A CASE OF SPONTANEOUS CAROTID Cavernous Fistula Presenting with Proptosis

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Purpose: To present a case of spontaneous carotid cavernous fistula (CCF) presenting with proptosis.

Methods: A 67 year old woman presented with a 1 week history of proptosis in the left eye. Ocular examination revealed a visual acuity of 0,05(Snellen), conjunctival chemosis, dilated episcleral vessels and restriction of extraocular movement on the left eye. Exophthalmometry showed 7mm difference between the eyes.

Results: Computerized tomography and magnetic resonance imaging showed enlarged cavernous sinus; increased extraocular muscle size and dilated superior ophthalmic vein on the left. Radiological findings suggested the diagnosis of CCF and cerebral angiography confirmed presence of direct and low flow CCF. Intermittent external manual compression of the cervical carotid artery is recommended. After 2 weeks, exophthalmometry showed 3mm difference.

Conclusion: CCF is an abnormal communication between the cavernous sinus and the carotid arterial system. A CCF is divided into two categories, direct and indirect. Direct fistulas are usually related to a trauma. Spontaneous, low-flow fistulas are usually associated with atherosclerosis, hypertension and collagen vascular disease. These patients may present with conjunctival chemosis, proptosis, ophthalmoplegia and bruits. It must be differentiated from orbital pseudotumor, orbital cellulitis or thyroid eye disease. Based on patient’s symptoms, the treatment may be observation or neuro-radiological intervention.