ejpmr, 2022,9(1), 509-512

SJIF Impact Factor 6.222

EUROPEAN JOURNAL OF PHARMACEUTICAL AND MEDICAL RESEARCH

www.ejpmr.com

Case Report

ISSN 2394-3211

EJPMR

RETINAL DETACHMENT IN PATIENTS WITH PRE- ECLAMPSIA: TWO CASE REPORTS OF A RARE COMPLICATION OF PRE- ECLAMPSIA

[1]Dr. Jyoti Sharma, *[2]Dr. Shikha Sharma, [3]Dr. Gagan Acharya and [4]Dr. Molly Sharma

[1,2]MS OBG Medical Officer Regional Officer Bilaspur (H.P).
[3]MD Medicine Senior Resident Pandit Jawahar Lal Nehru Government Medical College Chamba (H.P).
[4]MS OBG Medical Officer Regional Officer Bilaspur (H.P).

***Corresponding Author: Dr. Shikha Sharma**
MS OBG Medical Officer Regional Officer Bilaspur (H.P).

Article Received on 16/11/2021 **Article Revised on 06/12/2021** **Article Accepted on 26/12/2021**

ABSTRACT
Pre- eclampsia presents a medical condition in pregnancy that is manifested with raised blood pressure and urine protein. Ocular involvement in pre-eclampsia is rare. Retinal detachment in pre-eclampsia is a rare complication, only occurs in 1-2 % of severe pre-eclampsia patients, but in 10% of those with Eclampsia. Most patients are managed conservatively by treating underlying cause, blood pressure control and proper follow up. The resorption occurs within weeks after delivery with improvement of visual acuity in most patients, however, a few, may be left with a permanent visual loss. We are reporting 2 such cases of retinal detachment in pre-eclamptic women, being a rare complication of pre- eclampsia.

KEYWORDS: Pre-eclampsia; Retinal detachment; OCT (Optical Coherence Tomography).

INTRODUCTION
Pre- eclampsia is a pregnancy specific disease characterized by hypertension and significant proteinuria in a previously healthy women on or after the 20th week of gestation, occurring in about 2-8 % of pregnancies. It is a systemic disorder that can affect almost every organ in the body. It is associated with increased rates of maternal morbidities such as pedal edema, cerebral edema and hemorrhage, acute renal failure, disseminated intravascular coagulation, abruptio placentae, adult respiratory distress syndrome, sepsis, stroke and retinal detachment. Visual symptoms can occur in 25-50% of pre eclamptic patients.[1] However, retinal vascular changes occur in 40- 100% of patients. Most common retinal vascular abnormalities are spasm and narrowing of retinal vessels.[2,3] Retinal detachment in pre-eclampsia is a rare complication, only occurs in 1-2% of severe PE but in 10% of those with eclamptic seizures.[1] The serous retinal detachment in preeclampsia is unusual cause of visual loss and is produced by the involvement of the choroidal vascularization.[4] The visual symptoms manifest most commonly as blurred vision, can also present as photopsia, scotomas, diplopia, visual field defects and blindness. Symptoms tend to get worse with increasing severity. The majority of patients with clinical management have a complete recovery in the case of serous retinal detachment. Complete recovery is expected in a couple of weeks.[5] There is no need for any surgical intervention.[6] Long-term visual changes/blindness, however may occur due to retinal pigment epithelium changes or optic atrophy. We are here reporting, 2 cases of retinal detachment in pre-eclamptic women, with complete resolution after delivery.

CASE REPORTS
In case I: Pre- eclampsia with postpartum exudative retinal detachment.
In case II: Pre- eclampsia with antepartum bullous retinal detachment.

CASE I
A 23-year-old, primigravida at POG 35 weeks 6 days referred to our department, reported in emergency, with complaint of severe headache for last 2-3 days, with BP 220/110mmHg at the time of referral. There was no associated blurring of vision, epigastric pain, nausea or vomiting at the time of admission. Her blood pressure at the time of admission was 176/108mmHg. There were no previous high B.P records, or history of similar headache in past. On per abdominal examination, it was cephalic presentation, with uterus relaxed and FHR present with no fetal distress. All investigations were sent and Injection MgSO4 was started immediately as per Pritchard's regimen, along with antihypertensives. Her blood investigations were- Hb- 10.6gm%, platelets- 1.2 lac/mm3, PT/INR- 15.2/1.2, creatinine- 0.32mg/dl, SGOT/SGPT- 27/15 IU/L, urine routine examination-protein 3+. Her bedside visual acuity was better than 6/60 in bilateral eyes, her fundus examination on indirect

ophthalmoscopy was within normal limits bilaterally. While induction was done, she had fetal bradycardia for which underwent emergency caesarean section and delivered an alive Fch with APGAR score 8 and 9. On her 1st postoperative day, she started having headache again with strain over eyes with complaint of something moving in front of eyes. Her BP was 140/94mmHg, visual acuity was 6/12 Right eye, 6/18 left eye, with pinhole 6/6 bilateral eyes. IOP was normal. Anterior segment was unremarkable. Her direct fundus examination revealed exudative retinal detachment bilateral eye, more in left eye, with choroidopathy which was supported by OCT examination. She was put on oral antihypertensives with B.P monitoring and daily fundus review. B.P was well controlled. On 5th POD, her fundus and OCT examination showed subsided retinal detachment, with pigment mottling present over macula with improving visual acuity. Her final follow up examination done 1 week later revealed that retina was in place with no subretinal substantial fluid and no macular Edema, with no visual symptoms and normal visual acuity. (see fig. A- D).

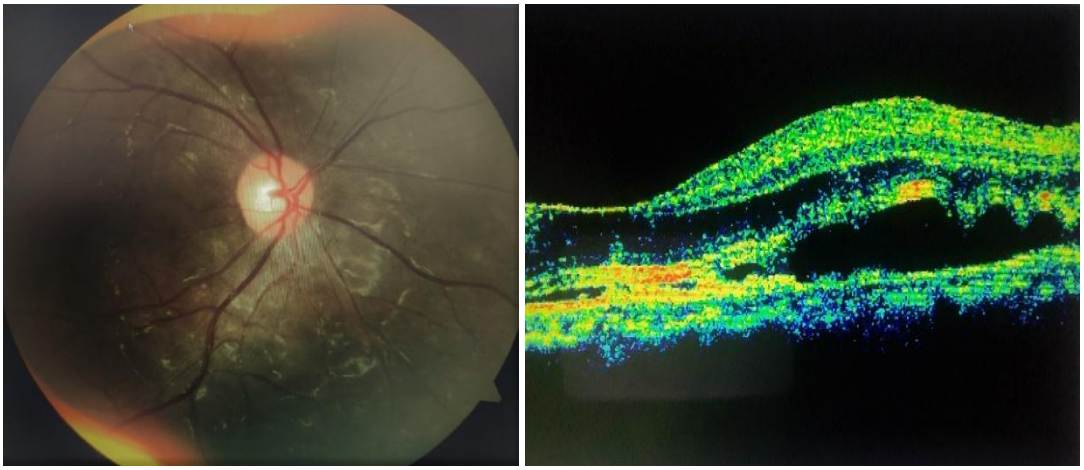

Fig. A. Fundus and OCT left eye (detachment more on left side) showing exudative Retinal detachment.

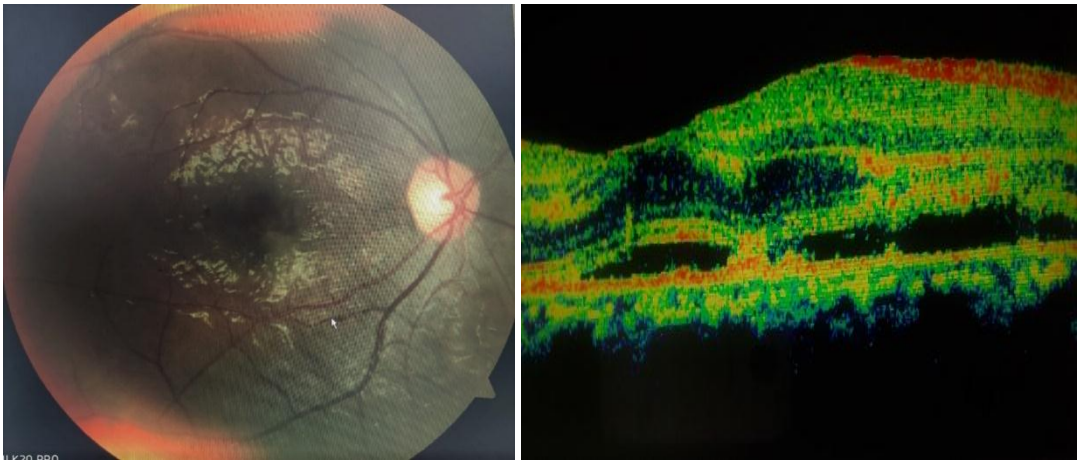

Fig. B. fundus and OCT right eye showing exudative retinal detachment.

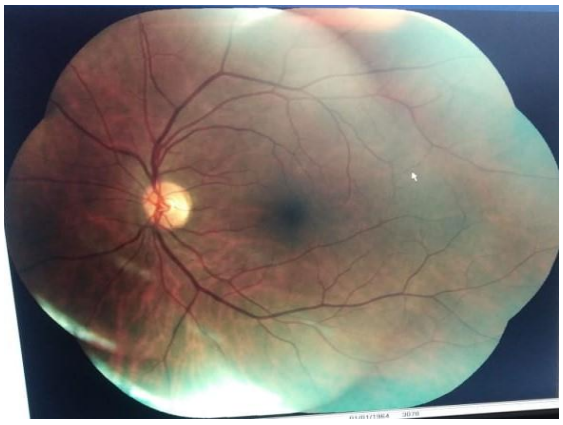

Fig. C. resolved fundus on follow up examination after 1 week.

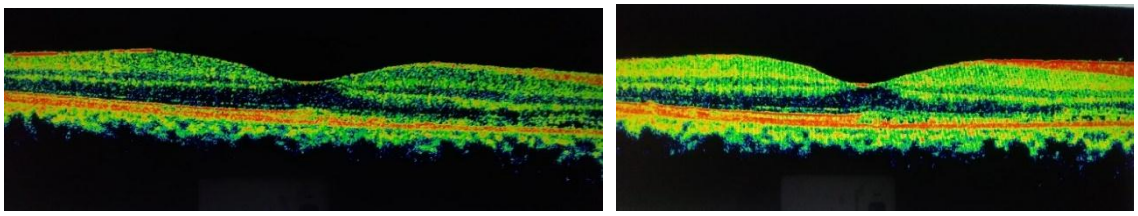

Fig. D. OCT right and left eye showing resolving retinal detachment.

CASE 2

A 20-year-old primigravida at POG 33 weeks 5 days, presented in emergency with chief complaint of loss of vision for 2 days, earlier was slight blurring of vision from last 10- 12 days, followed by gradually progressive symptom and now patient perceived only light in bilateral eyes. Her blood pressure at the time of admission was 150/108mmHg. She was a referred case from CHC where her maximum B.P recorded was 204/130mmHg on the day of referral and was referred with loading dose of Mgso4 as per Pritchard's regimen, along with i/v labetalol 40mg. On per abdomen examination, uterus was relaxed, it was cephalic presentation with FHS normal. She was admitted, Mgso4 as per regimen was continued, was put on tablet labetalol 200mg TDS. Her Hb 8.9 gm%, platelets 2 lac/mm3, serum creatinine was 0.7mg/dl, SGOT/SGPT- 110/44, total bilirubin was 1.0mg/dl, s. LDH was 1386 U/L, PT/INR-12.2/1.1, urine routine – protein 2+. Pregnancy was terminated by induction of labour. Her indirect fundus ophthalmoscopy was suggestive of serous retinal detachment. She was taken for emergency LSCS in view of acute fetal distress with meconium-stained liquor, it was an alive male child with APGAR 8 and 9. After LSCS, her visual acuity was only hand movement perception close to face. Her repeat fundus examination was done (direct ophthalmoscopy) which revealed bilateral large bullous serous retinal detachment that was confirmed on USG B scan. Her B.P postoperatively was well controlled with tablet amlodipine 5mg BD, tablet labetalol 100mg TDS. At POD 3rd, repeat fundus examination showed resolving bullous retinal detachment bilateral eye with decreased size of detachment. On her subsequent follow up 1 week later, there was further decreased size of retinal detachment bilateral eyes with improving visual acuity. She was discharged and on her final follow up visit 6 weeks later, the fundus examination revealed complete resolution of the detachment with mild visual complaints. Best visual acuity achieved was 6/9 right eye, 6/12 left eye. Fundus findings showed nothing but changes on the RPE (retinal pigment epithelium), and slightly reduced fovea reflection. Control OCT was preformed and the diagnosis was confirmed.(See figure 1and 2).

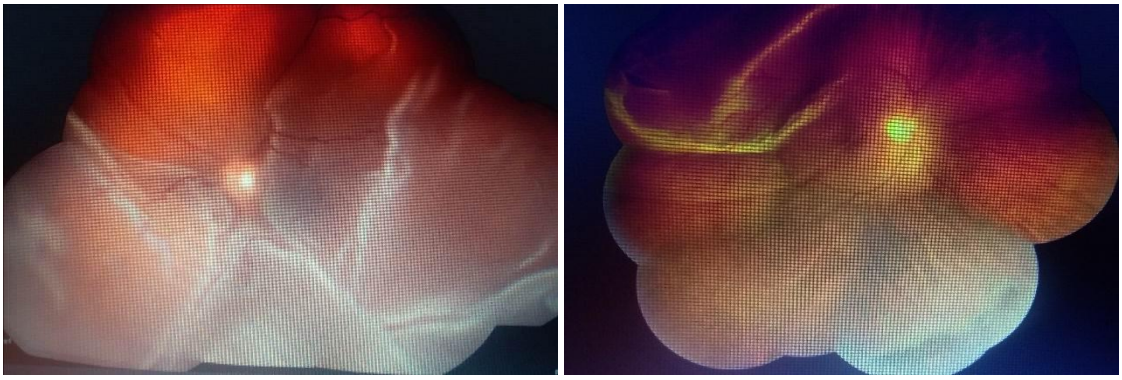

Fig. 1: Right and left eye fundus showing bullous serous retinal detachment.

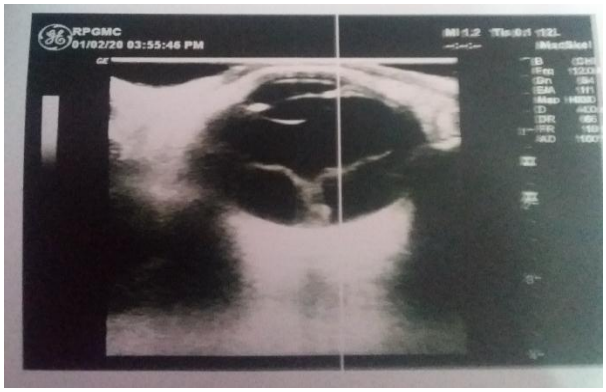

Fig. 2: B scan showing evidence of floating thin membrane like structure in posterior chamber, in both eyes, showing possibility of retinal detachment bilateral eyes.

DISCUSSION

Retinal detachment is a rare cause of vision loss in pre-eclampsia with only a few reported cases in medical literature. The reported incidence is less than 1% in pre-eclampsia and 10% in eclampsia. It is a rare ocular complication of pre- eclampsia which was described 1st by Von Graefe in 1855.[7] It is defined as presence of subretinal fluid or blood due to acute hypertension, inflammation, infection or neoplasm. This accumulation of fluid leads to separation of retinal pigmented epithelium and retinal photoreceptors causing visual loss. It is thought to be the result of choroidal ischemia and RPE infarction secondary to intense vasoconstriction of choroidal arterioles in pre- eclampsia. This leads to disruption of normal functioning of retinal pigment epithelium. One of function of RPE is to keep fluid out of the potential space between retina and RPE. The choroidal vascular insufficiency causes acute necrosis of RPE resulting malfunction of its sodium ion and water pump causing transudation and progressive retinal detachment. Management is usually conservative and don't require surgery. There is spontaneous complete resorption of fluids and visual restoration. Retinal detachment may happen before or after delivery.[8] ERD tends to be bilateral, diagnosed postpartum, more frequent in primiparous and more common in women who undergo cesarean delivery; it tends to resolve postpartum.[9] Retinal detachment secondary to pre eclampsia usually resolves without long term sequalae which occurs within weeks after delivery due to normalization of blood pressure. However, it doesn't always guarantee improvement of visual acuity in case of permanent RPE necrosis. Patients with severe pre eclampsia, rarely, can be left with a permanent visual loss, despite resolution of retinal detachment due to extensive RPE necrosis.

CONCLUSION

Retinal detachment is a rare complication of preeclampsia. Choroidal ischemia could lead to bilateral retinal exudative detachments in patients with pre-eclampsia causing variable visual disturbances. A multidisciplinary approach and better cooperation between ophthalmologists and obstetricians is needed. Regular follow up retinal examination is needed. Few weeks of conservative medical treatment with antihypertensives would result in spontaneous resolution in most of the patients a few weeks post-delivery without long term sequalae.

REFERENCES

1. Schultz KL, Birnbaum AD, Goldstein DA. Ocular disease in pregnancy. Curr Opin Ophthalmol, 2005; 16(5): 308–14.
2. Androudi S, Ekonomidis P, Kump L, Praidou A, Brazitikos PD. OCT-3 study of serous retinal detachment in a preeclamptic patient. Semin Ophthalmol, 2007; 22(3): 189–91.
3. Sathish S, Arnold JJ. Bilateral choroidal ischaemia and serous retinal detachment in pre-eclampsia. Clin Experiment Ophthalmol, 2000; 28(5): 387–90.
4. Mihu D, Mihu CM, Talu S, Ciuchina S, Mautan A. Ocular changes in preeclampsia. Oftalmologia, 2008; (2): 16-22.
5. Moloney JB, Drury Ml. The effect of pregnancy on the natural course of diabetic rethinopathy. Am J Ophtalmolgy, 1982; 93(6): 745-756.
6. Aburymra S. Doençasretinianas da gravidez. In: Retina e Vítreo. Clínica e Cirurgia. SociedadeBrasileira de Retina e Vítreo e ConselhoBrasileiro de Oftalmologia (Ed). São Paulo: Editora Roca, 2000; 584-585.
7. Von Grafe, A. Ueber eine Krebsablagerung im Innern des Auges, deren ursprünglicher Sitz zwischen Sklera und Choroidea war.
8. Bos AM, Van Loon AJ, Ameln JG. Serous retinal detachment in preeclampsia. Ned TijdschrGeneeskd, 1999; 143: 2430-2432.
9. Gracia P. VD, Paz L G.O. Retinal detachment in association with pre-eclampsia, eclampsia, and HELLP syndrome. Int J Gynaecol Obstet, 2011; 114(3): 223-5.