

posterior reversible encephalopathy after normal delivery

Letter to Editor

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Abhishek Biswas

DNB, IDCCM Surgical ICU, Mohali, India

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***Corresponding author:** Abhishek Biswas, DNB, IDCCM Surgical ICU, Mohali, India

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Sir/ Madam,

Posterior Reversible Encephalopathy Syndrome (PRES) is a clinoradiological syndrome¹ with multifactorial risk factors like preeclampsia and eclampsia. It should be considered in all pregnant and postpartum females having neurological signs and symptoms along with radiological features. Early diagnosis and management is vital in this reversible condition.²

We report a 26-year-old multipara female who presented to our hospital after 5 hours of normal vaginal delivery (NVD) with seizures, accelerated hypertension, occipital headache, and blurred vision. She was initially managed with Inj. Magnesium 2 gm, Midazolam 1 mg and was eventually referred to our hospital. There were no similar past history during last pregnancy and medical history of any chronic illnesses was negative.

Her GCS was 15/15, reacting pupils, heart rate 120/min, blood pressure 180/100 mm of Hg, oxygen saturation of 94% at room air with mild tachypnea 27/ min and complained of feeling of nausea. Apart from bilateral pitting oedema other systemic examinations were unremarkable. Laboratory reports showed mild proteinuria and hypoalbuminemia (serum albumin 2.2 gm/ dl). MRI brain showed prominent white matter oedema of bilateral occipital, posterior temporal region without any evidence of bleeding.

Immediate ICU management in consultation with neurology team included administration of magnesium and labetalol infusion, mannitol, frusemide, levetiracetam along with close monitoring of vitals/ GCS.

The aim was to lower the blood pressure gradually over the next 24 hours with labetalol and furosemide infusions. Once her condition stabilized, magnesium was stopped, and injectables were replaced with oral amlodipine, levetiracetam and torsemide. By day three she recovered

completely from visual disturbances and was shifted out of ICU.

PRES in eclampsia patients is diagnosed with clinical features of altered mental status, headache and visual disturbances, along with MRI findings of bilateral symmetrical hyperintensities on T2- weighted images in the parietal and occipital lobes.

Two different theories are debated for pathophysiology.³ The hyper perfusion theory, also called the "Vasogenic theory," and "hypo perfusion/ischemic theory," also called the "Cytotoxic theory" without hypertension. It is thought that patients with chronic hypertension have hypertrophic artery walls (including in the CNS), causing reduced permeability of the blood-brain barrier. Patients with preeclampsia do not have this compensatory effect and even small increases in blood pressure, can cause them to respond with increased permeability of the blood-brain barrier. The above theory may be relevant in our patient's condition since blood pressure had been normal throughout the pregnancy as per her records. Blood pressure was seen elevated for the first time in relation to the birth which was anticipated due to advanced labor.

MRI FLAIR remains the gold standard imaging modality for early diagnosis and prompt management to avoid irreversible neurological consequences.

Recent study showed PRES predominance amongst younger (<25 years) age group. 56% of PRES eclampsia patients had no comorbidities and pregnancy-associated risk factors, and only 28% had preeclampsia. Blood pressure fluctuations were found to be more causal of the event rather than a sudden rise.⁴

If treated and managed promptly with gradual lowering of blood pressure, anti-epileptics, diuretics and close

monitoring of GCS, PRES is a reversible condition. However delayed treatment may lead to multiple secondary complications, like status epilepticus, ICH and infarcts.

Conflict of interest: The authors have no conflict of interest

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