

Symptomatic left temporal arteriovenous traumatic fistula

Figure 1 Three-dimensional CT reconstruction showing arteriovenous fistula

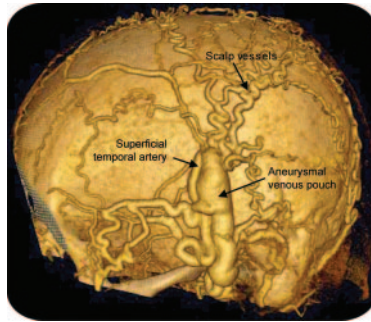
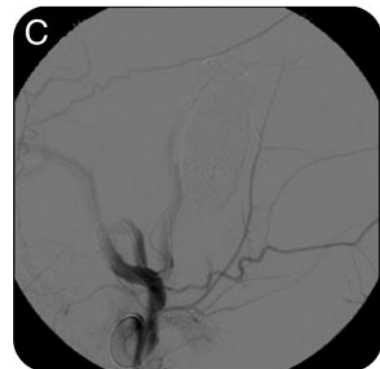
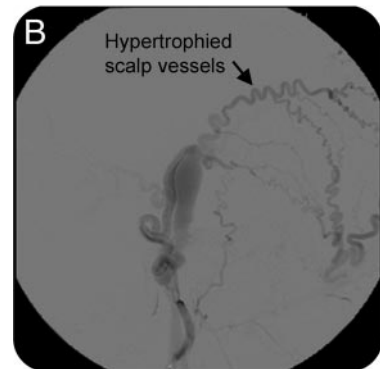
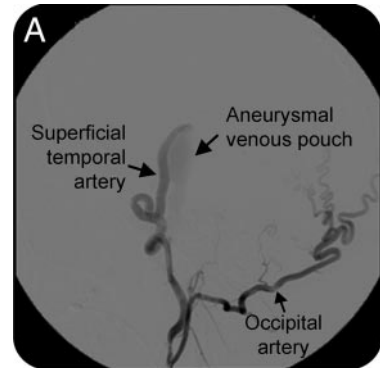


Figure 2 Left external carotid angiogram



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

T.M. Burrus, MD, G.M. Miller, MD, L.P. Flynn, MD, J.R. Fulgham, MD, and G. Lanzino, MD, Rochester, MN (T.M.B., G.M.M., J.R.F., G.L.), and Vermillion, SD (L.P.F.)

Disclosure: Dr. Lanzino serves as an editorial board member of *Neurocritical Care* and the *Journal of Neurosurgery*; receives royalties from publication of *Cavernous Malformations of the Brain and Spinal Cord* (Thieme, 2008); has received an educational grant from EV3; and holds stock in Johnson & Johnson. Dr. Burrus, Dr. Miller, Dr. Flynn, and Dr. Fulgham report no disclosures.

Address correspondence and reprint requests to Dr. Giuseppe Lanzino, 200 First Street SW, Gonda E8, Rochester, MN 55905; lanzino.giuseppe@mayo.edu

1. Andreoli A, Tognetti F, Lanzino G. Traumatic aneurysm of the superficial temporal artery from fist injury. *Br J Neurosurg* 1990;4:353–354.
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.

(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.

Neurology[®]

Symptomatic left temporal arteriovenous traumatic fistula

T. M. Burrus, G. M. Miller, L. P. Flynn, et al.

Neurology 2009;73;570

DOI 10.1212/WNL.0b013e3181b2a6f1

This information is current as of August 17, 2009

Updated Information & Services	including high resolution figures, can be found at: http://n.neurology.org/content/73/7/570.full
References	This article cites 2 articles, 0 of which you can access for free at: http://n.neurology.org/content/73/7/570.full#ref-list-1
Subspecialty Collections	This article, along with others on similar topics, appears in the following collection(s): Arteriovenous malformation http://n.neurology.org/cgi/collection/arteriovenous_malformation Brain trauma http://n.neurology.org/cgi/collection/brain_trauma Other cerebrovascular disease/ Stroke http://n.neurology.org/cgi/collection/other_cerebrovascular_disease__stroke
Permissions & Licensing	Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at: http://www.neurology.org/about/about_the_journal#permissions
Reprints	Information about ordering reprints can be found online: http://n.neurology.org/subscribers/advertise

Neurology® is the official journal of the American Academy of Neurology. Published continuously since 1951, it is now a weekly with 48 issues per year. Copyright . All rights reserved. Print ISSN: 0028-3878. Online ISSN: 1526-632X.

