

INTRODUCTION

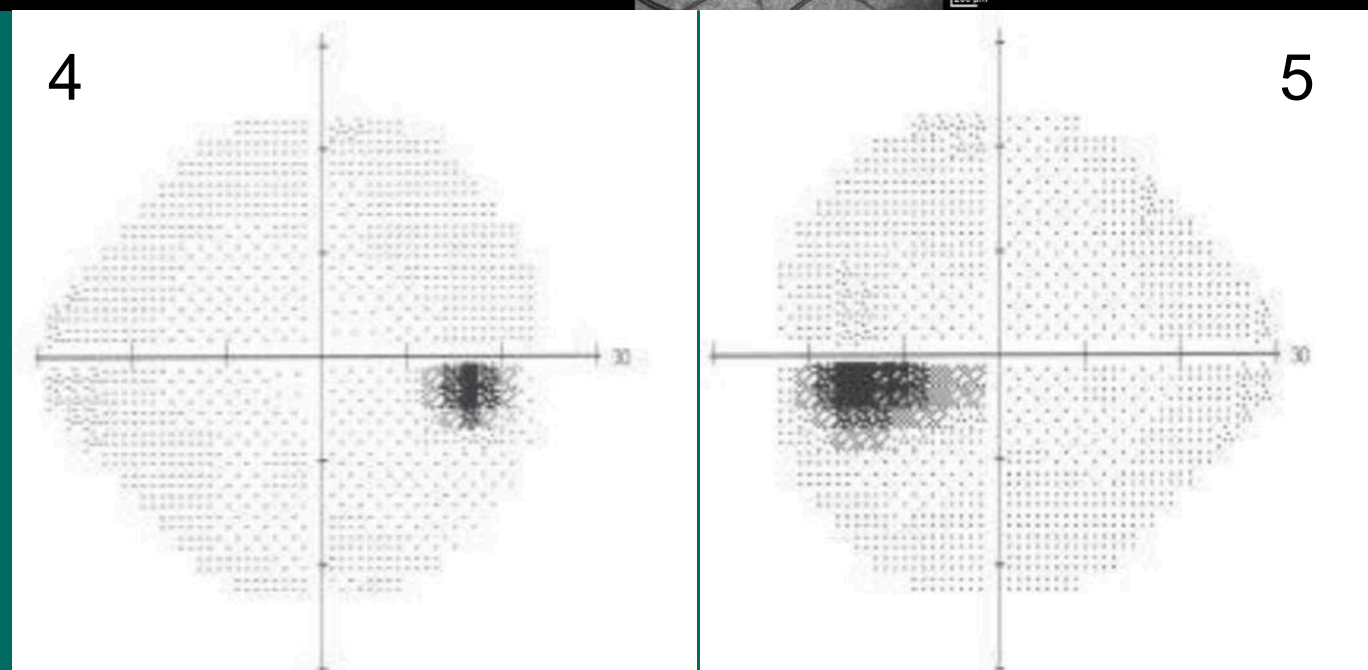
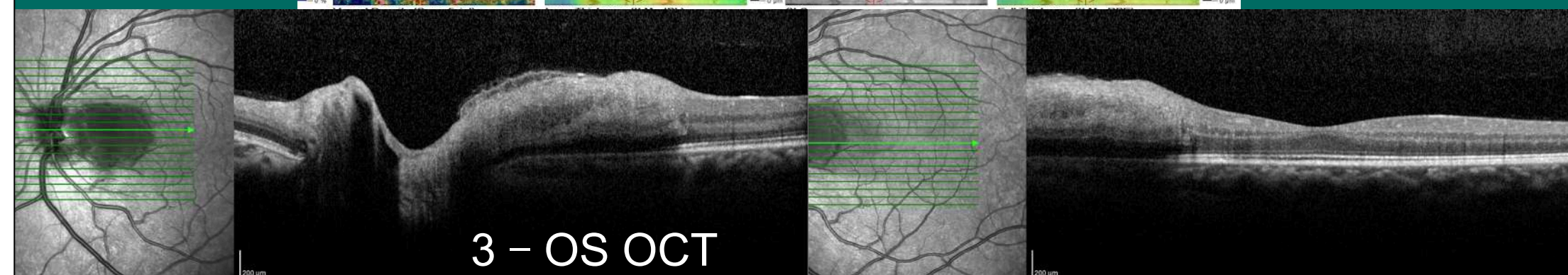
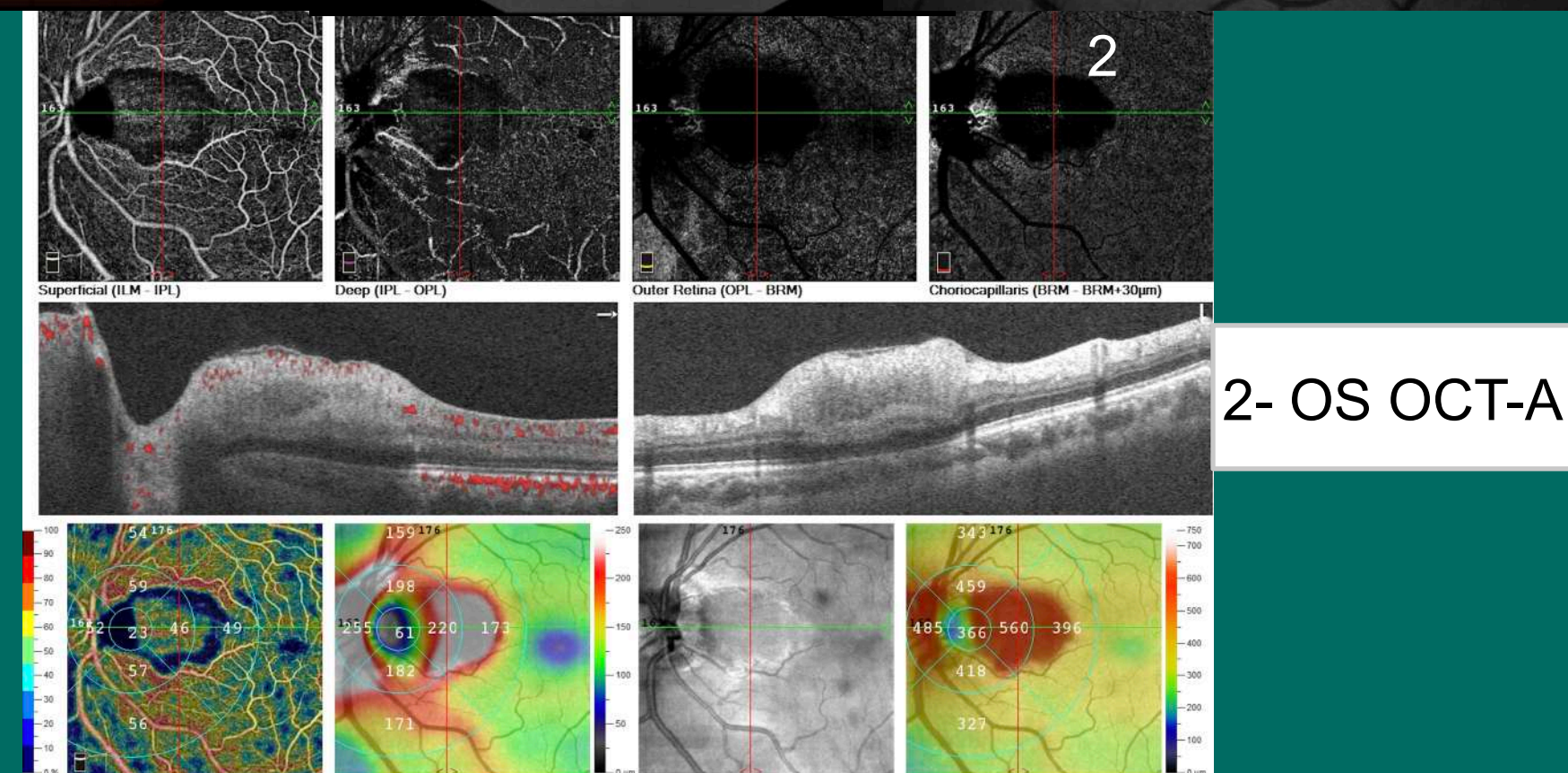
Nasal endoscopic surgery (FESS) is established as a relatively safe and efficient method for the treatment of nasal and paranasal sinuses diseases. The anatomical closeness and the connections among the paranasal sinus structures, the nasal cavity and orbit make the orbital region vulnerable to traumas during the surgical procedure, exposing its substance to complications. This case describes a patient with exclusive occlusion of the cilioretinal artery on the left eye due to nasal endoscopic surgery, a fact never described in the literature before.

CASE REPORT

A 35-year-old patient, male, previously healthy, admitted to an eye care due to a scotoma in the left eye for four days, which began immediately after FESS to septoplasty and turbinectomy. Surgical description mentions infiltration of local adrenaline 1:80.000 and xylocaine in the nasal septum and in the inferior turbinate during the procedure. Ophthalmological examination presented with visual acuity of 20/20 in the right eye (OD). Left eye (OS) was 20/25. However, there was a paracentral scotoma in the left eye. Dilated fundus, appeared normal in OD. In the OS there was an intense retinal paleness on the temporal juxtapapillary region, sparing the fovea (picture 1). Optical Coherence Tomography Angiography (OCT-A) confirmed the cilioretinal artery occlusion in the OS (picture 2). The computerized campimetry (Humphrey Visual Camp; Estimulus III; 24-2) was normal in the OD and showed centrocecal defect in the OS (picture 5).

Since the patient only went to see the doctor with more than 100-hour of evolution of the situation, no therapeutic measures were taken.

PICTURES



DISCUSSION

Ophthalmic complications in FESS include direct trauma to the lamina papyracea, tear drainage ducts lesions or extrinsic ocular muscles, retro-orbital hemorrhage and direct lesions to the optic nerve. Retinal arteries occlusions are considered extremely rare and grave complications.

Once excluded genetic causes and thrombophilia, the suspicion might be: 1 – fatty embolism, caused by an extensive handling of nasal bones and the release of fat tissue in the bloodstream. Considered the least probable in this case, due to minimal surgical manipulation and the absence of risk factors presented by the patient and; 2 – vasospasms resulting from the infiltration of dilute adrenaline (1:80.000) in the nasal septum and the inferior turbinate during the surgical procedure. This concentration of adrenaline is considered safe, however, in some cases, the adrenaline is inadvertently infiltrated inside the blood vessels provoking vasospasms and possibly the artery occlusion, which is the main hypothesis for this case. Regardless of the cause, delay in diagnosis limits the treatment of these patients, who in their majority, present low visual prognosis.

REFERENCES

- 1 - Siedek V, Pilzwegger E, Betz C, Berghaus A, Leunig A. Complications in endonasal sinus surgery: a 5-year retrospective study of 2,596 patients. *Eur Arch Otorhinolaryngol.* 2013;270:141-8.
- 2 - Seredyka-Burduk M, Burduk PK, Wierzchowska M, et al. Ophthalmic complications of endoscopic sinus surgery. *Braz J Otorhinolaryngol.* 2017; 83(3): 318–323.
- 3- Stankiewicz JA, Lal D, Connor M, Welch K. Complications in endoscopic sinus surgery for chronic rhinosinusitis: a 25-year experience. *Laryngoscope.* 2011;121:2684-701.
- 4- Kubo N, Ono A, Nishimura T, et al. Onset of central retinal artery occlusion during the endoscopic sinus surgery. *Pract Oto-Rhino-Lary* 2003; 96(8): 697–703.