

## Clinical Image

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# Unilateral papilledema revealing a large right carotid-ophthalmic aneurysm: Report of a case

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### Abstract

A routine optalmological examination allowed the discovery of a significant underlying pathology: a right expanding carotid-ophthalmic aneurysm in a highly myopic woman aged 36.

**Keywords:** Neuro-ophtalmology; Papilledema; carotid-ophthalmic aneurysm; optic nerve disease.

### Introduction

Aneurysms of the carotid-ophthalmic segment of the internal carotid artery are uncommon and can affect the immediate vital and visual prognosis. The ophthalmologist can be the first medical contact when they are revealed by signs of direct compression of the optical pathways, and more rarely by a picture of intracranial hypertension when they are ruptured. We describe and illustrate here the case of a patient with a large ruptured left carotid-ophthalmic aneurysm, discovered with unilateral loss of visual acuity, oculomotor paralysis and bilateral papilledema.

### Clinical case

This is a 36-year-old female patient, who initially consulted the ophthalmological emergency room due to decreased visual acuity in the right eye associated with horizontal binocular diplopia and retro-orbital headaches that had been ongoing for 5 days. Clinical examination reveals esotropia of the right eye, with oculomotor limitation in the left VI territory. The pupils are isochoric, reactive; we also note a relative afferent pupillary deficiency in the right eye. Visual acuity is evaluated at 5/10 in the right eye and 9/10 in the left eye. The fundus examination reveals unilateral papilledema without other associated signs.

The brain scan reveals large saccular aneurysm of the left internal carotid artery measuring 24x27 mm.

The patient was seen by an ophthalmologist 3 months later

after neurosurgical treatment; she no longer had diplopia or headaches. Visual acuity is 7/10 on the right and 9/10 on the left. The fundus is normal on the left and shows optic atrophy on the left. The visual field finds ceco-central deficit on the right.

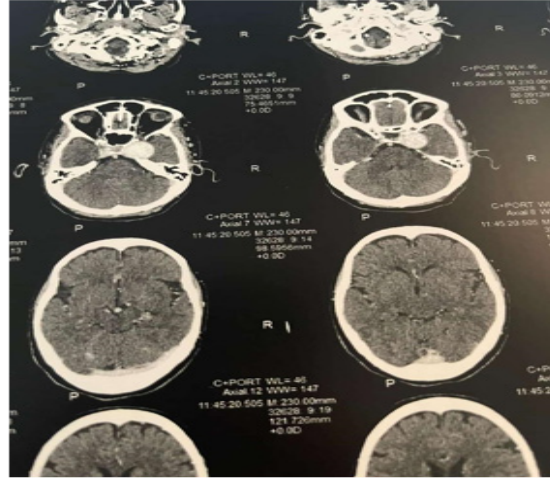
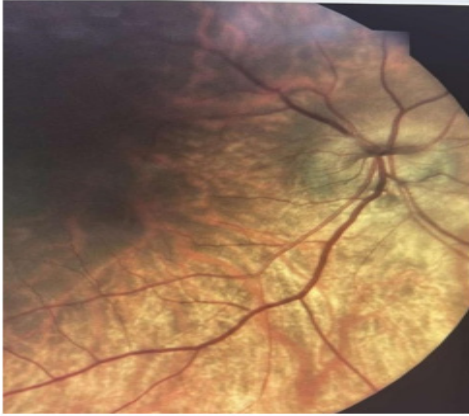
### Discussion

Carotid-ophthalmic aneurysms represent approximately 5% of all intracranial aneurysms and have a low risk of rupture. We find in the literature a marked female predominance (up to 90%) and a frequent association with multiple intracranial aneurysms (45%). Due to their location, they can reach significant proportions before rupture. When they are ruptured, their management involves surgical clips or endovascular embolization, with results that seem comparable.

The case described here shows that they can cause intracranial hypertension (IV paralysis, bilateral papilledema, retinal hemorrhages) and signs of direct compression of the optical pathways (unilateral drop in visual acuity, secondary optic atrophy).

### Conclusion

A carotid-ophthalmic aneurysm may be revealed by signs of direct compression of the optic nerve and a more general picture of intracranial hypertension. It represents a neurosurgical emergency that can affect the vital prognosis, requiring urgent brain imaging in the face of any diagnostic suspicion.



**Figure 1:** Clinical image.