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Case Report

Bilateral Exudative Retinal Detachment as a Presentation of HELLP Syndrome

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Introduction

HELLP syndrome is a well-known but rare scenario of pregnancy induced hypertension disorder, (10percent) characterized by Haemolysis, Elevated Liver enzymes, and Low platelets.

It might be the cause of maternal morbidity and mortality if undiagnosed or overlooked.

Preterm delivery, liver rupture, and renal failure could be the result of this syndrome.

Visual disturbances occur in severe preeclampsia and eclampsia.

Serious visual loss has been reported in patients with HELLP syndrome.

Optic disc oedema, haemorrhages, and cotton wool and Elschnig spots similar to hypertensive retinopathy have been found on ophthalmoscopy

A rare and an important complication of this condition which indicates the severity of the disease is exudative retinal detachment which in our case was the presenting feature in a young female in obstetric department.

Exudative retinal detachment has been reported in eclampsia [2, 3]. Bilateral exudative retinal detachment associated with the HELLP syndrome is reported in very few cases.

Clinical Case Description

A 26-year-old pregnant woman at 36 weeks of gestation admitted in obstetrics ward was referred to eye clinic with sudden loss of bilateral vision since 1 day suspected as grade 4 hypertensive retinopathy

She was admitted in the obstetrician department with elevated blood pressure since 3 days. Upon ophthalmologic examination. Her vision was hand movement both eyes. Normal intraocular pressure on applanation as 12 mm of mercury. Normal anterior segment examination clear cornea clear lens and clear anterior chambers, On slit lamp a grey reflex was noted in both eyes. On fundus examination under mydriatics bilateral exudative retinal detachment was identified,. The retinal detachment was bullous with high level of sub retinal fluid and was near total. Optic nerves were identified with great difficulty. The patient was unable to fix eyes for OCT but fundus pictures were obtained. She was referred back to obstetrics for further investigations and her labs came out as. Elevated LDH and bilirubin levels.

: AST/ALT > 2x the upper limit of normal.

Platelet count < 100,000/mm^3.

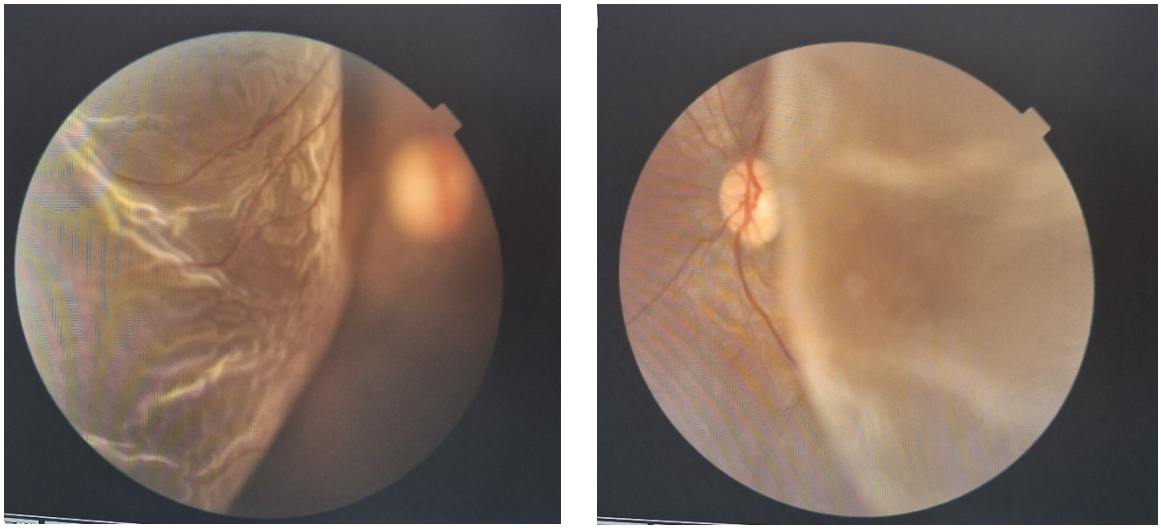

Figure 1 Color pictures of right and left near total exudative retinal detachment

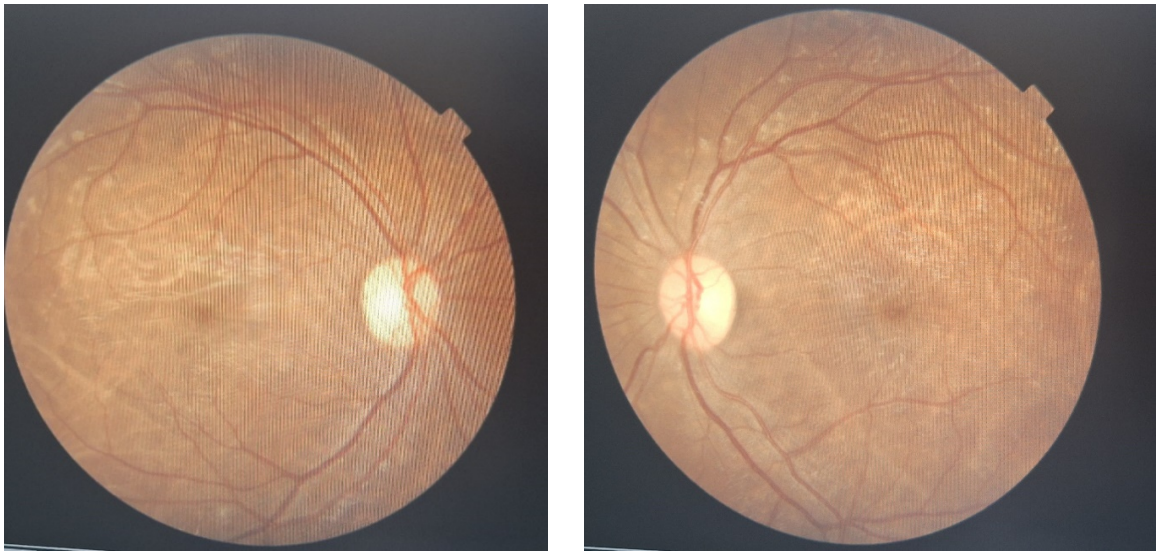

Figure 02 Resolved retina detachment after treatment

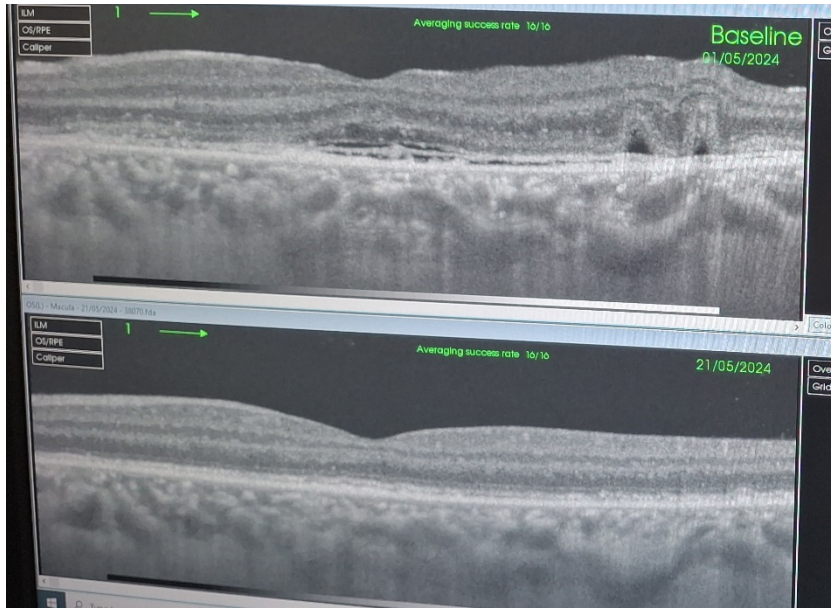

Figure 3 Retina scans after resolution of retinal detachment

This patient was diagnosed with HELLP syndrome, and delivery of foetus was performed promptly, after which the retinal findings showed progressive resolution.

Pathophysiology of Exudative Retinal Detachment in HELLP Syndrome

Systemic hypertension and ischemia cause damage to the retinal and choroidal vasculature and to the retinal pigmented epithelium (RPE).

The pathogenesis of exudative retinal detachment in eclampsia is not well understood. It is well accepted that the choriocapillaris is damaged by ischemia [4] or thrombosis due to disseminated intravascular coagulation [5].

Ophthalmic Manifestations of HELLP Syndrome

Diagnosis

The diagnosis of bilateral exudative retinal detachment in the setting of HELLP syndrome can be confirmed using:

- Fundoscopy: Reveals the presence of exudates, haemorrhages, and detachment.

- Optical Coherence Tomography (OCT): Identifies sub retinal fluid accumulation, confirming the exudative nature of the detachment.
- Fluorescein Angiography (if needed): Helps assess the extent of vascular leakage and retinal ischemia.

Management

The management of HELLP syndrome is multifaceted and involves both obstetric and ophthalmologic care:

A. Obstetric Management

- Delivery of the foetus is the definitive treatment for HELLP syndrome and is often the most effective way to resolve systemic manifestations, including ophthalmic issues.
- Blood pressure control: Tight control of hypertension is essential to prevent further damage to the retina.
- Monitoring for complications: Liver failure, renal failure, and eclampsia are associated risks.

B. Ophthalmologic Management

- Regular eye exams are crucial for monitoring retinal changes.
- Steroid therapy may be considered in cases with significant inflammation, although its use is controversial in pregnant women due to potential foetal risks.
- Postpartum follow-up: Retinal detachment often resolves after delivery, but long-term follow-up is necessary to assess any permanent visual impairment.

Prognosis

- Postpartum Recovery: In many cases, exudative retinal detachment and other retinal findings improve or resolve after delivery, as the systemic condition stabilizes.
- Visual Outcome: If detected and treated promptly, most patients experience a favourable visual prognosis, although permanent damage can occur in severe cases with prolonged detachment.

Discussion

Bilateral exudative retinal detachment in HELLP syndrome is an uncommon but serious presentation that needs early recognition and management. The presence of retinal findings in HELLP syndrome often correlates with the severity of the condition and may provide early clues for diagnosis. As the management of HELLP syndrome revolves around prompt delivery of the foetus, it is crucial that obstetricians and ophthalmologists work together to ensure the best maternal and foetal outcomes.

Conclusion

Bilateral exudative retinal detachment in HELLP syndrome has been reported earlier ,but in our case the young pregnant mothers ophthalmic presentation led to the diagnosis of HELLP syndrome.

Prompt diagnosis and treatment, including delivery and ophthalmic follow-up, are critical to preventing vision loss and ensures safety of mother and child.

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