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PROLIFERATIVE HYPERTENSIVE RETINOPATHY IN A PATIENT WITH SECONDARY ARTERIAL HYPERTENSION

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Background: Hypertension related organ-damage in the eye includes retinopathy, choroidopathy and optic neuropathy. Fundoscopy findings associated with hypertensive retinopathy include arteriolar narrowing, arteriovenous nicking, cotton wool spots, intraretinal hemorrhages, hard exudates and disc swelling. Rare cases of retinal neovascularization have been reported in the literature in association with hypertensive retinopathy.

Purpose: To report a case of bilateral hypertensive retinopathy complicated with retinal neovascularization in a 48-year-old male patient.

Methods: Case report

Results: A 48-year-old caucasian male presented in the emergency department (ED) with isolated right eye (RE) floaters of a week duration. Ophthalmologic evaluation revealed best corrected visual acuity (BCVA) of 20/40 bilaterally and signs of bilateral proliferative retinopathy with an associated RE vitreous hemorrhage. Blood pressure was 210/110 mmHg and severe hypertensive retinopathy was suspected. The patient was admitted for systemic evaluation and treatment. At the ophthalmology department he performed a fluorescein angiography (FA) that revealed bilateral areas of macular and peripheral retinal ischemia, retinal capillary dropout and secondary retinal neovascularization (neovascularization elsewhere – NVE) in the RE and LE. On Spectral Domain Optical Coherence Tomography (SD-OCT) macular edema was detected bilaterally. Management included bilateral peripheral retinal photocoagulation (RP) in non-perfused areas, focal macular laser for macular ischemic areas and intravitreal bevacizumab injections in the RE due to macular edema. A diagnosis of primary hyperaldosteronism was made on subsequent systemic investigation. Adrenal gland computed tomography (CT) revealed mild bilateral hyperplasia and an adrenal gland venous sampling was non interpretable. Throughout follow-up, clinical and angiographic improvement was noticed.

Discussion and Conclusion: Retinal neovascularization is a rare complication of severe hypertensive retinopathy, for which treatment with RP and intravitreal anti-angiogenic treatment can be undertaken. The severity and potentially devastating effects of retinal neovascularization on the posterior segment underscores the need for prompt and appropriate ophthalmologic evaluation and management, along with the importance of a multidisciplinary approach.