

A Case of Posterior Reversible Encephalopathy Syndrome

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Abstract

Posterior reversible encephalopathy syndrome is a condition characterised by headache, confusion, seizures and visual disturbances. This can occur in high blood pressure and eclampsia. Magnetic resonance imaging is the gold standard. Usually the symptoms tend to resolve after a period of time. It was first described by Hinchey in 1996. We had a 22-years-old primi that has delivered a caesarean section and developed blood pressure, vomiting, altered mental orientation, visual disturbances and no neurological signs. Later on she developed seizures. The diagnosis was made by Magnetic Resonance Imaging and treated. She was discharged home without any neurological deficit.

Keywords: Headache, Magnetic resonance imaging, Posterior reversible encephalopathy syndrome, Postpartum eclampsia, Seizures

INTRODUCTION

Posterior reversible encephalopathy syndrome is a clinicoradiologic syndrome wherein we get patients to have medical hypertension and eclampsia. It doesn't have any particular age group predilection. Radiological findings plays immense role for its diagnosis. Earlier recognition is mandatory since it possess high risk of mortality. As the name suggest it resolves within one or two weeks when appropriate cause is treated.

CASE REPORT

A 22 years old, pregnant lady with oligohydramnios (diminished liquor) at term got admitted for safe confinement. No other relevant medical or surgical past history. Her blood pressure was normal. All investigations were normal. She underwent elective caesarean delivery due to oligohydramnios and foetal distress and delivered an alive female baby weighing 2.5 kg. Patient had fever on her first post operative day. Urine culture was sent. Simultaneously, she was started with antibiotics. On her fifth post operative

day, she developed sudden loss of vision, headache, vomiting, increase in blood pressure and developed seizures. Her blood pressure was 140/100 mm Hg. Urine albumin was negative. She had no pedal edema. The triad of preeclampsia is high blood pressure, proteinuria and edema. We started her on magnesium sulphate and she was treated as "postpartum eclampsia". Fundus examination was normal. She was disoriented, started throwing fits inspite of our treatment, medical opinion was sought. A diagnosis of posterior reversible encephalopathy syndrome was made and confirmed by Magnetic Resonance Venography (MRV) (Figure 1) and Magnetic Resonance Imaging (MRI) (Figure 2) showing abnormal intense signal lesions in brain predominantly in gray matter of both occipital gyri. Injection phenytoin intravenously and diazepam were given. She was treated with anti-edemal measures, anti-biotics, anti-convulsants, ulcer protectors and other supportive measures. After treatment her blood pressure became normal. She was conscious, well oriented, motor function and vision became normal without any neurological deficit at the time of discharge. She came for review with her 8 months old baby. She was doing well.

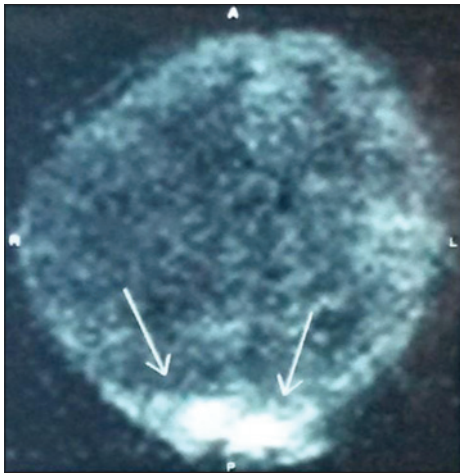


Figure 1: Abnormal intense signal in occipital region in MRV

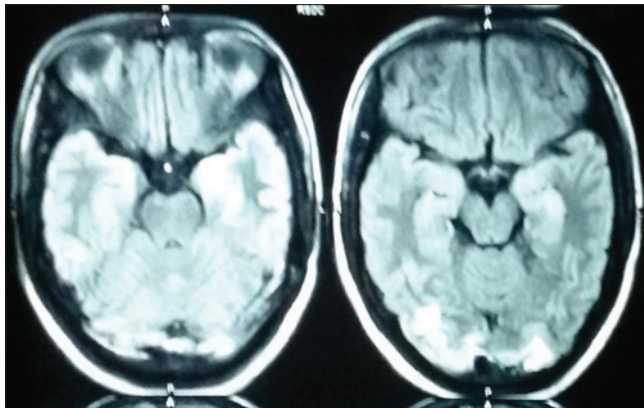


Figure 2: Hyperintense signal in occipital and parietal region in MRI

DISCUSSION

In pregnancy when there is high blood pressure, edema, and proteinuria it is called preeclampsia, when not treated leads to complication eclampsia, where the patient develops seizures. Especially when the pregnant patient throws fits, unless otherwise proved, it is treated as eclampsia. After the delivery when the patient has headache, vomiting, blurring of vision and throws fits, it is called postpartum eclampsia. The differential diagnosis for postpartum eclampsia are epilepsy, meningitis, cerebral tumour, tuberculoma, head injuries, cerebral venous thrombosis, adrenal crisis, hypoglycaemia, gestational trophoblastic diseases, systemic lupus, strychnine poisoning, cerebral malaria, and posterior reversible encephalopathy syndrome (PRES). Our patient, thanks to the physicians, diagnosed as PRES because she had headache, vomiting and altered mental status, with characteristic MRI showing white and grey matter edema¹ and intense signal in both occipital lobes. The development of PRES is associated

with preeclampsia, hypertension, immunosuppressive drugs, renal failure, lupus and HELLP syndrome (haemolysis, elevated liver enzymes, low platelet count).² PRES was first described by Hinchey in 1996. Even normo-tensive patients can develop PRES when there is an acute increase in BP. Permanent blindness and motor dysfunction can also occur. Management needs Intensive care unit. There should be no rapid reduction of blood pressure. When preeclampsia is related to PRES, labour induction or caesarean is done. As the Angiotensin converting enzyme inhibitors are contraindicated in pregnancy, magnesium sulphate is used here. The effect of magnesium sulfate in the prevention and treatment of eclampsia likely is multifactorial.³ Intensive ventilation and i.v Lorazepam is recommended. There is accumulating evidence to suggest a possible role for potent glucocorticoids as treatment along with magnesium sulfate and blood pressure control in pregnant patients with PRES/eclampsia.⁴ The main management should be withdrawal of the triggering factor. The exact etiology, pathogenesis and the clinical scenario of PRES still remains vague.⁵ Recurrence is possible.⁶ The MRI is a gold standard, so lumbar puncture is not needed. More rigorous management of hypertension, as is currently recommended for patients with posterior reversible encephalopathy syndrome, should be applied to all women with severe preeclampsia or eclampsia.⁷ Although reversible by definition early recognition and prompt treatment is essential to prevent secondary complications like intracerebral hemorrhage and infarction.⁸ This case has been reported not only because of its rarity but also to know the existence of such a clinical entity and sought out its management as a team.

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