Case Report

BILATERAL SIMULTANEOUS CENTRAL RETINAL VEIN OCCLUSION IN A PATIENT WITH SYSTEMIC HYPERTENSION

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ABSTRACT

The central retinal vein occlusion is caused by age related changes in the retinal vessels. Bilateral central retinal vein occlusion is a relatively rare event. Only less than 10% cases are bilateral. While simultaneous bilateral central retinal vein occlusion is very rare. We are presenting a case report regarding a middle aged hypertensive patient who presented with bilateral central retinal vein occlusion in the Department of Ophthalmology, Madina Teaching Hospital, Faisalabad.
A 55 years old middle aged female presented with bilateral sudden blurring of vision with finger counting vision in both eyes. After detailed clinical work up a diagnosis of bilateral central retinal vein occlusion secondary to systemic hypertension was made. Her hypertension was controlled with the help of internist and constant follow up was advised.

INTRODUCTION

Central retinal vein occlusion is a common cause of sudden unilateral loss of vision in elderly. It is usually a unilateral phenomenon presenting in more than 90% of cases as unilateral sudden loss of vision. Only in less than 10% of cases it presents as bilateral disease and simultaneous presentation is even more, rare. Common risk factors include systemic diseases like age related arteriosclerosis, hypertension, blood dyscrasias, and local factors like raised intra ocular pressure, vasculitis of retinal veins and congenital anomaly of retinal veins.[1]
Clinically it presents in two forms i.e. non ischemic and ischemic variety. The non ischemic type carries good prognosis while the ischemic type carries poor prognosis.

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Hypertension related arteriosclerosis compresses central retinal vein behind lamina cribrosa where artery and vein share a common adventitial sheath. This leads to thrombus formation and occlusion of venous blood flow. Increased capillary pressure with endothelial damage leads to extravasations of blood. This stagnation of blood results in hypoxic damage to tissues.

CASE REPORT

A 55 years old house wife presented with sudden blurring of vision of both eyes as Out Patient, in the Department of Ophthalmology, Madina Teaching Hospital, Faisalabad. There were no associated symptoms. Patient was currently under treatment of a physician for systemic hypertension when she suddenly developed blurring of vision while she was working at home. No relevant past ophthalmic history was present. Previous history confirmed that she had been hypertensive for the last few years with poor control.
On clinical examination her visual acuity was finger counting at a distance of one meter in each eye. Intra ocular pressure was 15 mm Hg in both eyes. Both pupils were equally reactive with no afferent pupil defect. Media were clear on both sides with normal anterior segments.
On fundus examination there were hemorrhages of dot and blot types involving all four quadrants with dilated veins. Optic discs were edematous and it was difficult to examine macula/ fovea due to haemorrhages. Few cotton wool spots were observed. Findings were almost similar on both sides (Figs. 1 and 2). On systemic examination, her

Blood Pressure reading was 170/110 mm Hg. Laboratory investigation were done and there was normal blood cell count, normal lipid profile, normal liver and kidney function tests. Laboratory test results of hypercoagulability, including levels of anticardiolipin antibody, protein S, protein C, and antithrombin III were all negative. Patient was advised a regular follow up and referred to internist for control of hypertension. On follow up visits she presented with gradual decrease in hemorrhages. Fundus fluorescein angiography of both eyes were performed after three months. Diffuse macular edema was observed on both sides. Patient was advised to get his hypertension controlled with the help of Medical Department.

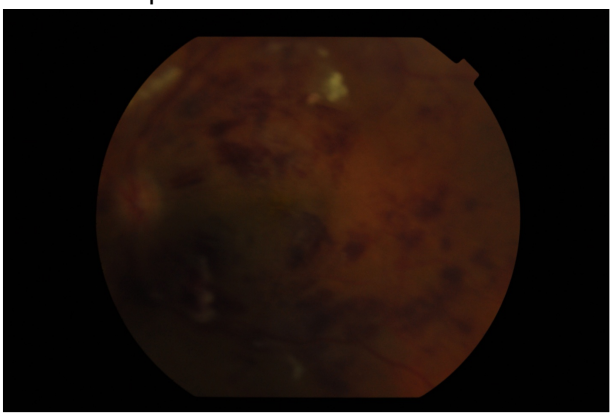

Fig 1

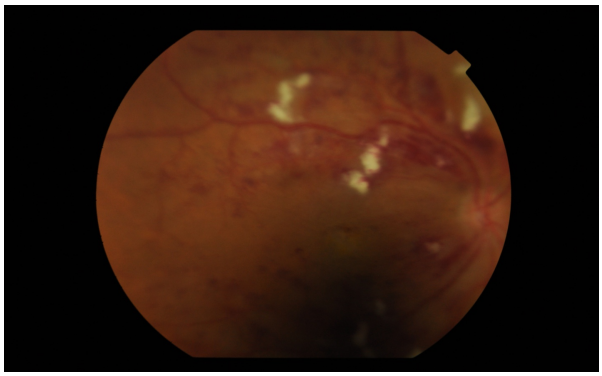

Fig 2

DISCUSSION

Central retinal vein occlusion (CRVO) is one of the most dramatic clinical events in Ophthalmology for which there is usually no treatment[2]. Most interventions are aimed at the prevention or treatment of complications[3]. It is most common retinal vascular retinal disease only after diabetic retinopathy. Occlusion of central retinal vein occlusion is often a result of local or systemic causes. Local causes such as primary open angle or closed angle glaucoma or trauma were ruled out in our patient. The systemic diseases which can cause CRVO are 1) Atherosclerosis and other systemic diseases like hypertension, 2) Conditions associated with elevated central venous pressure like pulmonary hypertension, tricuspid regurgitation and Right Atrial myxoma, 3) Hypercoagulability states and 4) Collagen vascular diseases and vasculitidis. The patient was thoroughly investigated for systemic diseases and systemic hypertension was the only positive finding. The central retinal vein occlusion is typically a unilateral condition. Fani *et al*. presented a case of bilateral central retinal vein occlusion in a colonic cancer patient in 2001.[4] Systemic examination in their cases proved coagulation disorder as underlying cause. Balogh Z, Berta A and associates presented a case report in 2011 regarding a young patient who presented with bilateral central retinal vein occlusion caused by malignant hypertension[5]. In our case the cause of Bilateral simultaneous central retinal vein occlusion was hypertension alone. Authors recommend regular check and control of hypertension in all hypertensive patients.

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