



Case report

Recurrent intraarticular knee hemangiomas: A case report[☆]George Mathew Srampickal^{a,*}, Korula Mani Jacob^a, Koyeli M. Mahata^b^a Department of Orthopaedics, Christian Medical College and Hospital, Vellore, Tamil Nadu, India^b Department of Radiology, Christian Medical College and Hospital, Vellore, Tamil Nadu, India

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ABSTRACT

Intra-articular hemangioma is a rare condition with only around 200 cases reported in the literature. MRI is the investigation of choice and arthroscopy has got a definitive role in the treatment. Arthroscopy may have to be combined with open surgery if the feeder blood vessels are extra-articular. We performed a complete resection, after arthroscopic examination in an 18-year-old girl presented with a recurrent intra-articular hemangioma. At 18 months follow up there was no evidence of recurrence.

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Key messages

High degree of suspicion is needed in the timely diagnosis and treatment of intra-articular hemangioma. Delay in diagnosis can lead to the destruction of the joint and secondary arthrosis. Incomplete excision of the lesion can lead to recurrence.

1. Introduction

Intra-articular hemangiomas are rare neoplasms. It is a benign condition and is thought to be due to a hamartomatous vascular malformation rather than a true neoplasm. It is often misdiagnosed or missed altogether and so the natural course and treatment options are not well described. The most common joint to be involved is the knee. If they are inadequately excised they are prone to recurrence and therefore should not be taken lightly. We report a case of recurrent intra-articular hemangioma of the knee joint which preoperative MRI had assessed as highly suspect and which resection and subsequent histological examination confirmed to be an intra-articular synovial hemangioma.

2. Case history

An 18-year-old girl presented with complaints of pain in the right knee for almost 8 years which she noticed after a trivial fall

with associated swelling on the medial aspect of the knee. The pain was aggravated by walking on uneven surfaces and on running. She did not notice any episode of locking of her knee. She had undergone surgery previously, 7 years before and again one year after the first surgery for a recurrent swelling.

On physical examination, there was a 10 cm long scar on the lateral aspect of her right knee healed primarily. Her knee alignment was normal. An ill-defined cystic swelling was noted on the anteromedial aspect of the knee along the joint line which increased on flexion and became less prominent on extension. The swelling was mildly tender but not warm or pulsatile. There were a few small dilated subcutaneous veins noted overlying the swelling. There was no significant synovitis or effusion. Mild wasting of quadriceps muscle was present on the affected side.

Plain radiographs of the knee were essentially normal (Fig. 1). Magnetic resonance imaging revealed a lobulated, multi-septate T2 hyper intense lesion with multiple hypo intense septae predominantly within Hoffa's fat pad in favor of slow flow vascular malformation. There were associated discrete T2 hyper intense foci within the lesion that were thought likely to represent phleboliths. The lesion occupied Hoffa's fat pad with extension into the subcutaneous plane along lateral aspect of the patellar tendon (Fig. 2). There was bony remodeling along the inferior aspect of medial and lateral patellar facets with corresponding articular cartilage loss. There was evidence of previous surgical scar along the lateral aspect of the knee and infrapatellar region. A smaller, similar appearing hyper intense lesion in the subcutaneous plane, along with the posterolateral aspect of the right leg, at the junction of mid and lower third which also appeared suggestive of a second asymptomatic slow flow vascular malformation.

Focused USG-Doppler screening showed few small hypo echoic spaces demonstrating vascularity of venous pattern. Some mobile

[☆] This work should be attributed to Department of Orthopaedics, Christian Medical College, Vellore, Tamil Nadu, India.

* Corresponding author.

E-mail addresses: drmsgeorge@gmail.com (G.M. Srampickal), korulamani-jacob@gmail.com (K.M. Jacob), koyelimahata@hotmail.com (K.M. Mahata).



Fig. 1. Lateral and anteroposterior plain radiographs of the knee were essentially normal though on retrospect increased infra patellar soft tissue shadow.

internal echoes are seen which could be related to recent bleed. Hyperechoic areas are likely to represent calcific foci – phleboliths (Fig. 3). Similar vascularity is seen within lesion in the posterior aspect of the right leg.

The patient underwent arthroscopy of the right knee with standard anterior medial and lateral portals and an accessory superolateral portal at which the intra-articular hemangioma was clearly identified in the anteromedial space anterior to the medial joint line abutting the Hoffa's fat pad (Fig. 4). The initial plan had been to perform an arthroscopic ablation of the feeder vessels and excise the hemangioma arthroscopically; however in view of the fact that she had already had two surgeries in the past, combined with the fact that the origin of the feeder vessels was evidently

extra-articular, it was decided to proceed with a mini-open en-bloc resection of the lesion.

Histopathologic examination showed fibro-adipose tissue and skeletal muscle with parts of a lesion composed of closely packed congested, ectatic thick and thin walled blood vessels. The adjacent stroma showed fibroblastic proliferation, numerous thick walled congested blood vessels and mild infiltrates of lymphocytes, plasma cells and a few foamy macrophages suggestive of benign angiomatous lesion with no evidence of malignancy.

The patient was followed up clinically and radiologically at 18 months. She had no surgery related complications, full pain-free range of motion and was able to perform all her daily activities and academics with no restriction. Her Oxford knee score improved

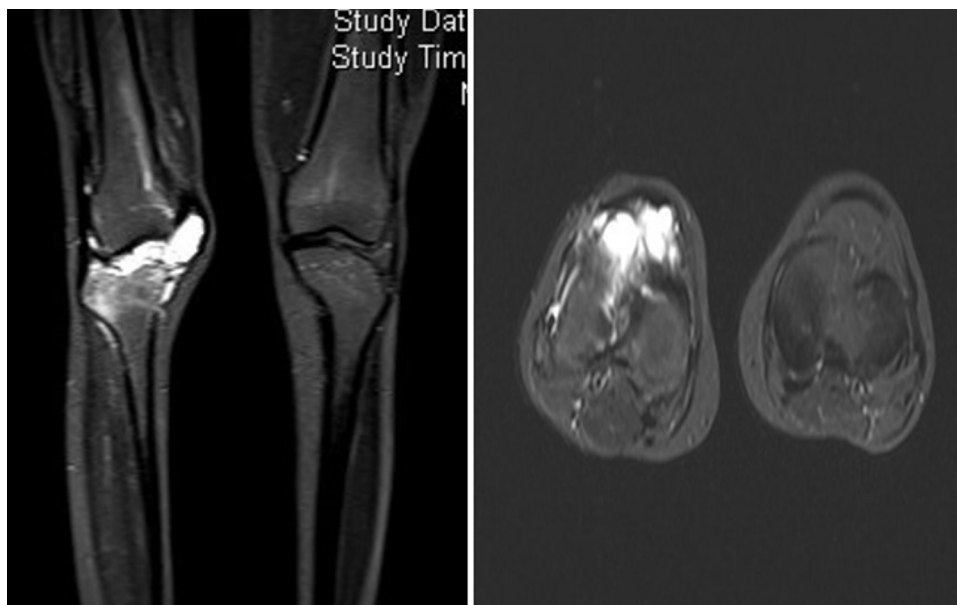


Fig. 2. MRI T2 hyper intense lesion with multiple hypo intense septae predominantly within Hoffa's fat pad in favor of slow flow vascular malformation.

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