



ORIGINAL RESEARCH PAPER

POSTPARTUM VISUAL CHANGES IN PREGNANCY-ASSOCIATED HYPERTENSIVE AND METABOLIC DISORDERS: A CASE SERIES OF PRES, CSR, DRY EYE AND RETINAL DETACHMENT IN DADRA AND NAGAR HAVELI

Ophthalmology

KEY WORDS: Posterior Reversible Encephalopathy Syndrome (PRES); Central Serous Chorioretinopathy (CSR); Exudative Retinal Detachment; Dry eye; Pregnancy Hypertension Syndrome; Dadra and Nagar Haveli.

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ABSTRACT

Postpartum visual disturbances are rare but potentially sight-threatening complications associated with pregnancy. This case series describes four postpartum ocular conditions: Posterior Reversible Encephalopathy Syndrome (PRES), Central Serous Chorioretinopathy (CSR), dry eye and exudative retinal detachment. Three women presented with acute visual loss following complicated pregnancies and one with watering and foreign body sensation. Diagnosis was established using magnetic resonance imaging, optical coherence tomography, fundus photography and slit lamp examination. Prompt multidisciplinary management resulted in significant visual improvement in all cases during follow-up. These cases emphasize the importance of early ophthalmic evaluation, timely imaging, and coordinated multidisciplinary care to preserve vision and prevent permanent visual impairment in high-risk postpartum patients.

1. INTRODUCTION

The process of pregnancy involves numerous physiological, hormonal, cardiovascular, and metabolic changes that can have a considerable effect on the eyes. While pregnancy-associated eye problems are mostly transitory and reversible, serious systemic conditions such as preeclampsia, eclampsia, gestational diabetes and postpartum hypertension might lead to vision threatening problems. Postpartum period is especially at risk since fast changes in hemodynamics and hormonal levels can provoke retinal, choroidal, neuro-ophthalmic and corneal disorders that require urgent medical attention

2. Case Series:

Case 1: Posterior Reversible Encephalopathy Syndrome (PRES)

A 30-year-old multigravida female was admitted to a tertiary care hospital in the antenatal period, presenting with preeclampsia. She had hypertension, edema, proteinuria, and hemodynamic instability. Fetal distress was noted and LSCS was performed. Though the procedure went well, the patient had a sudden deterioration of neurological status post-operatively. She had altered sensorium which rapidly progressed to unconsciousness. The patient remained unconscious for about three days after which she started regaining consciousness.

After the patient regained consciousness, she complained of sudden diminution of vision bilaterally. Both eyes vision was hand movements. Visual field by Humphrey field analyzer showed generalized depressed fields. MRI reports showed Bilateral Parieto-Occipital Hyperintensities hence the final diagnosis of PRES syndrome with Cortical Blindness was established.

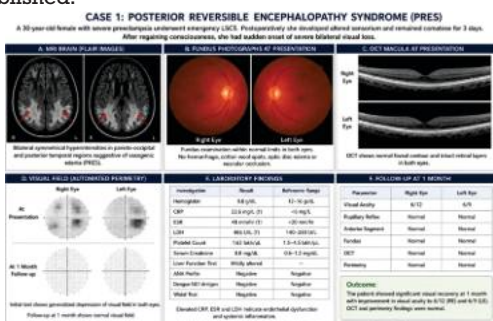
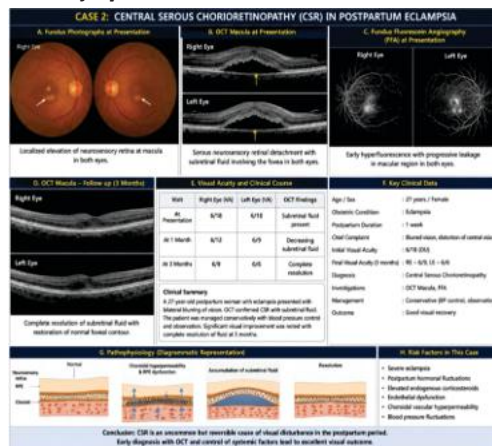


Figure 1: Case 1: Posterior Reversible Encephalopathy Syndrome (PRES)

Case 2: Central Serous Chorioretinopathy (CSR)

A 27-year-old female who gave birth one week prior came into the Ophthalmology department complaining of sudden blurring and distortion of her central vision in both eyes. The patient had recently suffered from eclampsia with significant changes in blood pressure during the peripartum period. The patient was having difficulties in reading, and recognizing people. The patient did not have a prior history of any ocular disease or injury.





Case 4: Exudative Retinal Detachment Associated with Gestational Diabetes Mellitus

A 29-year-old female in her post-partum state reported to the Department of Ophthalmology with progressively decreasing vision in both eyes about two weeks after delivery. The patient had a medical history of gestational diabetes mellitus where she had poorly controlled glycosylated hemoglobin during pregnancy. The patient stated that she had difficulty in reading, recognizing faces, and carrying out her normal routine activities due to decreased vision. The patient did not have any previous history of retinal surgery, trauma, or genetically inherited retinal disease.

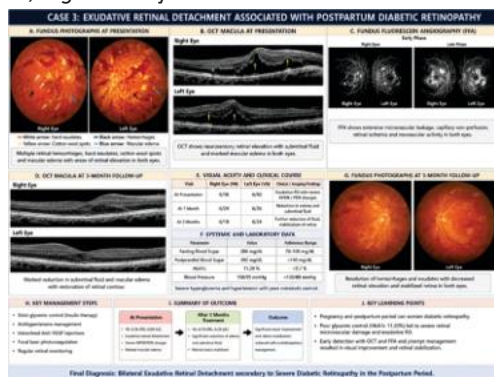


Figure 3: Exudative Retinal Detachment Associated with Postpartum Diabetic Retinopathy

3:DISCUSSION

The postpartum period predisposes women to vision-threatening ocular complications due to vascular, hormonal, and metabolic changes. This case series demonstrates four distinct postpartum manifestations: Posterior Reversible Encephalopathy Syndrome (PRES), Central Serous Chorioretinopathy (CSR), dry eyes and exudative retinal detachment associated with gestational diabetes. Although these conditions affect different anatomical structures, they shared common underlying mechanisms including endothelial dysfunction, impaired vascular autoregulation, increased vascular permeability and decreased tear film production. Early diagnosis using magnetic resonance imaging, optical coherence tomography, fundus photography, and fluorescein angiography enabled timely multidisciplinary management, resulting in favorable visual outcomes. These findings emphasize the importance of prompt ophthalmic assessment in postpartum women with visual symptoms to prevent irreversible vision loss and improve long-term visual prognosis.

4. CONCLUSION

This case series highlights four vision-threatening postpartum ocular complications associated with hypertensive and metabolic disorders of pregnancy: Posterior Reversible Encephalopathy Syndrome (PRES), Central Serous Chorioretinopathy (CSR), dry eyes and

exudative retinal detachment secondary to gestational diabetes. Although these conditions affect different anatomical structures, they share common underlying mechanisms, including endothelial dysfunction, impaired vascular autoregulation, increased vascular permeability, and microvascular injury. The postpartum period represents a particularly vulnerable phase during which these pathological changes may lead to acute visual impairment.

Accurate diagnosis depended on the appropriate use of advanced imaging modalities, including magnetic resonance imaging, optical coherence tomography, fundus photography, and fundus fluorescein angiography. Prompt multidisciplinary management involving ophthalmologists, obstetricians, neurologists, and endocrinologists resulted in favorable visual outcomes in all patients. Visual acuity improved from hand movements to 6/12 and 6/9 in the PRES case, from 6/18 to 6/9 and 6/6 in the CSR case, 6/12 to 6/6 in the patient with dry eyes and from 6/36–6/60 to 6/18–6/24 in the patient with diabetic retinal disease.

These findings emphasize the importance of maintaining a high index of suspicion for ocular complications in postpartum women with preeclampsia, eclampsia, gestational or pre-existing diabetes, and other high-risk conditions. Early ophthalmic evaluation, timely imaging, and coordinated multidisciplinary care are essential to preserve vision and prevent permanent visual disability.

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