Loose bodies in the knee: a common case with unusual presentation

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Patient: 39 years, female

Clinical History:

We present a case of multiple loose bodies in the knee joint of a mentally retarded diabetic patient.

Imaging Findings:

A 39-year-old mentally retarded lady was referred by the GP to the Orthopaedic Clinic with complaints of crepitations during movement of left knee. The attendant also mentioned that she had locking and giving away of the left knee. On examination, the left knee was normal in appearance with some swelling but there was no feature of inflammation. There was crepitation on movement. Drawer's tests were negative; varus and valgus tests were also negative. A plain x-ray of both knees AP and Lateral views were done that showed presence of multiple radio-opaque shadows in the left knee with mild osteoarthritic changes in the tibiofemoral and patellofemoral joints. A few loose bodies were also noted in the suprapatellar bursa. However, the right knee was alright both clinically and radiologically. The orthopaedic Surgeon decided to do knee arthroscopy. During the procedure, a total of 32 loose bodies were removed. They were all of the size of approximately 1cm in diameter with the largest one of about 2.5 cm in diameter. There was a mild arthritic change in the femoral surface. However, the articular surface was intact and there was no feature of osteochondritis dissecans. After the procedure, patient became asymptomatic and was discharged from the clinic.

Discussion:

Loose bodies in the knee are not uncommon in Orthopaedic practice\(^1\), \(^3\), \(^4\). They develop for a variety of reasons. The commonest source of loose bodies in the knee is osteochondritis dissecans where there is osteocartilagenous separation of the articular surface at the subchondral level\(^7\). Other less common causes are osteophytes, torn meniscus, synovial osteochondromatosis\(^8\) and fractured bone. They can also be calcified, fibrous, bony, cartilaginous and osteocartilaginous in nature. The loose bodies range in size from very small\(^8\) to large particles, the former being called ‘snow storm knee’ for their appearance during arthroscopy\(^4\), \(^8\). The loose bodies can be found anywhere in joint cavity including lateral recess of knee\(^2\). This is diagnosed on the basis of clinical findings and plain x-ray. Ultrasound can be done to detect the location and size of the loose bodies\(^8\). Our patient was mentally retarded and was under care of a carer. She was not able to communicate with others well and so it was suspected that the patient might have the loose bodies in the knee for a long time. The carer noticed the difficulty only lately. However, as there was no clear history of traumatic injury to knee, presence of multiple loose bodies only in left knee while other knee is normal can exclude traumatic cause. During arthroscopy, some osteoarthritic features were noticed in the femoral articular surface. But there was no feature suggestive of osteochondritis dissecans. So, the cause is highly likely to be synovial osteochondromatosis that have formed by encapsulation of niduses in layers for
Differential Diagnosis List: Multiple loose bodies in the knee

Final Diagnosis: Multiple loose bodies in the knee

References:


**Figure 1**

*Description:* X-ray of both knees AP view (weight bearing). Note the radio-opaque shadows in the left knee. In comparison, right knee is normal. *Origin:*
Description: X-ray left knee lateral view. Knee partially flexed. Note multiple radio-opaque shadows in the knee scattered all over the joint. Origin:
Description: Photograph of the loose bodies after removal from the left knee. There are a total of 32 loose bodies. The largest one is about 2.5cm X 2.5cm in size. Other loose bodies were about 1 cm in size. Origin:
Description: Loose bodies in the knee as seen during knee arthroscopy. Origin:
Description: A small loose body below the medial meniscus of knee as seen during knee arthroscopy.
Origin: