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CLINICAL CHALLENGES

PETER SAVINO AND HELEN DANESH-MEYER, EDITORS

Blind Runner

Laura Pelegrín, MD,[1] Marina Mesquida, MD,[1] Amanda Rey, MD,[1] Bernardo Sánchez-Dalmau, MD,[1] and Larry Frohman, MD[2]

[1]Department of Ophthalmology, Hospital Clínic de Barcelona, Barcelona, Spain; and [2]Institute of Ophthalmology and Visual Science, New Jersey Medical School, Newark, New Jersey, USA

(In keeping with the format of a clinical pathologic conference, the abstract and key words appear at the end of the article.)

Case Report

A 42-year-old man born in Pakistan was referred for a painless, gradual decline in visual acuity over 4 months in both eyes. He had no history of diabetes, hypertension, or other systemic diseases. His best-corrected visual acuity was 20/25 right eye and 20/200 left eye. He had no relative afferent pupillary defect (RAPD), but his pupils reacted sluggishly to light, the left eye more than the right. Adnexae and ocular motility were normal. Slit lamp examination revealed bilateral neovascularization of the iris with peripheral anterior synechiae on gonioscopy (Fig. 1A and B). The intraocular pressure was 10 mm Hg in the right eye and 6 mm Hg in the left eye. Fundus examination showed numerous microaneurysms in the mid-peripheral retina and posterior pole, arteriovenous shunts between the superior and inferotemporal vessels of the arcade, arteriolar narrowing, and venous dilation without beading in both eyes. In the left eye, neovascularization of the optic disc and preretinal and vitreous hemorrhage were also present (Fig. 1C and D).

What is your initial formulation of this patient?

Comments

COMMENTS BY LARRY FROHMAN, MD

This patient had no significant medical history, and developed iris neovascularization, synechiae (I do not know if uveitis was also present.), mid-peripheral microaneurysms, arteriovenous shunts, optic disc neovascularization, and preretinal and vitreous hemorrhage. The lack of a RAPD suggests that there was bilateral, relatively symmetric optic nerve involvement, which might be evident upon perimetry. This constellation of signs and symptoms suggests the presence of ocular ischemic syndrome (OIS). One possible cause is high grade atherosclerotic disease of the carotids. We could start the evaluation with carotid Doppler, but no matter what it would show, magnetic resonance angiography (MRA) or computed tomographic angiography is also indicated. The selection of initial study might be made based upon relative contraindications (not present in this patient) as well as the quality of the studies at your facility. It would be unusual to have bilateral, although somewhat asymmetric, OIS bilaterally on a carotid atherosclerotic basis in the absence of

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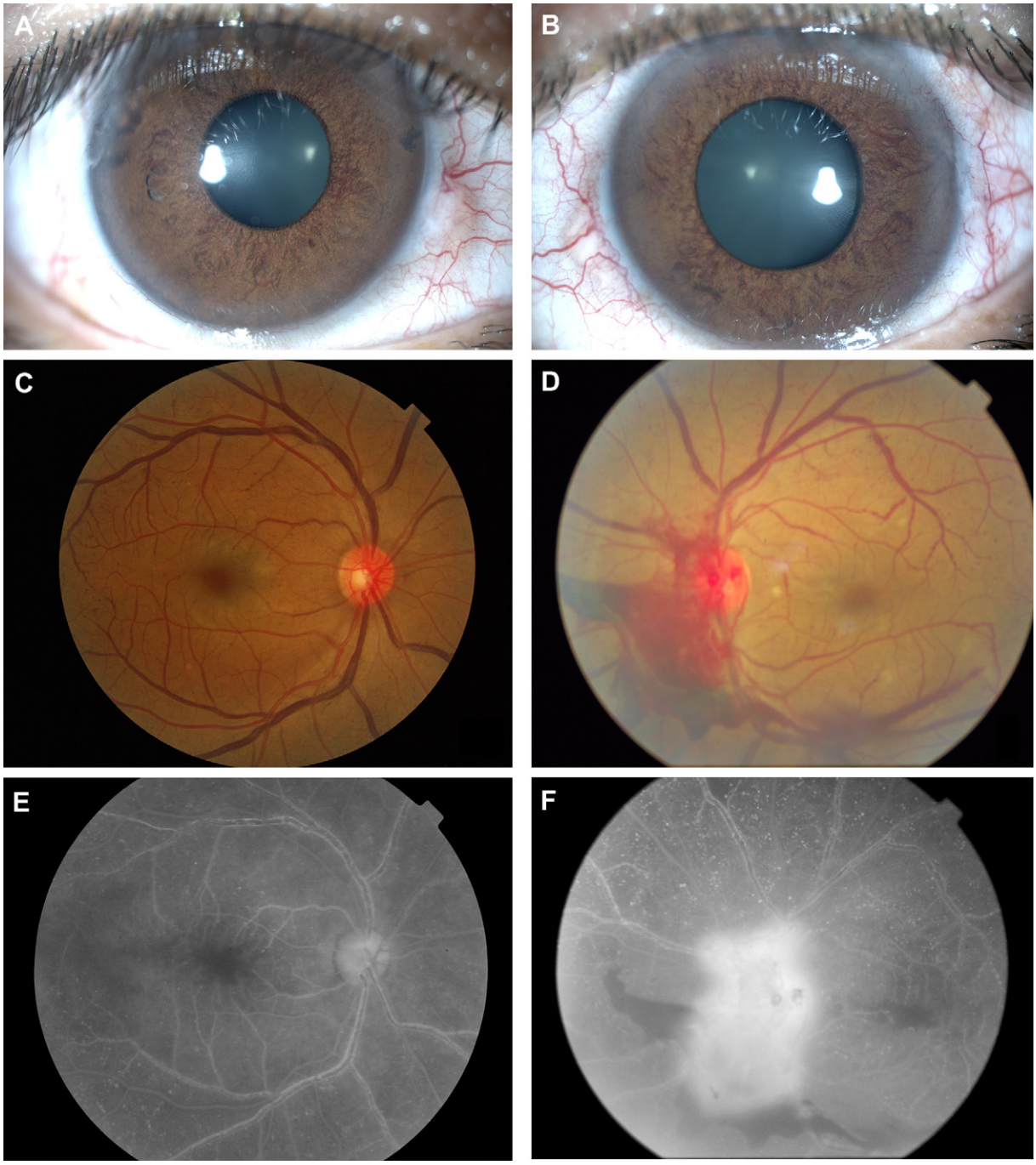

Fig. 1. *A* and *B*: Anterior segment image of both eyes shows a prominent neovascularization of the iris stroma as a result of anterior segment chronic ischemia. Gonioscopy also revealed angle neovascularization. *C*: Retinography of right eye showing numerous microaneurysms all over the posterior pole and the mid-peripheral retina with venous engorgement. *D*: Retinography of left eye showing neovascularization and aneurysmal dilatation on the optic disc, with preretinal and vitreous hemorrhage. Posterior pole shows multiple microaneurysms, venous dilation, and arterial narrowing. Note the dark coloration of retinal veins. *E*: Fundus fluorescein angiography of right eye shows staining of vascular walls, microaneurysms formation, and peripheral capillary nonperfusion. *F*: Fundus fluorescein angiography of left eye shows proliferative retinopathy with neovascularization of the optic disc and dye leakage. Blockage of colorant due to preretinal hemorrhage. There are staining of vascular walls and peripheral ischemia.

systemic disease that particularly targets these vessels. Furthermore, although atherosclerotic aortic disease proximal to the carotid takeoff could cause bilateral ocular ischemia, it would be quite unusual to have this without other neurologic signs or symptoms. I would ask about symptoms related to global intermittent loss