A 34-year-old man with refractory epilepsy due to an arteriovenous malformation (AVM) of the right postcentral gyrus (figure, A) was evaluated for epilepsy surgery. After study of the size, location, and depth of the lesion, we decided to defer resection, radiosurgery, and embolization because of concern that intervention would result in neurologic deficits. Invasive video-EEG monitoring (iVEM) was excluded because of the risk of hemorrhage.

Follow-up angiography 4 years later (figure, B) showed complete occlusion of the AVM. He denied transient neurologic symptoms or headaches in the intervening years. MRI revealed no signs of previous bleeding. Cortical resection following iVEM, which was now possible, resulted in worthwhile seizure reduction (Engel Class IIIa). Intraoperatively (figure, C), the AVM was visualized with thrombosed nidus (arrow) and draining vein (interhemispheric sulcus top).

Spontaneous occlusions occur in less than 1.5% of cerebral AVMs. Causes postulated to explain such results include hemodynamic changes due to spontaneous hemorrhage, surgery, the presence of brain tumor, hypercoagulability, atherosclerosis, and thromboembolism from associated aneurysms.²

REFERENCES


Figure

Spontaneous asymptomatic occlusion of arteriovenous malformation (AVM) and intraoperative presentation

(A) Initial right carotid digital subtraction angiography in transverse projection shows an AVM of the middle cerebral artery while (B) current angiography shows a complete occlusion. (C) Intraoperative presentation of the occluded AVM with thrombosed nidus (arrow) and draining vein (interhemispheric sulcus top).
Teaching NeuroImages: Spontaneous asymptomatic occlusion of a cerebral arteriovenous malformation
Adam Strzelczyk, Ulrich Sure and Felix Rosenow
Neurology 2010;74:e105
DOI 10.1212/WNL.0b013e3181e39719

This information is current as of June 14, 2010

Updated Information & Services
including high resolution figures, can be found at:
http://www.neurology.org/content/74/24/e105.full.html

References
This article cites 2 articles, 0 of which you can access for free at:
http://www.neurology.org/content/74/24/e105.full.html##ref-list-1

Permissions & Licensing
Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at:
http://www.neurology.org/misc/about.xhtml#permissions

Reprints
Information about ordering reprints can be found online:
http://www.neurology.org/misc/addir.xhtml#reprintsus