was approached by lateral para-patellar approach. The loose bodies were removed, subtotal synovectomy was done, and synovium was seen covered with multiple whitish grey nodules of different sizes. Joint was thoroughly washed and sutured in layers and the knee was maximally mobilized post-operatively (Fig 3 a-f). Synovium

and bony pieces were sent for histopathological examination and diagnosis was confirmed (Fig 4).

Patient recovered rapidly post operatively and post-op period was uneventful. Knee ROM exercises were started in early post op period.

DISCUSSION

Synovial chondromatosis is a rare benign, monoarticular disease of synovial joint of 3rd to 5th decade, occurring mostly in males.

It is classified as:

Primary- involves normal joint
Secondary- involves degenerative joint.

Milgram described 3 stages of disease-

- Early- active synovial disease without loose bodies.
- Transitional- active synovial disease with loose bodies.
- Late- no synovial disease but loose bodies present.

In early stage of disease it often mimics tendinitis or bursitis & become appreciable in transitional state where loose bodies are formed. Pathologically, in this synovium gradually forms blisters which calcify & enlarges. These nodules are usually centered near synovium and cartilage or may present as loose bodies in joint. Microscopically, appears as focal islands of metaplastic hyaline cartilage embedded in synovium. Chondrocytes may become multinucleated giant cell.

Loose bodies can lead to degenerative changes in joint & patient usually presents with gradually increasing pain, swelling and limitation of movements of joint

This is mostly benign condition with <5% malignant transformation with good prognosis.

Treatment is by removal of loose bodies and diseased synovium either arthroscopically or by open technique, preferably by open technique, as seen in our case.

Incidence of recurrence is low.

Synovial chondromatosis although is a rare disease of joints but should be suspected as differential diagnosis in patients with pain gradually increasing bony swelling of monoarticular joints sometimes biarticular also and diagnosis should be confirmed by combined clinical, radiological and histopathological approach.



Figure 1a



Figure 1b



Figure 2a

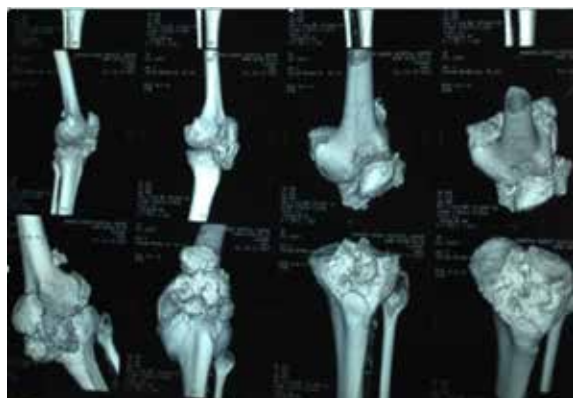


Figure 2b



Figure 3a



Figure 3b



Figure 3c



Figure 3d



Figure

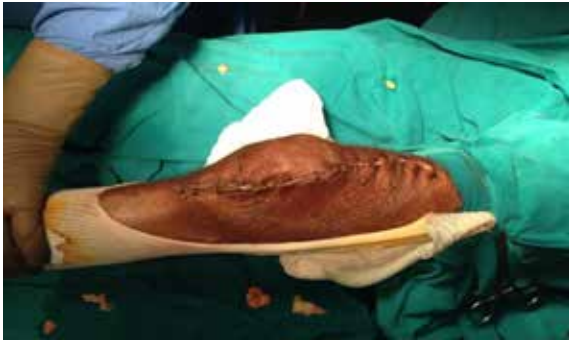


Figure 3f

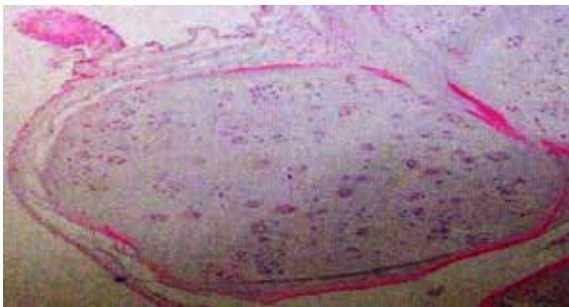


Figure 4

Figure 1a and Figure 1b: Clinical Photographs

Figure 2a: Xrays Figure 2b: 3-D CT

Figures 3 a-f: Intra-operative images

Figure 4: Microscopic appearance

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