

A Medial Soft Tissue Mass of the Knee

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A 67-year-old woman presented with 3 months of a progressively enlarging soft mass over the medial right knee. There was impairment and pain on walking. She had a 5 year history of osteoarthritis of the knees documented by plain radiographs, and recurrent flares of pain and swelling of the wrists and knees. Linear opacification of the triangular ligament by radiography and the presence of calcium pyrophosphate dihydrate crystals in the synovial fluid led to a diagnosis of chondrocalcinosis. She was treated with nonsteroidal antiinflammatory drugs, physical therapy, and occasionally intraarticular steroids. On examination, a 15 × 10 cm, tense, slightly tender, subcutaneous mass was observed. The overlying skin was distended and the vascular bed was plainly visible. The knee joint was mildly swollen with fluid in the knee but it was not tender. Marked joint valgus instability and moderate pitting edema of the leg, secondary to chronic vein insufficiency, were noted. Laboratory examinations showed only a mild increase in acute phase reactant measures. Synovial fluid analysis showed a viscous transparent fluid with 1000 leukocytes/ml and few extracellular calcium pyrophosphate dihydrate crystals. Radiography of the knee was not contributory, apart from bilateral osteoarthritis and medial soft tissue swelling. Magnetic resonance imaging (MRI) revealed an

extraarticular wide medial knee cyst with a low T1 signal and a nonhomogeneous, high T2 signal communicating with the joint space. Several other smaller cysts with similar signal intensity were located in the popliteal region (Figure 1). Both the chronic joint effusion, which was unresponsive to conservative treatments, and the remarkable size of the mass indicated surgery. During surgery, the cystic mass was observed to be external to the medial joint capsule and to be narrowly connected to the postero-medial side of the joint cavity. The excised cyst was filled with a thick, gelatinous synovial fluid. Five months later the joint was still mildly swollen and unstable, but the cyst had not recurred.

Synovial cysts of the knee are common. They are related to knee effusions that usually leak and accumulate, due to a valve effect, in the posterior bursae of the knee; however, sometimes a large cyst can promote an enlarged mass within the calf muscles^{1,2}. To our knowledge, this is the first description of such an unusual localization of a synovial cyst that, beyond the popliteal space, progressively developed outside the medial capsule of the joint.

Differential diagnosis of medial knee neoformation includes sarcomas, benign neoplasms, Dercum adiposity³, and aneurysms. Ultrasonography, MRI, and computerized tomog-

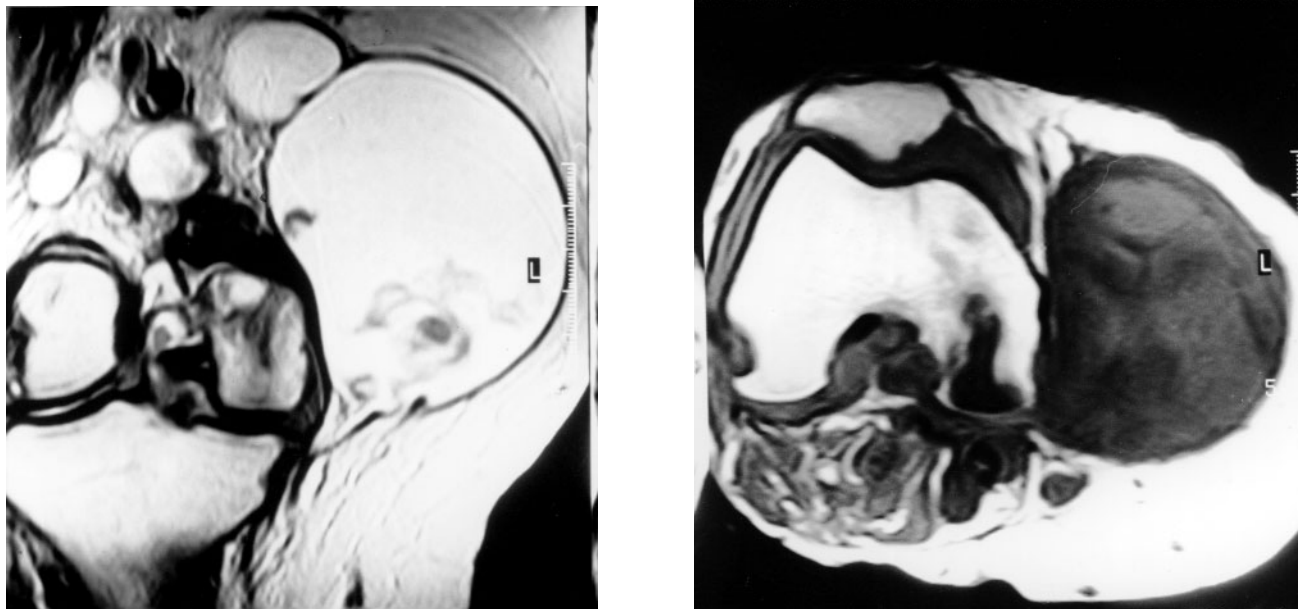


Figure 1. MRI of an extraarticular knee cyst communicating with the joint space (A). Several other smaller cysts with similar signal intensity were located in the popliteal region (B).

raphy are reliable tools for diagnosis; double contrast arthrography may also be useful to confirm diagnosis in masses that communicate with the joint. Our observation shows that popliteal cysts should be included in the differential diagnosis of soft tissue medial masses of the knee.

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