

Case Report: A Rare Case of Subarachnoid Hemorrhage in a Patient of Postpartum Eclampsia

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Abstract: *Cerebrovascular accident during hypertensive disorder of pregnancy is a rare entity, but carries high risk of mortality and morbidity due to its unpredictable onset and late diagnosis. Here, we report an unusual near miss case of eclampsia in a postpartum woman with intracranial haemorrhage requiring decompressive craniotomy.*

Keywords: Intracranial haemorrhage (ICH), Eclampsia, Sub arachnoid haemorrhage, Glasgow Coma Scale (GCS), Hypertensive Disorders of Pregnancy (HDP).

1. Introduction

Eclampsia is defined as a convulsion in a woman with pre-eclampsia that is not attributable to any other cause, seizures are generalised and may appear before, during or after labour. Intra cranial haemorrhage (ICH) is a rare complication in preeclampsia and the incidence is about 3.5 to 26 per 1, 00, 000 deliveries. It is associated with high maternal mortality and estimated to be around 9 - 38%. Early and prompt diagnosis of ICH in pregnancy and timely intervention are associated with decreased maternal as well as perinatal morbidity and mortality. Timely intervention may require multidisciplinary approach. WHO defines maternal near miss case as "a woman who nearly died but survived a complication that occurred during pregnancy, childbirth or within 42 days of termination of pregnancy". Herein we report a near miss case of eclampsia in a postpartum woman with ICH requiring decompressive craniotomy.

2. Case Report

A 32 year old Para2Live2, day 1 post caesarean section patient was brought to emergency department with complaints of sudden onset of aphasic state. As per history narrated by attendants patient had a normal antenatal care till 3 days back then she was diagnosed with preeclampsia and was started on Tab. labetalol 100 mg 8 hourly. She underwent elective cesarean section 24 hours back in view of second gravida with full term pregnancy with previous cesarean section with preeclampsia, after 5 hours of cesarean

section - she developed an episode of generalized tonic-clonic type of convulsions - which was successfully managed with injection magnesium sulphate as per recommendations for eclampsia management. Patient underwent NCCT head for altered sensorium and not obeying commands, which was suggestive of intraparenchymal bleed of average 4.5x3.8x4.3cm (approx 36cc) in left frontal lobe with significant peri regional edema with midline shift of 8mm towards right, along with subarachnoid haemorrhage along the sulci - gyral spaces of frontoparietal lobe. Patient was referred to our hospital which is a tertiary care centre for further management. On examination, patient was drowsy and her vitals were as follows: pulse rate: 68beats/min, blood pressure: 100/70 mm Hg, oxygen saturation: 98%, GCS OF 11/15 (E4V1M6), pupils were bilateral equal size and reactive to light, moving all four limbs. Obstetrical examination revealed uterine size corresponding to 22 weeks of gravid uterus consistent with postpartum state. All the relevant investigations like platelet count, liver and renal function test were normal.

Neurosurgery opinion was taken and Patient was immediately shifted for left frontoparietal decompressive craniectomy with evacuation of left frontotemporal hematoma. Post craniotomy patient was given ICU care with IV antibiotics and inj. Levetiracetam, inj. Mannitol and tab. Labetalol. During the course patient developed hemiparesis on right side of the body and was advised regular physiotherapy and speech therapy. Patient entirely recovered with no motor or sensory loss.

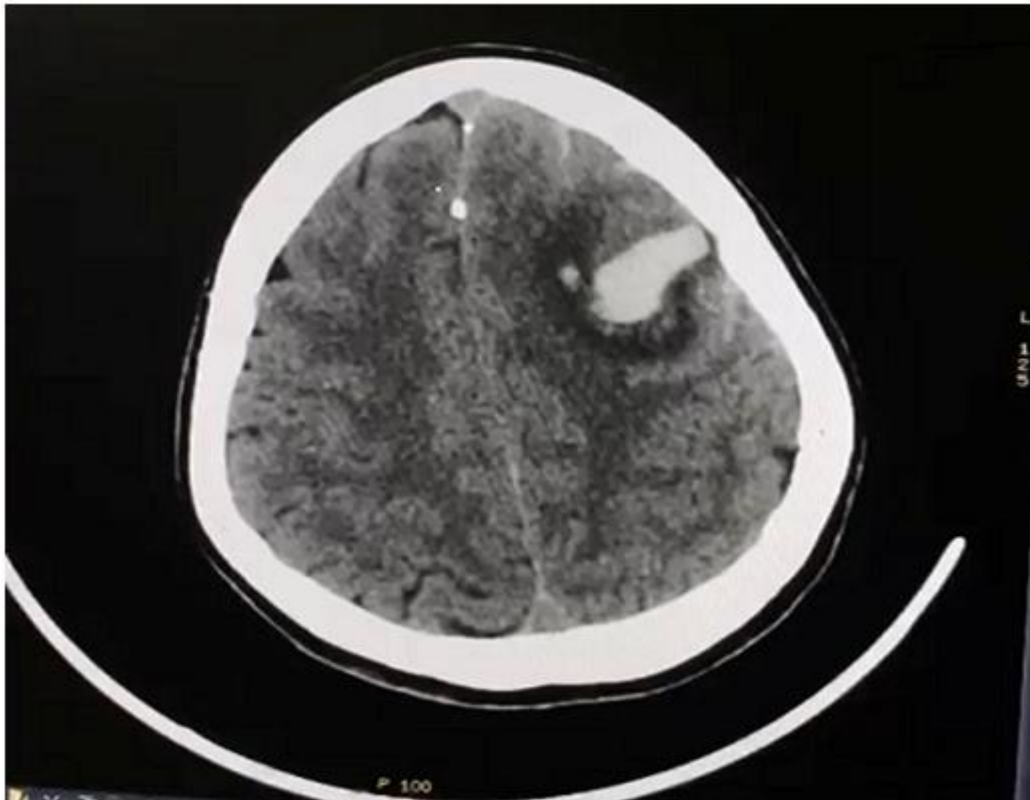


Figure 1: NCCT head showing intraparenchymal bleed & midline shift .

3. Discussion

Pregnancy related stroke comprises both ischemic and hemorrhagic related causes Hemorrhage accounts for up to 38% of cases.¹ The main cause for ICH is aneurysmal subarachnoid hemorrhage , rupture of arteriovenous malformations (AVM) is the next most common cause.² Less frequent less frequent causes of ICH in pregnancy include preeclampsia /eclampsia, coagulopathy, trauma and cerebral venous thrombosis. Intracranial hemorrhage is a rare complication during pregnancy and postpartum period, but potentially fatal, which contributes significantly to maternal mortality. One of the recent studies has suggested that ICH may be responsible for up to 7.1 % of all maternal mortality.³The data are conflicting about the whether the risk of ICH is increased throughout pregnancy but some studies show that the risk is increased during third trimester especially during parturition and immediate postpartum.⁴ Preeclampsia is characterised by hypertension with blood pressure >140/90 mmhg and proteinuria >300mg/day. Preeclampsia can often cause neurological symptoms such as headache, visual disturbances and rarely impairment of consciousness also. eclampsia is the occurrence of seizures in the context of preeclampsia. Major cerebrovascular changes in eclampsia are similar to those of hypertensive encephalopathy i. e edema and state of cerebral hyper perfusion which are mainly seen in posterior parietal and occipital lobe.⁵ Generally these features are evident as posterior reversible encephalopathy syndrome (PRES) on imaging and are reversible. ICH has been found in up to 40 % of patients with eclampsia in autopsy series.⁶ But haemorrhage is because of increased cerebrovascular resistance and loss of cerebral autoregulation. Haemorrhage may be extensive or petechial. only early diagnosis and management improves the outcome in these cases. This

unique case represents that timely diagnosis and multidisciplinary approach for management of ICH in eclampsia patients can decrease the mortality and morbidity associated with it, especially in developing countries.

4. Conclusion

Intracranial haemorrhage can occur as a consequence of hypertensive disorders of pregnancy especially preeclampsia and eclampsia and is an emergency requiring early diagnosis as well as intervention with multidisciplinary approach. Hence, all women having high risk for HDP or having HDP should be encouraged for institutional delivery with ICU set up.

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