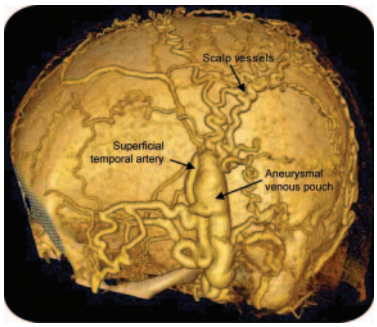
Symptomatic left temporal arteriovenous traumatic fistula

Figure 1 Three-dimensional CT reconstruction showing arteriovenous fistula



A 25-year-old right-handed man presented with left greater than right tinnitus several months after receiving a blow to the left temporal area.

Bruit was noted during auscultation. CT angiography (figure 1) and catheter angiography (figure 2, A and B) showed a traumatic left scalp arteriovenous fistula. The fistula was fed by an enlarged left superficial temporal artery and by hypertrophic branches of the occipital artery (figure 2, A and B). There was also recruitment of contralateral external carotid branches. Therapeutic options include surgical or endovascular disconnection of the fistula.[1] The patient underwent Onyx and coil embolization of the fistula with complete obliteration (figure 2C) and resolution of the bruit. Scalp arteriovenous fistulas can result from blunt trauma.[1] Obliteration of the fistulous connections and of the proximal portion of the draining vein is the mainstay of endovascular therapy to prevent recurrence.[2]

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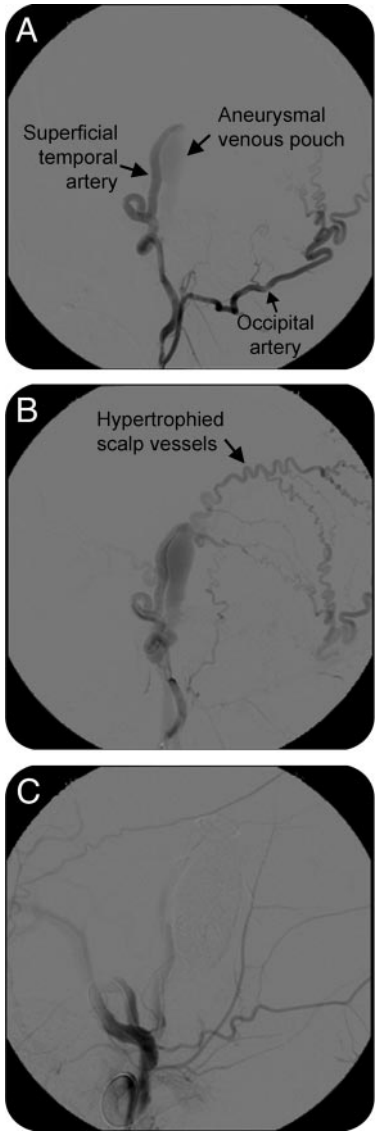
Figure 2 Left external carotid angiogram



(A) Early phase and (B) midarterial phase. There is early filling of a post-traumatic arteriovenous fistula with a large venous pouch fed by a hypertrophic superficial temporal artery and hypertrophic branches of the occipital artery. (C) Complete obliteration of the fistula after Onyx embolization is shown.

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2. Whiteside OJH, Monksfield P, Steventon NB, Byrne J, Burton MJ. Endovascular embolization of a traumatic arteriovenous fistula of the superficial temporal artery. J Laryngol Otol 2005;119:322–324.

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