

# An atypical case of complex indirect carotid cavernous fistula with contralateral ophthalmic symptoms

**Mohamad Jazli Ahmad Sobri, Muhammad Khairul Adha Fuaad Adzleen Mohmood, Muhammad Mohd Isa, Amirah Mohammad Razali**

Department of Ophthalmology, Faculty of Medicine, Hospital Sultan Abdul Aziz Shah, Universiti Putra Malaysia, Serdang, Malaysia

## ABSTRACT

A carotid cavernous fistula (CCF) is an abnormal communication between the carotid artery and the cavernous sinus, usually on the ipsilateral side. We report a case of a right sided carotid artery fistula draining into the left ophthalmic vein, giving rise to a left sided ocular manifestation. A 79-year-old woman with underlying diabetes and hypertension presented with a one-month history of left eye redness associated with diplopia and blurred vision. She was already on topical antiglaucoma over the left eye. Visual acuity was 6/24 OD and 6/30 OS. The relative afferent pupillary defect was negative. Anterior and posterior segment examination was normal for the right eye. There was left eye proptosis with limited extraocular movement. Corkscrew vessels were present over the left conjunctiva. The rest of the anterior segment was unremarkable. The intraocular pressure was 22 mmHg over the left eye. Left fundus examination revealed a pink optic disc with a cup-to-disc ratio of 0.4. The veins were slightly tortuous but not dilated. A cerebral angiogram revealed a complex indirect CCF from the right internal and right external carotid artery, draining into the left ophthalmic vein. Embolisation was attempted; however, it was unsuccessful. The patient suffered from a stroke post-procedure. She refused any further interventions. A complex CCF may lead to a challenging embolisation treatment and may cause significant morbidity to the patient. A timely multidisciplinary approach is essential to ensure favourable outcomes.