Fat 'fracture': a subcutaneous fat injury following a blunt trauma

A 54-year-old man presented 6 weeks after a fall with localized pain, swelling, movement restriction and soft tissue indentation of the left lateral thigh. He was referred for an ultrasound which showed a fat fracture (*Figure 1*).

Following a blunt trauma, localized swelling, soft tissue indentation and impaired movement raise suspicion of underlying muscle or tendon injury. However, a cleavage in the subcutaneous fat at the plane of the force can give a similar picture – a fat 'fracture'. Fat fracture was first described by Thomas et al (2001). It is part of a spectrum of changes following trauma to the subcutaneous fat, in addition to fat contusion and necrosis.

The diagnosis of fat fracture is often overlooked. Differentiation between tendon rupture and fat fracture is important, as surgery can be avoided. When clinical examination is inconclusive, ultrasound plays an important role. It is easily available, safe and provides excellent spatial resolution. BJHM

Thomas RH, Holt MD, James SH, White PG (2001) 'Fat fracture'-a physical sign mimicking tendon rupture. *J Bone Joint Surg Br* **83**(2): 204–205. https://doi.org/10.1302/0301-620X.83B2.11404

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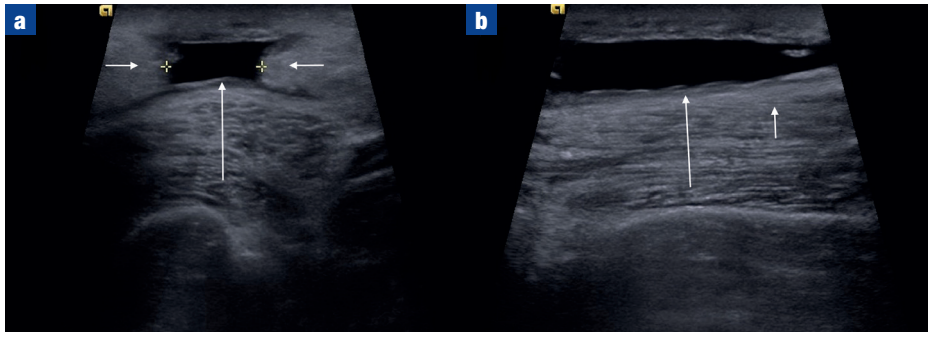
Figure 1. A fluid-filled gap within the subcutaneous fat plane is seen, **(a)** measuring 1 cm in width (long arrow) and **(b)** 5 cm in length (long arrow) in keeping with the diagnosis of a fat fracture. The subcutaneous fat surrounding the cleavage shows diffuse swelling with increased echogenicity suggesting a traumatic contusion (short arrowheads, a).



Pneumocephalus after endoscopic sinus surgery

A 71-year-old man presented with a 1-week history of frontal headaches after endoscopic sinus surgery 2 weeks earlier. He denied other nasal symptoms, and a neurological examination showed no abnormal findings. Endoscopic examination showed a pulsating lesion on the roof of the right nasal ethmoid sinus. Plain radiographs with skull lateral view revealed a pneumocephalus in the frontal lobe (*Figure 1a*), and computed tomography showed a bony defect in the roof of the ethmoid sinus.

His treatment was conservative management with bed rest. After 2 weeks, the pneumocephalus had decreased in size (*Figure 1b*). Three weeks after his initial evaluation, it had completely resolved (*Figure 1c*). The dural pulsation resolved after 4 weeks.

The possibility of pneumocephalus should be considered in a patient with a history of endoscopic sinus surgery who is complaining of headaches, as it is a rare but possibly life-threatening complication. BJHM

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Figure 1. **a.** The pneumocephalus is noted on initial skull lateral view. **b.** Decreased size of pneumocephalus after 2 weeks. **c.** Complete resolution of the pneumocephalus after 3 weeks.