

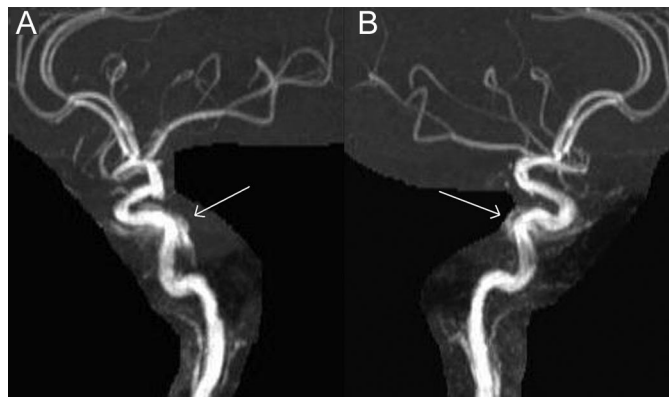
Teaching NeuroImages: Seeing double

Intercavernous sinus dural arteriovenous fistula causing bilateral abducens palsy

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Figure 1 Magnetic resonance angiography (MRA) brain



MRA revealed flow-related enhancement in the right (A) and left (B) cavernous sinuses (arrows) suggestive of carotid cavernous fistulas.

A 64-year-old woman developed sudden onset of diplopia, headache, and bilateral abducens palsy. MRI revealed no intracranial mass, ischemia, or intraorbital pathology. Magnetic resonance angiography suggested bilateral carotid cavernous fistulas (CCFs, figure 1). Digital subtraction angiogram revealed an intercavernous sinus dural arteriovenous fistula (DAVF), which was successfully embolized (figure 2). By 3-month follow-up, her abducens palsies and diplopia had resolved.

Bilateral abducens palsy can occur in the setting of a CCF or an intercavernous sinus DAVF. Such palsies are likely secondary to direct compression, vascular steal with cranial nerve ischemia, or swelling of extraocular muscles secondary to venous congestion.^{1,2}

AUTHOR CONTRIBUTIONS

Drs. Huang and Moseley made substantive contributions to the design of the study and drafting of the manuscript. Drs. Toledano and Katz made substantive contributions to the revision of the manuscript. Dr. Lanzino made substantive contributions to the design of the study and revision of the manuscript.

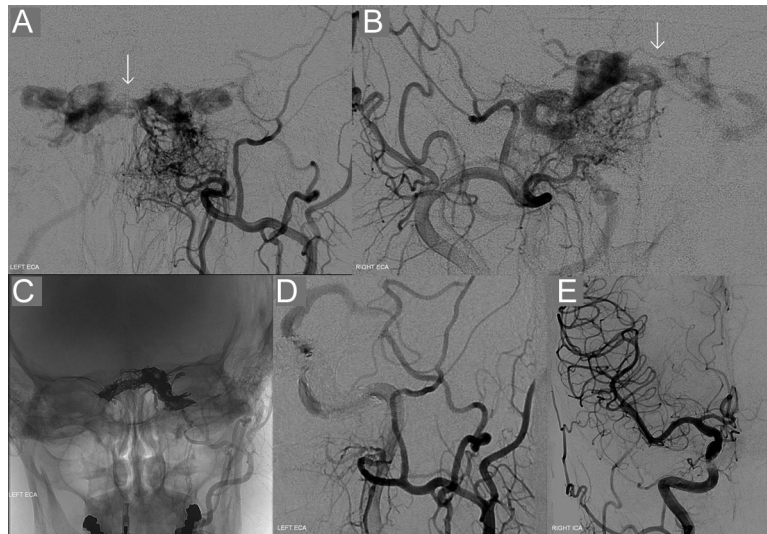
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Figure 2 Cerebral angiogram



Angiogram of the left (A) and right (B) external carotid arteries revealed a dural arteriovenous fistula of the intercavernous sinus (arrows). Following embolization (C), no residual fistula remained (D, E).

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