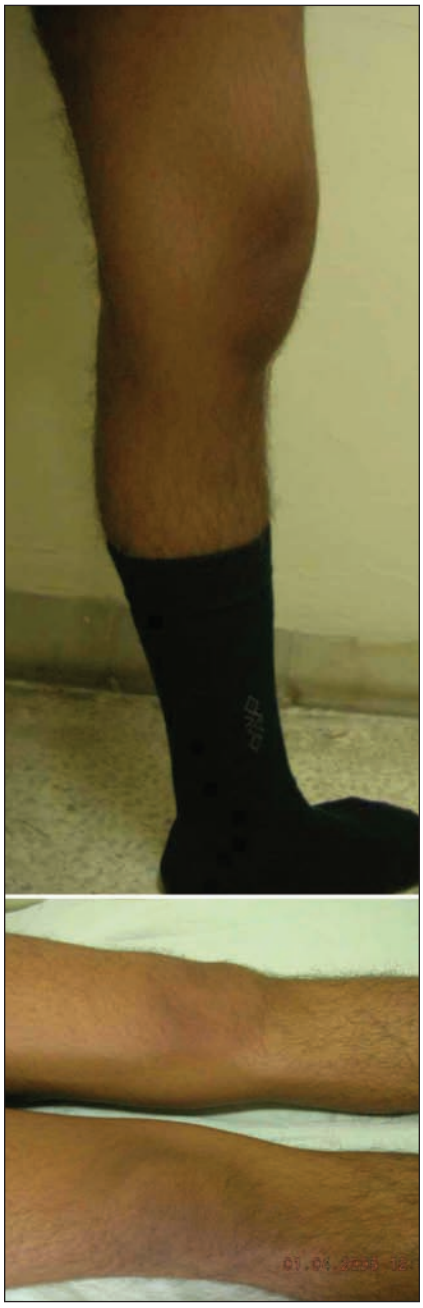
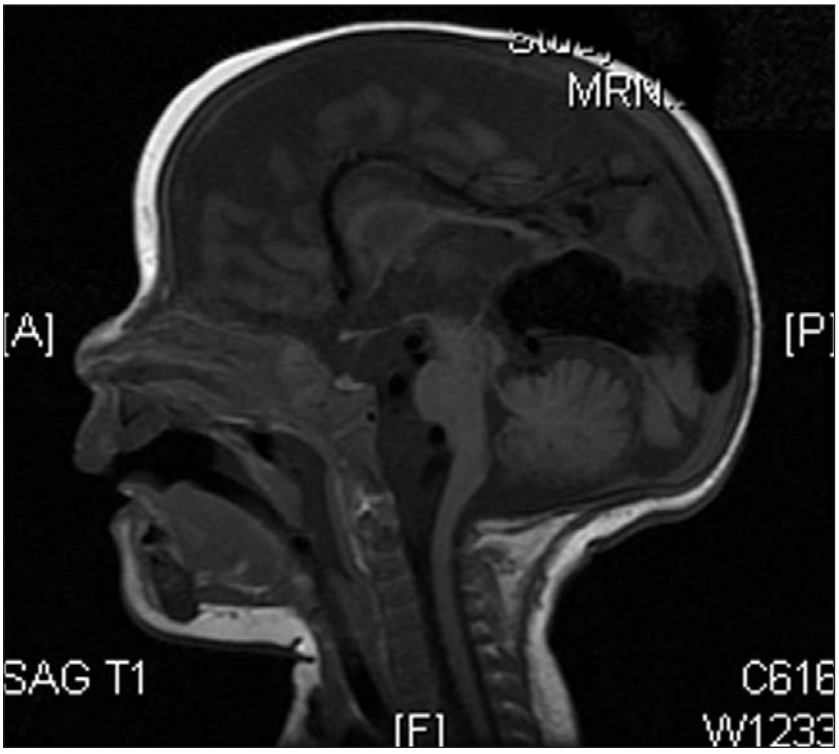
Clinical Vistas Briefs

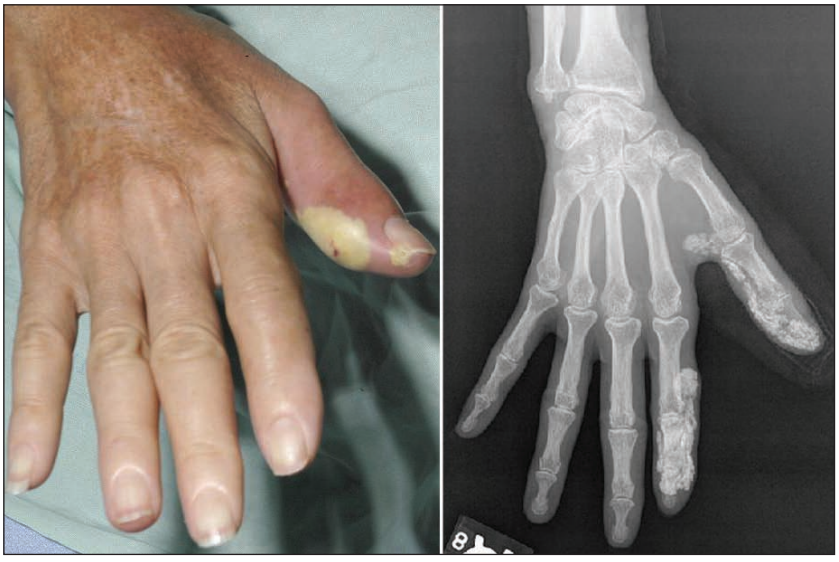
What's your call?



A 19-year-old man presented with painless swelling of his left knee that was prominent on standing but that resolved completely when supine.



Sagittal T1-weighted cranial MRI scan of a 3-month-old boy who presented to the emergency department in congestive heart failure and with a harsh cranial bruit.



A 55-year-old woman with scleroderma presented with a 5-day history of fever, chills and tenderness of her right thumb.

See page 1060 for diagnoses.

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Intramuscular cavernous hemangioma with juxta-articular swelling

The patient reported experiencing recurrent, painless swelling of his left knee since he was 8 years old (Fig. 1). There was no preceding trauma. He had pain and swelling once or twice a year that lasted about a month. None of his symptoms suggested local or systemic inflammation. The patient had received a diagnosis of presumed juvenile arthritis and had taken NSAIDs on and off for years. Aspiration of the swelling, done elsewhere, yielded only blood. Results of a preliminary screening for coagulation disorders (platelet count, bleeding time, clotting time, prothrombin time and activated partial thromboplastin time) were negative.

The patient's skin over his left knee was normal, and there was no limitation of movement. MRI scans showed a soft-tissue mass below the anterior thigh muscles (images available online at www.cmaj.ca/cgi/content/full/175/9/1059/DC1), which suggested a partially sclerosed hemangioma with no communication with the joint cavity.

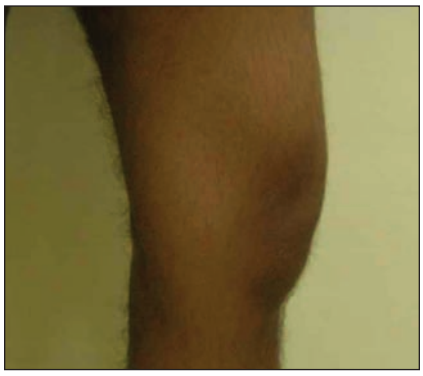

Fig. 1: Left knee with painless swelling on standing.

Hemangiomas are uncommon as a cause of recurrent joint swelling and, as in the case of our patient, are frequently misdiagnosed, which can lead to diagnostic delays. The swelling classically increases on standing and reduces on lying down because of emptying of the hemangioma. Hemangiomas are considered hamartomatous malformations or benign neoplasms of normal vascular tissues. Capillary hemangiomas consist of capillaries communicating freely with the systemic circulation, whereas cavernous hemangiomas are made up of dilated endothelial cavities with minimal connection to systemic circulation. Cavernous hemangiomas are more likely than arteriovenous malformations to present as juxta-articular swelling.[1] They usually present as an asymptomatic mass and cause pain and restriction of movement if they involve the deep fascia and muscles. Intramuscular hemangiomas make up 0.8% of all hemangiomas and are usually seen in the thighs. The most important differential diagnosis is hemarthrosis and pigmented villonodular synovitis, conditions easily distinguished with the use of MRI.

Intramuscular hemangiomas normally fibrose and resolve over time without any intervention. However, percutaneous sclerotherapy, radiotherapy, surgery, embolization and freezing have been used for treatment in persistent cases.

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REFERENCE

1. Goraya JS, Singh G, Singh S, et al. Arteriovenous malformation of knee masquerading as juvenile arthritis. *Scand J Rheumatol* 1998;27:313-5.

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Vein of Galen malformation

A large aneurysmal dilatation of the vein of Markowski and vein of Galen was noted on the cranial MRI. It was seen left of the midline, with marked mass effect, multiple fistulae and enlargement of the left middle-, left anterior- and posterior-cerebral arteries. MR venography showed a dilated venous pouch that drained into the falcine vein and posterior sagittal sinus (Fig. 1).

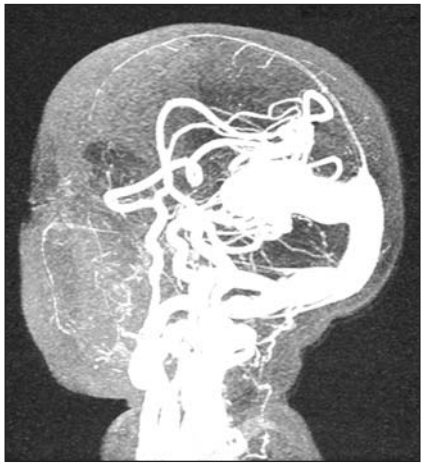

Fig 1: Magnetic resonance venogram, showing a dilated venous pouch draining into the falcine vein and posterior sagittal sinus.

Vein of Galen malformations are rare congenital vascular abnormalities resulting in a direct communication between the cerebral arteries and the deep draining veins of the posterior cerebral fossa. The malformation develops between weeks 6 and 11 of fetal development as a persistent embryonic prosencephalic vein of Markowski, which drains into the vein of Galen. These veins become enlarged and aneurysmal. Vein of Galen malformations are usually diagnosed on antenatal ultrasonography in the third trimester. They can be associated with other conditions, including atrial septal defects, patent ductus arteriosis and pseudoaortic coarctation (*Pediatr Radiol* 1997; 27:501-13). Treatment usually involves endovascular embolization.

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