

Cortical Blindness in Pregnancy: A Case Report

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Abstract

Cortical blindness originating from the brain's cortex is an uncommon yet severe pregnancy-related complication, often associated with preeclampsia or posterior reversible encephalopathy syndrome (PRES). We present the instance of a first-time pregnant woman, aged 28, who experienced sudden bilateral visual loss postpartum. Neuroimaging revealed findings consistent with PRES. Timely diagnosis and management led to partial visual recovery. This report highlights the critical importance of prompt diagnosis and management for pregnancy-induced cortical blindness.

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Introduction

Cortical blindness, characterized by bilateral loss of vision with preserved pupillary reflexes and normal ocular examination, results from occipital lobe dysfunction. In pregnancy, it is most commonly linked to hypertensive disorders, including preeclampsia as well as eclampsia. Posterior reversible encephalopathy syndrome (PRES) is a key underlying etiology. We present a case of postpartum cortical blindness due to PRES and discuss its clinical significance.

Case Report

A 28-year-old woman in her first pregnancy (primigravida) and with no prior health issues arrived at the hospital during her 38th week of gestation with headache, nausea, and visual disturbances. She was diagnosed with severe preeclampsia based on elevated blood pressure (160/110 mmHg), proteinuria, and neurological symptoms. An emergency cesarean delivery was performed using a spinal anesthetic because of concerning fetal heart rate patterns. On the first postpartum day, she reported complete bilateral vision loss. Ophthalmologic evaluation showed intact pupillary reflexes, normal fundus examination, and no signs of retinal or optic nerve pathology. The neurological assessment showed no abnormalities aside from the vision impairment. Brain MRI displayed areas of increased signal in both occipital regions, aligning with a diagnosis of PRES. The patient was managed with

antihypertensive therapy, magnesium sulfate, and supportive care. Her vision began improving within 48 hours, and partial recovery (6/24) was noted by three weeks postpartum.

Discussion

Cortical blindness in pregnancy is a rare but reversible condition, often associated with hypertensive emergencies. PRES, first described by Hinchey et al., is a neurotoxic syndrome characterized by vasogenic edema predominantly affecting the posterior circulation territories of the brain¹. The underlying mechanism of PRES is related to impaired endothelial function, which compromises the integrity of the blood-brain barrier and results in brain swelling². Hypertension, renal dysfunction, and endothelial damage are recognized as major contributing factors³. In the context of pregnancy, hypertensive disorders such as preeclampsia and eclampsia remain the leading causes of PRES, occurring in up to 90.0% of affected individuals⁴. Neuroimaging, particularly MRI with fluid-attenuated inversion recovery (FLAIR) sequences, is essential for diagnosis. Typical findings include symmetrical hyperintensities in the occipital, parietal, and sometimes frontal lobes⁵. In our case, bilateral occipital lobe involvement confirmed the diagnosis. Although computed tomography (CT) scans can detect some changes, MRI remains the gold standard for early and accurate diagnosis⁶.

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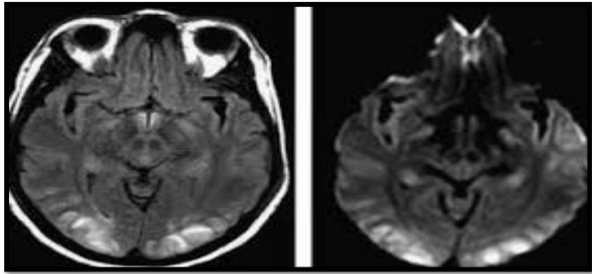
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This case underscores the importance of recognizing PRES as a reversible cause of cortical blindness in pregnancy. Obstetricians, neurologists, and ophthalmologists should collaborate to ensure timely diagnosis and appropriate management. Further investigation is necessary to enhance comprehension of the risk factors and extended prognosis for PRES during gestation⁶.



Photograph 1: MRI (brain) revealed bilateral hyperintensities (occipital lobes).

References

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