

Rare case of exudative retinal detachment in Normotensive HELLP syndrome: A Case Report

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ABSTRACT

HELLP syndrome (hemolysis, elevated liver enzymes and low platelets) is defined as a severe form of preeclampsia which leads to maternal, fetal morbidities and sometimes even death. HELLP syndrome usually occurs in severe preeclampsia; but sometimes it may present with atypical clinical features. Bilateral, serous, non-rhegmatogenous retinal detachment is a rare complication in severe hypertensive disorders of pregnancy, in most of the cases serous detachment is associated with development of hypertensive retinopathy. Here we report a rare case of 24-year-old female who presented at 36 weeks of pregnancy with headache, and diminution of vision in both eyes. Two days after admission a proteinuria of 440 mg/24 h was detected. She had platelet count of 70,000/ cc 3 and elevated liver enzymes. However the patient had normal blood pressure. Her serum was creatinine normal. The patient required a platelet transfusion. Fundus examination revealed exudative retinal detachment involving inferior quadrant. No signs of hypertensive retinopathy were noted. Prompt recovery with good visual acuity occurred after the pregnancy ended.

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INTRODUCTION

HELLP syndrome (Hemolysis, Elevated Liver Enzymes and Low Platelets) represents a severe form of preeclampsia associated with serious maternal and fetal morbidities and even death. Usually HELLP syndrome appears during the evolution of a severe preeclampsia; however HELLP syndrome can have atypical clinical manifestations. The visual system may be affected in 25% – 100 % of patients with severe hypertensive disorders of pregnancy[1]. Impedance in choroidal blood flow can sometimes lead to choroidal ischaemia which is the cause for serous retinal detachment [2], incidence of which is about 1 % of patients with severe hypertensive disorders of pregnancy, with a little higher incidence in patients of eclampsia. In the vast majority of the cases the detachment occurs concomitantly with hypertensive retinopathy[3]. We report a primigravida with normotensive HELLP (haemolysis, elevated liver enzymes, low platelets) syndrome who in the absence of any hypertensive retinopathy, developed bilateral, bullous retinal detachments.

CASE REPORT

A 24-year-old female primigravida consulted at 36 weeks of pregnancy for headache, and diminution of vision. Forty eight hours after admission a proteinuria of 440 mg / 24 hr was detected. However the patient remained with normal

blood pressure. An elevation of liver enzymes and creatinine were observed. The patient required a platelet transfusion. Fundus examination revealed exudative retinal detachment. Her previous antenatal records revealed no elevation of blood pressure. On examination, visual acuity with correction was 20/200 in her right eye and 20/80 in her left eye. Anterior segment examination was normal. Dilated fundus examination with indirect ophthalmoscopy and 78 D slit lamp biomicroscopy disclosed bullous, inferior, serous neurosensory retinal detachments in both eyes with shifting of fluid test positive [Fig. 1 & 2]. The only residual findings were diffuse mottling of the fundus secondary to pigmentary migration in the choroid and in the pigment epithelium of the retina disclosed by fluorescein angiography. An emergency cesarean section was done and patient was normotensive during post-partum period. Prompt recovery with good visual acuity occurred after the pregnancy ended.



Fig. 1: Showing inferior bullous Retinal detachment in right eye.



Fig. 2: bullous Retinal detachment in left eye.

DISCUSSION

Hypertensive changes in retina are directly correlated with the severity of hypertensive disorders of pregnancy. The degree of hypertensive retinopathy in women with hypertensive disorders of pregnancy is a reliable prognostic factor in determining the severity of the disease. The prevalence rate of hypertensive retinopathy in patients with hypertensive disorders in pregnancy is 20-30% [4]. Hypertensive retinopathy most commonly presents as generalized arterial narrowing. Other signs include arteriovenous nicking, silver wiring, focal arteriolar narrowing, retinal haemorrhages, cotton wool spots and serous retinal detachment [5,6]. The examination of the fundus is an essential and simple diagnostic step in pregnant women with hypertensive disorders of pregnancy [7]. Rarely choroidal ischaemia can lead to serous retinal detachment [8]. The exact cause of serous retinal detachment is still not known, however fundus angiography with fluorescein and indocyanine green dye reveals choroidal ischaemia in majority of cases [7]. Hayreh [7] for the first time suggested that alterations in choroidal circulation leads to focal degradation of retinal pigment epithelium (RPE) and outer retinal barrier, which in turn leads to proteinaceous exudates leaking from RPE underneath the neuro-sensory retinal layer [9]. Due to fears of teratogenic effects of fluorescein dye on developing fetus only limited data is present. Angiographic studies have shown that retinal detachments in preeclampsia are due to the occlusion of choroidal arterioles and choriocapillaris later on these choroidal infarcts may lead to round hyperpigmented lesions called as Elschnig's spot. Most of these cases of serous retinal detachment carries a relatively good prognosis with good visual recovery and settling of detachment [11]. However the presence of retinal detachment or papilloedema can act as indicator to terminate the pregnancy to save useful vision [12]. Presence of hypertensive

changes and retinal detachment can act as a useful marker of fetal wellbeing, since changes in retinal micro circulation corresponds to placental micro circulation as well. Further studies are needed to establish the exact pathogenesis and implications of retinal microvascular changes in preeclampsia.

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