VISUAL OUTCOME OF IDIOPATHIC CENTRAL RETINAL ARTERY OCCLUSION IN A HEALTHY YOUNG PATIENT

A 25-year-old Caucasian man presented a sudden painless loss of vision in the right eye 6 hours prior to seeking ophthalmological assistance. His medical history revealed classic dengue fever 6 years earlier.

Best-corrected visual acuity was counting fingers in the right eye and 20/20 in the left eye. Examination of the anterior segment was unremarkable in both eyes and intraocular pressure was 12 mmHg in the right eye and 11 mmHg in the left eye. Ophthalmoscopy disclosed a milky gray edema in the posterior pole and a cilioretinal artery supplying part of the papillomacular bundle; a cherry-red spot and a diffuse retinal arterial narrowing were also evident.

Immediately after clinical diagnosis of a central retinal artery obstruction (CRAO), the patient was medicated with a single dose of acetazolamide; 500mg. Ocular massage was attempted using a three-mirror contact lens and compression of the globe for approximately 10 seconds to obtain retinal arterial pulsations, followed by 5 seconds of release. An anterior chamber paracentesis was performed after 30 minutes of ocular massage because the retinal flow did not improve.

After twelve hours later, visual acuity of the right eye was 20/70 and two days later, it was 20/25. A slight optic disk pallor was observed as well as a decreased retinal swelling at the posterior pole. Forty-five days after the central retinal arterial obstruction, the best-corrected visual acuity of the right eye was 20/20. Although ophthalmoscopy (Figure 1) did not show a difference between the two eyes, the visual field of the right eye (Figure 2) showed a dense inferior nasal defect reflecting the retinal injury due to the CRAO. The visual field of the left eye showed no abnormalities.

Neurological evaluation with Magnetic Resonance Imaging (MRI), cardiac examination by electrocardiogram (ECG) and echocardiography showed no abnormalities. Carotid Doppler ultrasonography was also normal and non-contributory to the etiologic diagnosis. Laboratory investigation included complete blood count, erythrocyte sedimentation rate (ESR), prothrombin time (PT,) partial thromboplastin time (PTT), fasting blood sugar, lipid profile, glutamic-oxalacetic transaminase (GO-T) and glutamic-pyruvic transaminase (GP-T) levels, protein kinase C level (PKC), lactate dehydrogenase level (LDH), C-protein reactive, antinuclear factor assay (ANF), latex reaction, antiphospholipid antibody, Lupus erythematosus cells (LE cells), uric acid, sorology for human immunodeficiency virus (HIV), toxoplasmosis, hepatitis A, B and C, tuberculosis, syphilis, rubella and cytomegalovirus. All tests were normal. No risk factor for CRAO in young people such as fractures, tumors, sickle cell and consumption of illegal and legal drugs was found or reported by the patient.

Retinal artery occlusions are rare in persons less than 30 years old and most patients have some detectable etiologic factor.1 Pierre Filho et al. reported a rare case of CRAO complicating from a traumatic carotid-cavernous fistula resulting in severe loss of visual acuity in a 28-year-old man.2 Recently, Kanungo et al. reported retinal artery occlusion secondary to dengue fever in a 28-year-old woman.3 Although classic dengue fever was the only relevant previous disease reported by this patient, we believe that it was not the cause of central retinal artery occlusion because of the long six year interval between the manifested systemic infection and the retinal arterial episode

It is also known that prognosis of CRAO is quite delicate for most patients. An irreversible retinal damage may result after 240 minutes of central retinal artery obstruction in middle-aged or elderly rhesus monkeys.4 We believe that prompt diagnosis together with treatment within the first 6 hours of symptoms, age and evidence of cilioretinal artery irrigation contributed to recovery of the patient's vision.

References

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Figura 1 - Ophthalmoscopy forty-five days after the central retinal artery obstruction (CRAO). Eye fundus shows no abnormalities in the right eye. Left eye fundus has also no abnormalities

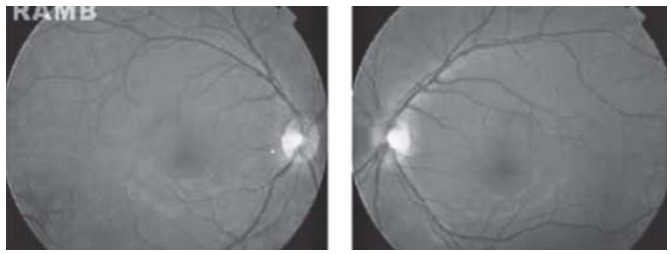
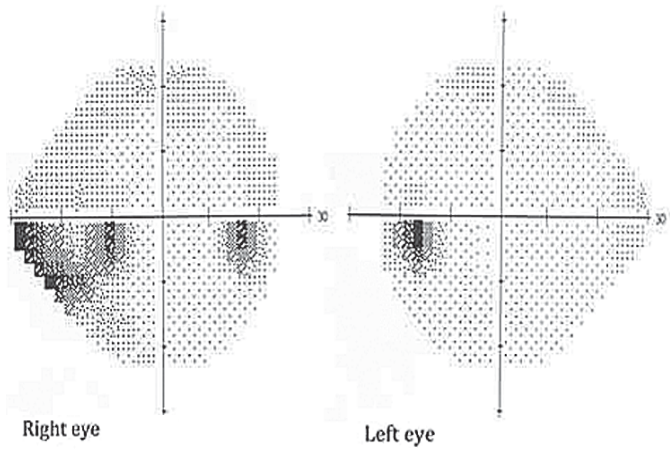


Figura 2 - Visual field results fourty-five days after the occlusion of the central retinal artery obstruction (CRAO). The right eye shows a dense inferior nasal defect reflecting the retinal injury due to the CRAO. Visual field of the left eye shows no abnormalities



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