Diagnostic Images

Painful knee

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The patient

A female aged 50 presented with a hot, swollen painful knee.

Investigation

Frontal and lateral radiographs of the knee.

Figure 1 Frontal knee radiographs showing marked calcification of the menisci. The suprapatellar fat pads (arrows) are displaced to either side of the distal femur indicating a large intra-articular effusion.

Figure 2 The meniscal calcification is again visible as well as a line of calcification in the articular cartilage adjacent to the femoral condyles (arrowheads) and in the displaced posterior capsule (arrow) associated with the marked effusion that can also be seen as distension of the suprapatellar pouch (curved arrow).

Comment

Chondrocalcinosis includes calcification in menisci, articular cartilage and capsule, that is, in hyaline and fibrocartilage. Meniscal calcification is quite common in the elderly associated with varying degrees of degenerative arthrosis or is often asymptomatic, but is much more marked when it occurs in crystal deposition disease (pseudo gout) and various metabolic conditions including hyperparathyroidism, gout, ochronosis, haemachromatosis, Wilson's disease, acromegaly, hypophosphatasia, and diabetes mellitus. The diagnosis in symptomatic patients therefore depends on biochemical investigations or demonstration of crystals in the joint fluid. However, radiological signs such as intervertebral disc calcification (ochronosis), periosteal bone resorption (hyperparathyroidism), peripheral arterial calcification (diabetes mellitus) and tufting of the terminal phalanges (acromegaly) may be present to indicate the aetiology. This is particularly so in late or gross disease and is not an indication to demonstrate each radiological abnormality.

Reference

1. Greenfield, G.B. *Radiology of Bone Diseases*, 4th edn. J.B. Lippincott Company, Philadelphia, 1986, pp. 858–869.