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White-Eyed Shunt

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A 57-year-old woman presented with right deep orbital pain followed by diplopia. Examination revealed ptosis, a fully dilated and nonreactive pupil, and impairment of adduction on the right side. There was no proptosis or chemosis (fig. 1A), and no bruit was audible. MRI showed abnormal flow void signals around the right cavernous sinus (fig. 1B). Cerebral angiography demonstrated a dural carotid cavernous fistula (CCF) between the meningohypophyseal trunk and bilateral inferior petrosal sinus (fig. 1C, D), which was subsequently occluded by transvenous embolization. The symptoms resolved within 2 months after treatment. Older patients with isolated oculomotor palsy are likely to have ischemic mononeuropathy or an aneurysm. This case is a reminder that CCF, well known as 'red-eyed shunt', can cause painful ophthalmoplegia without congestive external ocular signs [1, 2].

References

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- 2 Miyachi S, Negoro M, Handa T, Sugita K: Dural carotid cavernous fistula presenting as isolated oculomotor palsy. *Surg Neurol* 1993;39:105–109.

Fig. 1. Attempted left gaze. There was absent right adduction with partial ptosis. Note the lack of conjunctival injection (a). Proton-density MRI (b) shows abnormal vascular flow void signals (arrow). Right internal carotidograms (c, d) demonstrate dural CCF draining posteriorly into bilateral inferior petrosal sinus (arrows). Note the lack of orbital drainage.