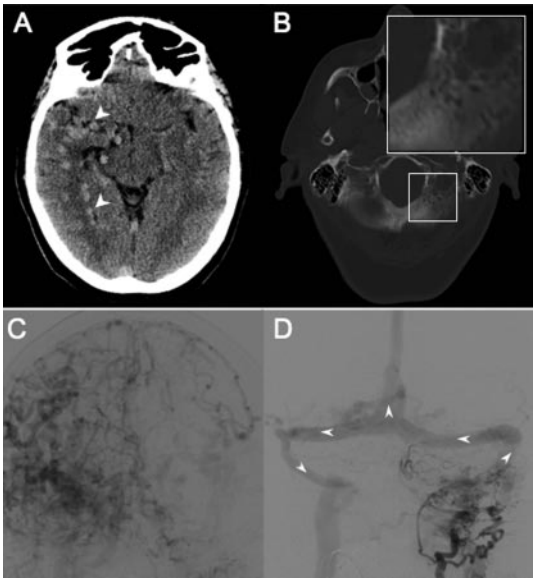
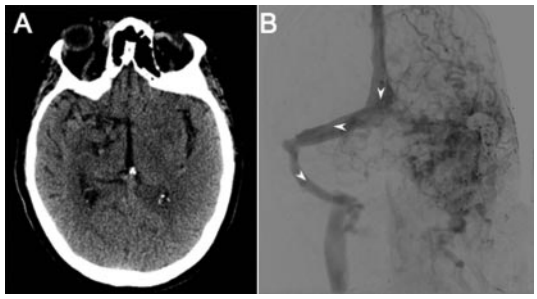
A reversible cause of "vascular dementia"

Figure 1 Pretreatment head CT and angiogram



(A) Plain head CT demonstrating dilated cortical veins (arrowheads). (B) Transosseous vascular channels in left occipital bone (inset). (C) Angiogram of cerebral venous phase with dilated cortical veins and absent drainage via dural sinuses. (D) Extracranial feeders to dural arteriovenous malformation with reflux into dural sinuses (arrowheads: retrograde flow).

Figure 2 Posttreatment head CT and angiogram



(A) Post-coiling head CT demonstrating decreased caliber of cortical veins. (B) Post-coiling cerebral venous phase with normal venous drainage via dural sinuses (arrowheads: anterograde flow).

A 63-year-old woman presented with progressive dementia over 2 years. Plain head CT demonstrated dilated parenchymal vessels and vascular channels in the left occipital bone (figure 1, A and B). Angiography confirmed a dural arteriovenous malformation (dAVM) centered on the left sigmoid sinus with reflux into all venous sinuses (figure 1, C and D). Cerebral venous drainage was rerouted via cortical veins. Coil occlusion of the recipient venous pouch restored normal venous drainage and reduced the caliber of cortical veins (figure 2, A and B), helping improve cognitive function.

Dementia secondary to dAVMs results from venous hypertension causing ischemic neuronal dysfunction.[1] Fistula obliteration may reverse the dementia.

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Disclosure: The authors report no disclosures.

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Neurology 2008;71;226
DOI 10.1212/01.wnl.0000317098.87419.68