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Bilateral Serous Retinal Detachment Due to HELLP Syndrome

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Abstract: Retinal detachment is an rare but it is a known complication of hypertensive disorder in pregnancy. It has affected 0.2–2% of patients with severe preeclampsia and 0.9% of patients with HELLP syndrome. We present a case of the female who had experienced bilateral sudden painless blurring of vision post Caesarean Section which was done at 32 weeks. She also had severe throbbing headache post section .After investigating the case we revealed that it was bilateral retinal detachment due to hypertensive disorder of pregnancy. In conclusion, bilateral, serous, non-rhegmatogenous retinal detachment is a rare complication of toxaemia of pregnancy. In the vast majority of the cases the detachment occurs concomitantly with hypertensive retinopathy
Keywords: Pregnancy, HELLP syndrome, hypertension, serous retinal detachment

INTRODUCTION

Retinal detachment refers to separation of the sensory layers of retina from the underlying retinal pigment epithelium. Retinal detachment is an unusual but well documented complication of hypertensive disorder in pregnancy affecting 0.2–2% of patients with severe preeclampsia and 0.9% of patients with HELLP syndrome [1].

CASE REPORT

We here report a case of the female who had bilateral retinal detachment due to HELLP syndrome. A 29 year old female experienced bilateral sudden painless blurring of vision post Caesarean Section which was done at 32 weeks.She also had severe throbbing headache post section.

Patient was alright 6 hrs post caesarean when she suddenly experienced bilateral painless diminution of vision accompanied with blurring and sudden onset continuous throbbing headache.

No history of diplopia, scotoma, floaters, flashes of light,photopsia. She also had no history of curtain falling in front of eye.

Patient had developed pregnancy induced hypertension at 30 weeks of gestation for which she was on anti hypertensive treatment. At 32 weeks patient complained of absent fetal movements for which her USG was done which revealed a huge retro placental clot for which she was taken for an emergency caesarean section.

No history of diabetes mellitus, tuberculosis and allergy.She had no history of previous surgery in past.

Patient was afebrile, conscious and oriented in time ,place and person .Pulse :100/min ,BP:210/120mmhg.She had signs of pallor, generalized edema.No signs of clubbing, jaundice, lymphadenopathy, icterus, rash, petechia .Her urine output was 50cc.

On Local Examination

BCVA	R/E 6/18	L/E 6/24
Eyebrow, eyelid, eyelash	N	N
conjunctiva	N	N
cornea	N	N
A/C	N	N
iris	N	N
pupil	N	N
LENS	N	N
IOP	12.2mm Hg	14.6mm Hg
SAC SYRINGING	Patent	Patent

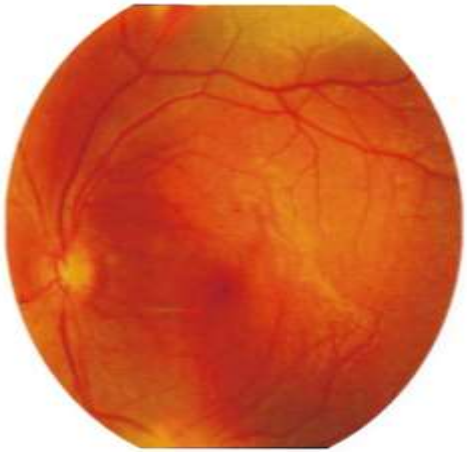

Fig1: This is the fundus image of left eye

Fig. 1 reveals: Media is clear, Disc: size, shape, margins: normal, Blood vessels: tortuous, Peripheral retina: retina appeared opaque with corrugated appearance and subretinal fluid collected beneath the retina at the posterior pole. There was no evidence of tear or break, Macula: macular reflex dull.

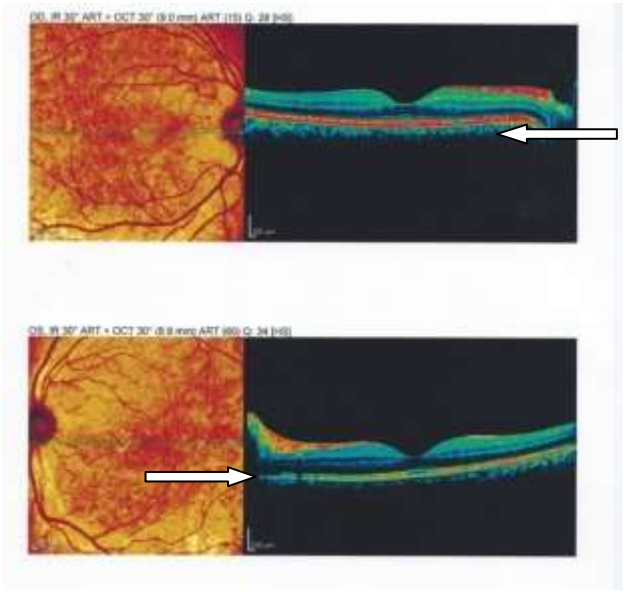

Fig 2: Normal Foveal Depression is Present in the Both Pictures. Bilateral Subretinal Fluid Collection is seen.
thus we came to the Diagnosis of Bilateral Serous Retinal Detachment due to HELLP Syndrome

Investigations

- HB: 8gm%
- WBC:3000 cells per cumm
- Platelets:40000 lakhs/cumm
- Urea :104gm%
- Creatinine:4
- SGPT: 186IU/L
- SGOT:202IU/L
- LDH:200IU/L

Treatment

Patient' BP was brought under control with the anti hypertensives. At the end of 2 weeks her BCVA was 6/6 .

DISCUSSION

The HELLP syndrome (haemolysis, elevated liver enzymes, and low platelets) is a variant of severe preeclampsia that is associated with significant maternal and perinatal morbidity and mortality. HELLP syndrome is associated with serious maternal morbidity, especially when it arises in the postpartum period [2]. Bilateral, serous, non-rhegmatogenous retinal detachment is a rare complication of toxaemia of pregnancy. In the vast majority of the cases the detachment occurs concomitantly with hypertensive retinopathy [3]. Retinal detachment occurs by 3 basic mechanisms and thus is classified into the following 3 main types and they are: Rhegmatogenous retinal detachment, the most common type results when a hole, tear, or break in the neuronal layer allows fluid from the vitreous to seep between and separate sensory and RPE layers. Traction retinal detachment results from adhesions between the vitreous gel/ fibrovascular proliferation and the retina. Exudative (serous) retinal detachment results from exudation of material into the subretinal space from retinal vessels (as in hypertension, central retinal venous occlusion, vasculitis, or papilloedema.

Hayreh suggested that in hypertensive choroidopathy endogenous vasoconstrictor agents leak freely from the choriocapillaries and act on the walls of the choroidal vessels resulting in choroidal vasoconstriction and ischemia [5]. Subsequently ischemia of the RPE causes degradation of the outer blood-retinal barrier and formation of a serous proteinaceous exudate from the choroid, through the RPE, into the subretinal space, producing serous retinal detachment.

Theory second postulated that placental thromboplastin may release into maternal circulation and activate the extrinsic coagulation system with resultant disseminated intravascular coagulation. This may be responsible for choroidal ischemia and consequent serous retinal detachment [7].

However, some patients may develop residual macular retinal pigment epithelial change, which may represent areas of infarction of the choriocapillaries (Elschnig's spots) [8].

CONCLUSION

The other physiologic changes to be remembered during pregnancy are corneal changes, dry-eye syndrome due to disruption of lacrimal acinar cells. IOP variation occurs due to increased aqueous outflow, decreased episcleral venous pressure. Ptosis defects that develop in the levator aponeurosis from fluid, hormonal, and stress-related changes [6].

Preeclampsia and eclampsia are the changes associated with hypertensive retinopathy may occur, including diffuse retinal edema, hemorrhages, exudates, and cotton-wool spots [9].

Possible mechanisms for these changes include hormonal changes, endothelial damage, hypoperfusion, ischemia and edema. Cortical blindness, which affects up to 15 percent often preceded or accompanied by headache, hyperreflexia, and paresis bilateral inferior scotoma and visual field defects have been reported to persist for several months postpartum [4]. MRI scan may show focal occipital lobe edema, including bilateral edema of the lateral geniculate nuclei, represented by hyperintense lesions on T2-weighted images [10]. Although studies have shown pregnancy to be an independent risk factor for worsening diabetic retinopathy (DR), the occurrence of gestational diabetes in the absence of preexisting diabetes does not seem to increase the risk for diabetic retinopathy. Uveitis is possibly due to hormonal and immunomodulatory effects. Latent ocular toxoplasmosis may reactivate during pregnancy [6].

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