

CASE PRESENTATION

Beware of a Giant Cell Tumour - A Case Report

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ABSTRACT

This case presents diagnostic problems encountered with a 20 year old man who presented with pain and a flexion deformity of the knee caused by a giant cell tumour of lower end of the femur.

On initial presentation, the knee radiographs were considered normal and the patient was treated for internal derangement of the knee. The diagnosis of giant cell tumour was established after six months when the knee radiograph indicated a bony lesion in the medial condyle of the femur extending into the popliteal space. The purpose of this case presentation is to remind orthopaedic physicians of the possible existence of giant cell tumour formation in the interspacial area of the knee.

The incidence of giant cell tumour in the lower end of the femur can mimic an internal derangement of the knee and if it is not considered in the differential diagnosis, the early diagnosis of giant cell tumour may be missed.

THE CASE

A 20 year old patient was seen in the Orthopaedic clinic with an eight months history of vague pain and

inability to straighten the right knee. Physical examination revealed wasting of the quadriceps. All movements of the knee were painful with the range of flexion/extension limited to 20 - 120 degrees. The radiographs of the knee were considered normal (Fig 1). The patient was admitted to the hospital as a case of painful locked knee. A below knee skin traction was applied which failed to make his

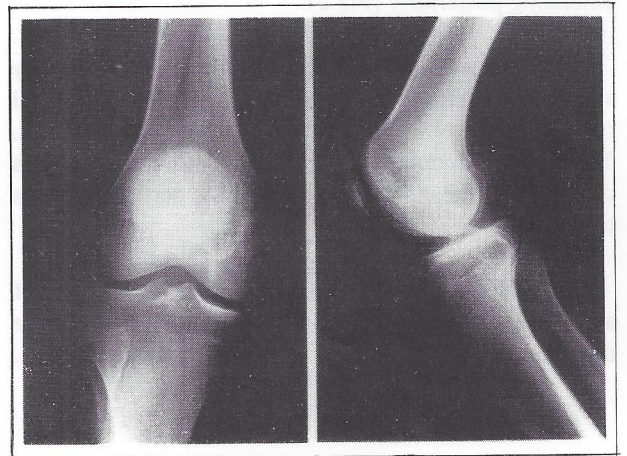


Figure 1. The initial anteroposterior and lateral radiograph of the right knee demonstrating a small intraosseous tumour in the medial femoral condyle, which was overlooked.

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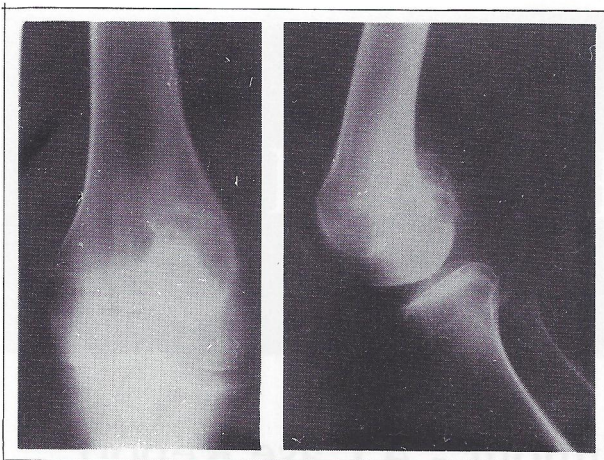


Figure 2. *The anteroposterior and lateral radiograph of the knee demonstrating a giant cell tumour in the medial femoral condyle extending posteriorly.*

knee straight. Arthroscopic examination of the knee demonstrated a doubtful tear in the medial meniscus. Exploration of the knee was done which did not demonstrate any abnormal pathology.

Six months later the patient reported to the clinic with persistent symptoms of pain and limited knee movements. The radiographs of the knee demonstrated a radiolucent, multilocular, bony lesion in the medial femoral condyle, extending posteriorly (Fig 2).

Patient was readmitted to the hospital. The bony swelling in the popliteal space and the medial femoral condyle was explored using the postero-medial approach. The tumour was removed, the medial femoral condyle was curetted and the cavity packed with the corticocancellus bone graft.

The histopathology report confirmed the diagnosis of a giant cell tumour. At three years follow-up showed that the patient was asymptomatic and there was no recurrence.

DISCUSSION

The torn meniscus is considered to be the commonest cause of internal derangement of the knee in young patients. The giant cell tumour is also common in patients between 20 and 40 years of age and because of its common site in the epiphysis of the distal femur or the proximal tibia, it can mimic the symptoms of an internal derangement of the knee.

The knee radiographs are expected to reveal the existence of the tumour and aid in the diagnosis, however, the location of the tumour may be distended from the expected arthroscopy environment, and the diagnosis may not be established during the first investigation.

These patients may also present with a flexion deformity of the knee which may occur due to irritation of the posterior capsule or a concurrent hamstring spasm and should be differentiated from a locking of the knee.^{1,2}

In this case, a small intraosseous lesion on the initial radiographs was overlooked and the patient's symptoms were considered to be due to the meniscus lesion. The diagnosis was revised six months later when the patient presented with persistent knee symptoms and the knee radiographs confirmed a large bone tumour.

This case demonstrated that the giant cell tumour in early stages can mimic an internal derangement of the knee and if the possibility of a tumour is not considered then the results may be a diagnosis of an internal derangement of the knee.

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