

# Hemangioma mimicking meniscal injury

## A report on 10 years of knee pain

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Cavernous hemangioma is a benign soft tissue tumor that can appear anywhere in the body. We report a case of cavernous hemangioma in Hoffa's fat pad in the knee. The case defied a number of diagnostic measures until computed tomography and exploration finally revealed the diagnosis.

### Case report

The patient was a woman, who was 55 years of age at the time of the final diagnosis. Approximately 10 years previously she started to experience pain in the upper part of her left leg when exercising. There was no history of trauma. Initially, the pain was quite mild, but it gradually increased over the years. The pain was initially diffuse, radiating from the knee region up towards the hip. Three years before her final diagnosis, she sought medical advice; and diagnostic measures were directed towards her left hip region. At this time, a physical examination of her knee and hip was negative. Radiography of her spinal column, sacroiliac joints, and hip joints was also negative except for moderate degeneration of her lowermost lumbar disc. Scintimetry of both knees was negative, and she was treated with physiotherapy.

Six months later, she appeared again with pain, which was now more focused to the medial side of her left knee. She still complained of aches during the night and pain on exertion; she denied catching or locking episodes. The range of motion lacked 30° in flexion and 10° in extension. There was distinct tenderness medial to the patellar tendon over the anterior part of the joint line, no pain on rotation of the tibia, and discrete atrophy of the quadriceps. Radiography of the knee was again negative, and examination in a weight-bearing position did not reveal any signs of degenerative joint disease. Because of a suspected meniscal lesion, the patient underwent an arthroscopy by the rou-

tine central approach through the patellar tendon. No signs of intraarticular pathology were found.

At follow-up after the arthroscopy, the patient still complained of meniscal-like pain; but in view of the negative arthroscopy, she was treated for a presumed pes anserinus bursitis with rest and anti-inflammatory drugs. During the following year, the symptoms persisted, and a mild protrusion of Hoffa's fat pad developed immediately medial to the patellar tendon. A year after the arthroscopy, computed tomography of the left knee revealed a 2 x 0.75-cm tumorous lesion in the medial part of Hoffa's fat pad (Figure 1). At exploration a hemorrhagic, soft tumorous body was found inside Hoffa's fat pad engaging also the synovial lining. The position of the lesion was level, but medial to the lower pole of the patella, corresponding well to the tomography. The lesion was well defined, but it was not pedunculated. It was excised, and the histologic preparations showed a cavernous hemangioma that also involved the synovial lining. After surgery the patient was cured. At an outpatient visit for unrelated reasons 18 months after the operation, she acknowledged that she had not had any further problems from her left knee; a physical examination of the knee at this time was also normal.

### Discussion

Cavernous hemangioma of joints was given the distinction of being an entity of its own by Bennett and Cobey (1939), who presented 5 cases and reviewed another 24. Hemangioma in the knee region is not entirely uncommon; today, about 160 cases have been reported in the literature (Mielke et al. 1978). The usual case is a child or adolescent with spontaneous hemarthrosis, and the diagnosis is often delayed for many years (Jacobs and Lee 1949, Paley and Jackson 1986). The condition is difficult to diagnose, and the lesion is often not recognized until an explorative arthrotomy is carried out. Intermittent swelling, due to spontaneous bleeding into the joint, is the cardinal sign (Jacobs and Lee 1949, Halborg et al. 1968, Boe 1986). In their large series of 19 cases, Halborg et al. (1968) found that pain

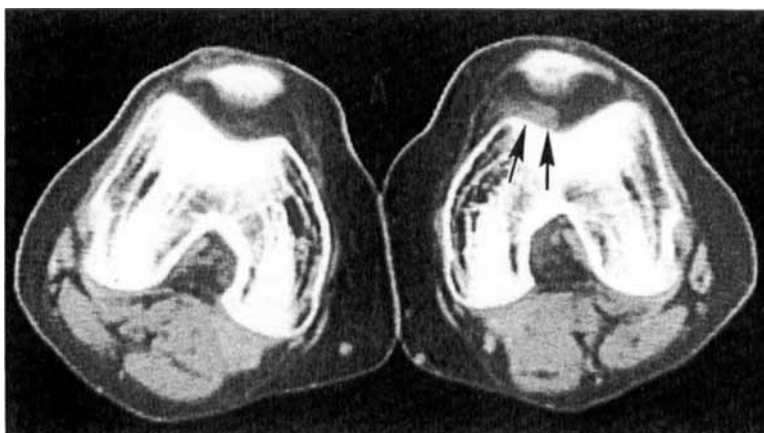


Figure 1. Computed tomogram in the horizontal plane at the level of the lower pole of the patella. The hemangioma is seen as soft tissue between the patella and the medial femoral condyle (arrows).

during motion, tenderness, and muscle atrophy were usual signs. Plain radiographs are often negative (Lewis et al. 1959), and arthrography is claimed to be not helpful (Mielke et al. 1978). Arteriography might fail to reveal the tumor (Paley and Jackson 1986), whereas arthroscopy can be useful (Boe 1986, Paley and Jackson 1986). Computed tomography has been successfully used previously (Linson and Posner 1979).

To our knowledge, our patient is the oldest case of synovial hemangioma that has been reported. The lack of hemarthrosis was also atypical, especially since the hemangioma was truly synovial, as opposed to juxta-articular (DePalma and Mauler 1964), and it also includ-

ed the synovial lining. Initially, the pain was very diffuse, and the diagnostic measures were at first directed towards the hip joint. A number of very typical signs were, however, present: pain on exertion, muscular atrophy, limitation of knee motion, and intensive local tenderness.

At exploration the lesion was readily discovered at a location corresponding to the CT finding. The location was such that the arthroscope must have passed very close to it; an alternative portal, for example, suprapatellar, would probably have revealed the lesion during the arthroscopy.

## References

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