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## Posterior Reversible Encephalopathy Syndrome in Pregnancy.

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### ABSTRACT

We report a case of a 24 year old primi patient presented with generalized clonic tonic seizures and high blood pressure. A number of clinical scenarios can present with similar symptomatology, which poses a great challenge. Here we report a case which on evaluation turned out as posterior reversible encephalopathy syndrome (PRES). It is gaining more and more importance as timely diagnosis and proper treatment results in complete recovery without any permanent neurological sequelae.

**Keywords:** encephalopathy, pregnancy, seizures

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## INTRODUCTION

Albeit a rare condition, Posterior Reversible Encephalopathy Syndrome (PRES) is commonly reported in association with preeclampsia and eclampsia. The typical features of PRES consist of impairment of consciousness, seizure activity, headaches, visual abnormalities, nausea/vomiting, and focal neurological signs. Consciousness impairment may range in severity from confusion, somnolence, and lethargy to encephalopathy or coma. Consciousness impairment has been reported in 13 % [14] to 90 % [8] of cases. Seizure activity occurs in up to 92 % of cases [7]. The seizures are rarely isolated (23 %-28 %) [7, 8]. Secondary generalized seizures are common (53–62 %) [3, 8]. MRI is the investigation of choice. MRI shows symmetrical white matter edema in posterior cerebral hemispheres, particularly in parieto-occipital regions. With treatment, resolution of findings occurs within days to weeks.

### CASE REPORT:

A 24 year old primigravida belonging to socioeconomic class - 2 whose gestational age - 29weeks & 4days (according to LMP) and gestational age - 27 weeks & 6days (according to USG) presented to the emergency labour room with history of convulsions 3episodes . Patient with 7 months of amenorrhoea Booked & immunised in a private hospital, where first and second trimester was uneventful. Patient had H/O headache followed by which she had first episode of generalised clonic tonic seizure seizure at home lasting for 1 min ,H/O LOC not known but patient did not respond to commands. Patient had rolling over of eye balls , there was no tongue bite. Patient was taken to a private hospital , there Patient had second episode of seizure lasting for 1-2 mins. Patients's BP was 190/110 mm Hg, Heart rate was 112 beats per minute, And then patient was referred to our institution for further management. Patient had third episode of seizure lasting for 1 minute with LOC and rolling over of eye balls.

Patient was given Inj labetalol 10mg IV stat followed by infusion at a rate of -1-2 mg per kg per hour and Inj Phosphenytoin 750mg IV stat in the emergency room On Examination Patient was drowsy ,Afebrile No neck rigidity, Both pupils were normal & reacting to light

BP-140/100 mmhg  
PR-104/min  
Spo2- 93% in room air  
Capillary blood Glucose- 204 mg/dl

Cardiovascular and Respiratory system was normal

Per Abdomen – Uterus corresponds to 28 weeks gestation, relaxed, not tense, not tender, fetal parts felt, fetal heart rate-178 beats per minute

Per Vaginum- cervix uneffaced , os closed, no bleeding p/v.

Laboratory investigations revealed normal urine routine, Complete Blood Count, Liver Function Test, Renal Function Test, Serum electrolytes and coagulation profile. Patient was treated with general supportive measures and Inj Mgso4 4mg slow IV given . Following Mgso4 5mg IM in each gluteal region.

Patient was restless, not oriented, irritable, her BP was 150/110mm Hg and HR was 100/min. per Abdomen –uterus was tense & tender ,Mild Bleeding per vagina was present.

In view of repeated seizures antepartum eclampsia worsening with abruptio placenta/ not in labour, patient was taken up for emergency LSCS under GA, assessed under ASA II E. LSCS done and a Preterm male baby weighing 700gms was delivered ,baby was resuscitated and shifted to NICU

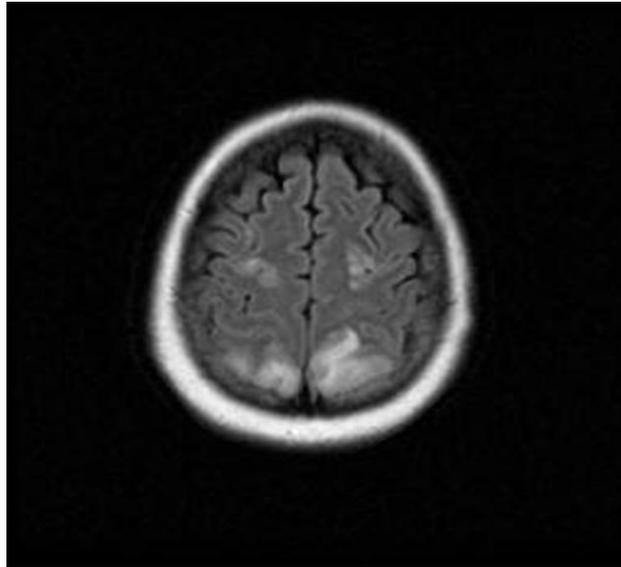
Intra op uterine findings- **100 gms of Retroplacental clot was present.**

Patient found haemodynamically stable,BP-130/90 MM HG,HR-94 per minutes,Urine output was 100 ml,clear.

Patient extubated fully awake, responding to oral commands, reflexes intact. and shifted to ICU for post operative management, Inj LABETALOL infusion Continued, BP was maintained < 130/90mmhg

Neurologist opinion obtained, advised EEG & MRI

MRI revealed **Bi lateral Parieto occipital hyperintensity consistent with POSTERIOR REVERSIBLE ENCEPHALOPATHY SYNDROME.**



1<sup>st</sup> Post operative day –inj midazolam, inj fentanyl, inj mgso4 ,inj labetalol was tapered & stopped.

2<sup>nd</sup> Post operative day-Patient was switched over to oral Tab labetalol 50mg BD & Tab Phosphenytoin 150mg TDS

Patient's Phosphorus value was 6.95 mg/dl & patient was started on tab Phostat 667 mg BD

Ophthalmologist's opinion was obtained – fundus examination was normal

Repeat MRI was done after 5 days – No significant abnormality

Patient was discharged after 2 weeks of hospital stay with tab nifedipine 10mg BD...

#### DISCUSSION

Posterior reversible encephalopathy syndrome (PRES) [1, 2] is a clinico-radiological entity that was well described by Hinchey et al. [3] in 1996 based on 15 cases, shortly after two other small case-series were published [4, 5]. This condition has been designated by a variety of names (reversible posterior leukoencephalopathy syndrome, reversible posterior cerebral edema syndrome, and reversible occipital parietal encephalopathy).

Triggers and associated conditions include Acute hypertension, Acute kidney injury, Eclampsia Sepsis, multi-organ failure, Autoimmune disease, Immunosuppressive drugs (tacrolimus, cyclosporine, chemotherapy) Illicit drugs (cocaine), Organ transplantation, Chronic hypertension and Chronic kidney disease.

Radiological features:

Most commonly there is vasogenic edema within occipital & parietal regions (95%) relating to posterior cerebral artery supply

Edema is usually symmetrical

Imaging patterns

- Holohemispheric at watershed areas
- Superior frontal sulcus
- Parieto-occipito dominance

Other uncommon patterns - <5% - purely unilateral central

### CONCLUSION

**PRES is a completely reversible hypertensive emergency.**

It progresses from reversible vasogenic edema – irreversible ischemic damage & irreversible neurological sequelae if prompt treatment is not provided.

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