

CONTINUING MEDICAL EDUCATION ΣΥΝΕΧΙΖΟΜΕΝΗ ΙΑΤΡΙΚΗ ΕΚΠΑΙΔΕΥΣΗ

Vascular Diseases Quiz – Case 50

A 75-year-old patient presented with sudden loss of vision in one eye. His past medical history included a known 40% stenosis of the right internal carotid artery (ICA) and arterial hypertension. No vision pathology was present before this incident. The patient had annual check-ups with his general practitioner, who reported no other health issues in the patient's record. Patient received atorvastatin 20 mg once a day (*od*), acetylsalicylic 100 mg *od*, and amlodipine 5 mg *od*. Upon funduscopic examination, ischemic retinal whitening was seen after an occlusion of the central retinal artery. A characteristic "cherry red spot" appeared in the macula. Choroid was not affected (fig. 1). Doppler examination revealed absence of flow.

What is a possible vascular diagnosis?

Comment

Atherosclerotic disease of the ipsilateral ICA is the most common cause of central or branch retinal artery occlusion (CRAO or BRAO, respectively). CRAO is not directly linked to the percentage of ICA stenosis; CRAO can occur in all patients with ICA stenosis. Vision loss can be either permanent or transient (amaurosis fugax); both conditions render the ICA stenosis as symptomatic and CEA might be indicated. Vision loss is acute and profound, but in some cases the patient retains some peripheral vision. A small percent-

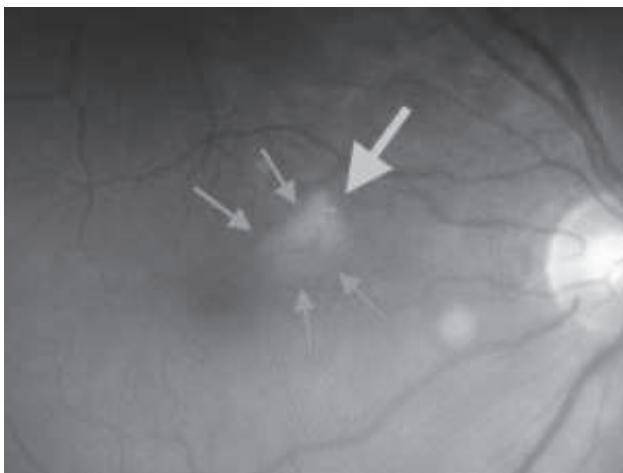


Figure 1. Cherry red spot during funduscopic examination.

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**N. Patelis,
C. Klonaris**

First Department of Surgery, Vascular Unit, "Laiko" General Hospital, Medical School, National and Kapodistrian University of Athens, Athens, Greece

age of patients retains normal central vision due to a cilioretinal artery feeding the macular region. Funduscopic examination and fluorescein angiography are necessary to set the diagnosis. Doppler examination of the orbital vessels is necessary to differentiate between embolic cause of CRAO and giant cell arteritis (GCA). GCA does not alter the appearance of the choroid.

Prognosis of CRAO is poor, but a significant number of BRAO patients fully recover.

Treatment techniques such as orbital massage and reduction of intraocular pressure did not lead to significantly better results compared to observation. Hyperbaric oxygen could assist, but it is not readily available. Systemic administration of thrombolytic therapy for CRAO is contraindicated, but intraarterial local thrombolysis has demonstrated promising results.

References

1. JIANU DC, JIANU SN, MUNTEANU M, VLAD D, ROSCA C, PETRICA L. Color Doppler imaging features in patients presenting central retinal artery occlusion with and without giant cell arteritis. *Vojnosanit Pregl* 2016, 73:397–401
2. BROWN GC, SHIELDS JA. Cilioretinal arteries and retinal arterial occlusion. *Arch Ophthalmol* 1979, 97:84–92
3. DAVID NJ, NORTON EW, GASS JD, BEAUCHAMP J. Fluorescein angiography in central retinal artery occlusion. *Arch Ophthalmol* 1967, 77:619–629
4. CHEN CS, LEE AW, CAMPBELL B, PAINE M, LEE T, FRASER C ET AL. Study of the efficacy of intravenous tissue plasminogen activator in central retinal artery occlusion. *Int J Stroke* 2011, 6:87–89
5. KAUFMANN TA, LEISSER C, GEMSA J, STEINSEIFER U. Analysis of emboli and blood flow in the ophthalmic artery to understand retinal artery occlusion. *Biomed Tech (Berl)* 2014, 59:471–477

Corresponding author:

N. Patelis, First Department of Surgery, Vascular Unit, "Laiko" General Hospital, Medical School, National and Kapodistrian University of Athens, 115 27 Athens, Greece
e-mail: patelisin@gmail.com

Diagnosis: Central retinal artery occlusion