Case Report

Partial HELLP syndrome with unilateral exudative retinal detachment treated conservatively

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Abstract

Peripartum vision loss, an uncommon, often reversible complication of pregnancy usually occurs in the setting of pre-eclampsia or eclampsia. The HELLP syndrome is characterized by hypertension, elevated liver enzymes and low platelets. This is a rare case of unilateral exudative retinal detachment associated with the Partial HELLP syndrome that occurred after delivery in a 23-year-old Indian woman. The retinal detachment subsequently reattached with good visual improvement under conservative treatment. This case highlights the importance of early intervention by the ophthalmologist when pregnant women complain about visual symptoms.

Keywords: Pre-eclampsia, Exudative retinal detachment, Partial HELLP syndrome

Introduction

Pre-eclampsia is a multisystem disorder and HELLP syndrome is one of its manifestations. HELLP syndrome is defined as the presence of thrombocytopenia (<150,000 platelets/microliter), hemolysis and hepatic dysfunction (elevated transaminases and lactate dehydrogenase). HELLP syndrome was first described by Weinstein in 1982. Partial HELLP syndrome is characterized by one or two of these abnormalities. Up to 25% of the patients with pre-eclampsia report visual problems, most common being a decrease in visual acuity. An association between HELLP syndrome and visual problems such as cortical blindness was first described in 1987. HELLP syndrome associated case with ophthalmic signs in the form of retinal detachment was first reported by Burke et al. Around 18 cases of retinal detachment have been reported so far in the literature in patients with HELLP syndrome. Most occur bilaterally during the third trimester. Unilateral retinal detachments occurring in the postpartum period are unusual. Majority of the patients have a complete recovery of vision with conservative management and surgery is usually unnecessary.

Case report

A 23 year old female with Gravida 2 Abortion1 with 34 weeks of gestation came with a history of pain in the abdomen, headache, low grade fever & high colored urine. Upon arrival, her BP was 170/80 mmHg, hemoglobin concentration 12.7 mg/dl, blood urea 43 mg/dl (range 0–45), creatinine 1.9 mg/dl (range 0.5–1.5), uric acid 12 mg/dl (range 2.4–5.7), total bilirubin 6.39 mg/dl (range 0–1.1), direct bilirubin 3.73 mg/dl (range 0–0.30), indirect bilirubin 2.66 mg/dl.
(range 0.2–0.8), serum aspartate aminotransferase (AST) 139 IU/L (range 0–46), serum alanine aminotransferase (ALT) 93 IU/L (range 0–49), lactate dehydrogenase 1308 IU/L (range 200–400), platelet count of 1.72 lakhs/cu mm (range 1.5–4) and a blood picture of normocytic normochromia with leukocytosis. She was diagnosed with Partial HELLP syndrome was started on calcium blocker, tablet nifedipine 5 mg twice a day along with alfa blocker, tablet prazocin 5 mg twice a day and subsequently underwent an emergency cesarean section the following day for non-reactive Non Stress Test. A single live healthy female baby weighing 2.7 kg was extracted. One month prior, her retinal examination was within normal limits. On post operative day one, her BP was 160/100 mm Hg with total bilirubin of 1.99 mg/dl, direct bilirubin 0.83 mg/dl, indirect bilirubin 1.16 mg/dl, AST 22 IU/L, ALT 26 IU/L, blood urea 6.22 mg/dl, and serum creatinine 0.8 mg/dl. On the seventh post-operative day, the patient complained of a sudden onset of blurring of vision in the left eye. On examination her visual acuity in the right eye was 6/6 whereas in the left eye it was 6/6 parts. Slit lamp examinations of anterior segment of both eyes were unremarkable with normal IOP. Vitreous in both eyes were clear. Fundoscopy of the left eye showed dumbbell shaped shallow serous retinal detachment in the inferonasal quadrant extending up to the macula as seen in Fig. 1. Fundus fluorescein angiogram in the early phase showed an area of delayed choroidal filling. In the midphase, the retinal vasculature was relatively spared without any evident signs of vascular occlusion. In the late venous phase, confluent patches were seen indicating choroidal hyper permeability and pooling of the dye, which was compatible with the diagnosis of exudative retinal detachment seen in Fig. 2. The patient was started on an antioxidant tablet, once a day and Nepafenac 0.1% eye drops four times per day along with bed rest and head end elevation. A diagnosis of severe preeclampsia with Partial HELLP syndrome complicated with a unilateral serous retinal detachment was made. A week later fundoscopy of the left eye revealed resolving serous retinal detachment as seen in Fig. 3. One month post treatment the patient showed complete resolution of the retinal detachment with regaining of visual acuity.

Discussion

Retinal detachment is an unusual but well documented phenomenon in hypertensive disorders of pregnancy affecting 0.9% of patients with HELLP syndrome. Retinal detachment is seven times more common in women with preeclampsia or eclampsia with HELLP syndrome than those without HELLP syndrome. Hutchings et al. suggested that retinal detachment is a consequence of choroidal vascular damage. Choroidal ischemia is secondary to arteriolar vaso-spasm which affects the retinal pigment epithelium and breaks down the blood retinal barrier. HELLP syndrome causes hemolysis of red blood cells leading to focal ischemia due to capillary obstruction. Retinal detachment in HELLP syndrome is commonly seen in the last trimester of pregnancy, but seldom within the first week postpartum. In the postpartum period, subretinal fluid is absorbed by retinal pigment epithelium and the visual acuity generally improves within weeks. In our case, the patient with Partial HELLP syndrome had only unilateral serous retinal detachment as compared to the bilateral detachments reported in the literature. Immediate management of HELLP syndrome and delivery of the fetus along with timely intervention by the ophthalmologist are advisable to reverse any ocular manifestations and avoid long term visual sequelae.
Conclusion

The case demonstrates that timely intervention and regular follow-up visits are essential in pregnant women with pre-eclampsia or eclampsia with HELLP syndrome to avoid visual problems. Hence, all patients with gestational hypertension should undergo a thorough retinal examination.

Conflict of interest

The authors declared that there is no conflict of interest.

References