Scholars Journal of Medical Case Reports
Abbreviated Key Title: Sch J Med Case Rep
ISSN 2347-9507 (Print) | ISSN 2347-6559 (Online)
Journal homepage: https://saspublishers.com

OPEN ACCESS

Ophthalmology

Hypertensive Chorioretinopathy

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DOI: 10.36347/sjmcr.2021.v09i12.005 | **Received:** 01.11.2021 | **Accepted:** 05.12.2021 | **Published:** 08.12.2021

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Abstract **Case Report**

A 54-year-old man was referred to the ophthalmology unit for blurring of vision in both eyes. On ophthalmic examination, his best-corrected visual acuity (BCVA) was 0.1 in the right eye and 0.7 in the left eye. Fundoscopy revealed disc swelling, cotton-wool spots, superficial retinal hemorrhages, and macular edema with hard exudates in both eyes. Optical coherence tomography (OCT) showed marked serous retinal detachment, involving the fovea, and cystic change of the inner retinal layer in both eyes. We diagnosed the condition as hypertensive retinopathy with marked serous retinal detachment caused by hypertensive choroidopathy. His blood pressure was 189/116 mmHg. There was no secondary cause of hypertension. Two months after resuming his regular medications, his BCVA improved to 0.6 in the right eye and 1.0 in the left eye, with regression of fundus changes, including serous retinal detachment. In malignant hypertension, both retinopathy and choroidopathy can occur, which can be detected on OCT.

Keywords: Hypertensive retinopathy, Hypertensive choroidopathy, Optical coherence tomography.

INTRODUCTION

Malignant high blood pressure can lead to severe multiple organ damage, and can affect the eyes in several ways. Patients with malignant high blood pressure may develop retinopathy, optic neuropathy and choroidopathy [1-3].

Here, we report a case of hypertensive chorioretinopathy in a 54-year-old man.

CASE REPORT

A 54-year-old man was referred to the ophthalmology unit for blurring of vision in both eyes. On ophthalmic examination, his best-corrected visual acuity (BCVA) was 0.1 in the right eye and 0.7 in the left eye. Fundoscopy revealed disc swelling, cotton-wool spots, superficial retinal hemorrhages, and macular edema with hard exudates in both eyes (Figure 1 a, b).

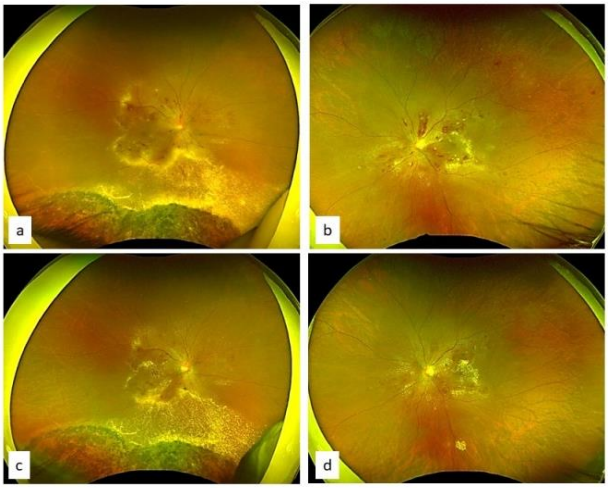

Fig 1: Fundus photographs of the right (a, c) and left (b, d) eyes: (a, b) initial visit, (c, d) 2 months later

Note disc swelling, cotton-wool spots, superficial retinal hemorrhages, and macular edema with hard exudates (a, b). Fundus changes were improved, including serous retinal detachment (c, d).

Optical coherence tomography (OCT) showed marked serous retinal detachment, involving the fovea, and cystic change of the inner retinal layer in both eyes (Figure 2 a, b).

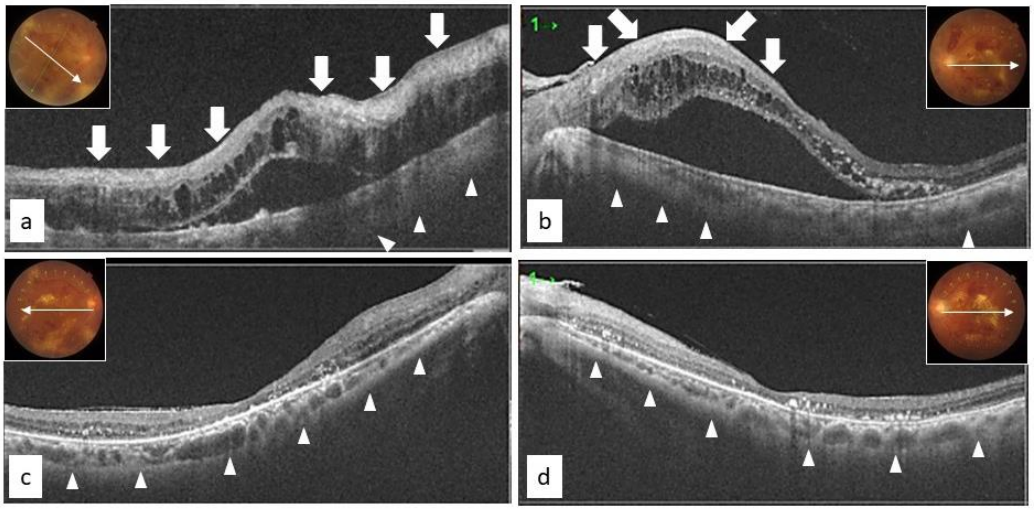

Fig 2: Optical coherence tomographic images of the right (a, c) and left (b, d) eyes: (a, b) initial visit, (c, d) 2 months later

Note the swelling of the retinal nerve fiber layer (a, b; arrows), and increased choroidal thickness (a, b; arrowheads) began to decrease as blood pressure normalized (c, d; arrowheads).

We diagnosed the condition as hypertensive retinopathy with marked serous retinal detachment caused by hypertensive choroidopathy. His blood pressure was 189/116 mmHg. There was no secondary cause of hypertension. Two months after resuming his regular medications, his BCVA improved to 0.6 in the right eye and 1.0 in the left eye, with regression of fundus changes, including serous retinal detachment (Figure 1 c, d).

DISCUSSION

In this study, we present a case of hypertensive chorioretinopathy in a 54-year-old man.

While hypertensive retinopathy is a known ocular manifestation, choroidopathy is less common. Malignant hypertension is characterized by arteriolar fibrinoid necrosis and retinal nerve fiber layer ischemia, which leads to cotton wool spot formation [1-3]. Using OCT, swelling of the retinal nerve fiber layer (Figure 2 a, b arrows) due to ischemic damage was identified as spots. High blood pressure can also lead to choroidopathy resulting from choroidal fibrinoid necrosis, choriocapillaris nonperfusion, retinal pigment epithelium ischemic necrosis, and subretinal fluid accumulation [1-3]. Choroidal thickness was increased (Figure 2 a, b arrowheads) during severe hypertension and began to decrease as blood pressure normalized (Figure 2 c, d arrowheads). In malignant hypertension, both retinopathy and choroidopathy can occur, which can be detected on OCT.

CONCLUSION

Although the findings were based on a single case, clinicians should be aware of both retinopathy and choroidopathy can occur in malignant hypertension. Our findings may contribute to a better understanding of this rare condition.

Disclosure: The author declares no conflict of interest.

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