Eastern Green Neurosurgery Case Report

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Posterior Reversible Encephalopathy Syndrome During Term Pregnancy- Case Report

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Posterior reversible encephalopathy syndrome (PRES) or reversible posterior leukoencephalopathy syndrome (RPLS) is a rare clinic-neuro-radiologically diagnosed disease in pregnant women. Other clinical conditions causing PRES include hypertensive encephalopathy, renal failure, autoimmune disorders and treatment with immunosuppressant or cytotoxic medications. Uncommon clinical conditions include acute intermittent porphyria and cryoglobulinemia.This syndrome is also known as reversible posterior cerebral oedema syndrome or posterior leukoencephalopathy syndrome. Clinical features include headache, encephalopathy, seizures, cortical visual disturbances or blindness and parieto-occipital white matter changes on neuroimaging. We report a 21-year-old primigravida who presented to us at term pregnancy with seizures, altered sensorium, and hypertension, which was later diagnosed to be PRES and was successfully managed.

Key words: Hypertensive Encephalopathy, Posterior reversible encephalopathy syndrome, Pregnancy, Seizure.

A 20-year-old primigravida at 40+ weeks of gestation, weighing 60 kg, presented with complaints of altered sensorium with Glasgow Coma Scale (GCS) of Eye 1, Motor 5, Verbal 2(8/15) and history of one episode of seizure. There was no past history of hypertension, cardiac diseases, seizures or other medical illness. Her Blood pressure was 140/110 mmHg with a heart rate of 120 beats per minute. Her respiratory rate was 22 breaths per minute and chest was clear on auscultation. Her oxygen saturation was 98% in room air. Pupils were equal and reactive to light. Other system examinations were normal. Complete blood count was within normal range (Hb of 10.8 g/dl). The renal function test, liver function tests, clotting parameters and electrocardiogram were normal. Urine analysis revealed proteinuria of 1+.

A provisional diagnosis of Eclampsia was made and she was immediately shifted for an emergency caesarean section. She was intubated and induction done using thiopentone and succinylcholine. Anaesthesia was maintained with oxygen and isoflurane. Intraoperative hypertension was managed with invasive blood pressure monitoring and with intravenous labetalol. A 3.2-kg, normal-birth weight baby was extracted and transferred to a neonatal intensive unit for low oxygen saturation. Patient was made painless with 150 µg of fentanyl. A total 1000 ml of Ringer's lactate was infused during whole surgery. Urine output was 200 ml in total 1 hour duration of surgery. Postoperatively, she was shifted to an intensive care unit (ICU) for planned mechanical ventilation and invasive monitoring. Her treatment included MgSO4 infusion, amlodipine, Labetelol, frusemide and mannitol. Neurology evaluation was done postoperatively and computed tomography (CT) brain was obtained which revealed an intra-axial hypodensity involving predominantly white matter regions of bilateral parieto-occipital lobes, right frontal lobe (Figure 1 A, B). She was extubated after her Glasgow Come Scale (GCS) and ventilatory parameters improved on her second postoperative day. On the third postoperative day, there was complete recovery of with GCS 15 and

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she was shifted to a Step Down Unit. Rest of her hospital stay was uneventful till discharge.

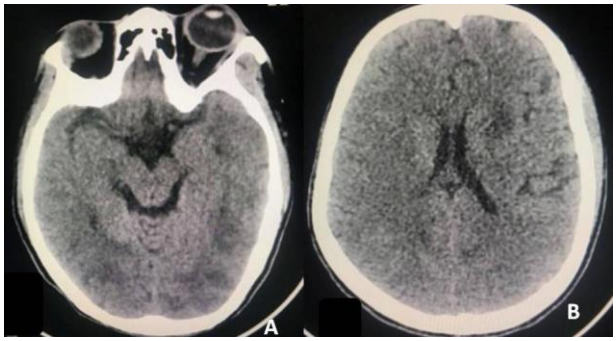

Figure 1: (A, B) Plain CT scans of head showing intra-axial hypo-densities over bilateral parieto-occipital lobes and Left caudate head.

Discussion

Posterior reversible encephalopathy syndrome (PRES) is a reversible neurologic syndrome which may present with variety of symptoms ranging from headache, altered mental status, seizures, and vision loss to loss of consciousness.[1] The diagnosis of PRES is mainly based on clinical and radiological finding of the patient. PRES, though being rare medical condition it may present during the period of pregnancy. This syndrome may occur from 28 weeks of gestational age to day postpartum.[2,3] The certain cause of this syndrome is controversial but well understood theory behind this is cerebral blood perfusion abnormalities by blood brain barrier dysfunction resulting cerebral vasogenic edema.[4]The signs and symptoms of PRES consist of headache, nausea/vomiting, consciousness impairment, seizures, visual abnormalities, and focal neurological signs. Consciousness impairment may range in severity from confusion, lethargy, somnolence or coma. In PRES, consciousness impairment has been reported in 13 % to 90% of cases.[5, 6] Seizure may occurs in up to 92 % of cases of PRES.[7] Early diagnosis of the disease may prevent long-term squeal of PRES. An increasing awareness of the clinical and radiographic presentation is required for timely diagnosis and prevention of short-term and long-term sequelae arising from PRES. Most of time symptomatic management of the Patients with PRES is carried out in the ICU. Patients with gross consciousness impairment or seizure in cluster may need endotracheal intubation. Hypoglycemia should be checked and corrected well. Other metabolic disturbances should be checked and corrected abruptly. Antiepileptic should be started if repeated seizure attacks observed in postpartum period.

Early diagnosis of the disease and quick response to it may result complete recovery but delayed diagnosis and treatment may lead to status epilepticus, cerebral infarction, cerebral hemorrhage or even death in some cases.[4,8]

Conclusion

Every postpartum case with seizure and altered consciousness level should be evaluated thoroughly for PRES in order to save the patient from delayed complications. Early recognition of the disease and treatment may give the patient full recovery. Our patient was managed well due to early detection resulting her recovered fully. She was discharged on her 10th post operative day together with healthy baby.

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