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Diagnostic Dilemma in Severe Preeclampsia with Posterior Reversible Encephalopathy Syndrome and Neurocysticercosis in a Primigravida

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Abstract: ***Seizures after 20 weeks of gestation are often presumed to be eclamptic. However, alternative etiologies such as neurocysticercosis (NCC) and Posterior Reversible Encephalopathy Syndrome (PRES) must be considered, particularly in atypical presentations. We report a rare case of a 23-year- old primigravida with severe preeclampsia and IUGR at 35+4 weeks who developed seizures post- LSCS. MRI revealed dual pathology-PRES and NCC-highlighting diagnostic challenges and the importance of multidisciplinary management.***

Keywords: Preeclampsia, PRES, Neurocysticercosis, Seizures, Pregnancy

1. Introduction

Hypertensive disorders complicate 5–10% of pregnancies. PRES, a neuro-radiological entity, is frequently associated with hypertensive encephalopathy and eclampsia. Neurocysticercosis, caused by Taenia solium, is a major cause of seizures in endemic regions. Coexistence of PRES and NCC during pregnancy is extremely rare, increasing diagnostic complexity and influencing management.

2. Case Presentation

Patient Demographics

23-year-old primigravida
Gestation: 35+4 weeks
Presented with headache, vomiting, and hypertension (BP 152/96 mmHg)

Antenatal History

Unbooked at current centre
Bleeding episode at 8 months-managed conservatively
Fever and headache during third trimester
No history of epilepsy, TB, asthma, or thyroid disorders

Examination & Investigations

Vitals & General Examination
BP: 152/96 mmHg
PR: 86 bpm
Grade 1 pedal edema
Obstetric Examination
Uterus: 34 weeks' size
Cephalic presentation
Fetal heart rate: 150 bpm
Cervix: Closed and uneffaced

Investigations

Test	Result	Interpretation
Hemoglobin	11.3 g%	Normal
Platelets	1.9 lakh/cumm	Normal
Urine albumin	3+	Severe proteinuria
LFT	Mildly deranged	End-organ effect
LDH	321 IU/L	Elevated
USG IUGR (EFW 7th percentile)	AFI 5.4 cm	Oligohydramnios

Clinical Diagnosis & Initial Management

Initial diagnoses included severe preeclampsia, IUGR, and oligohydramnios. An emergency LSCS was performed due to maternal and fetal compromise. Intraoperative findings revealed a retroplacental clot, suggestive of abruptio placentae. Baby was delivered with RDS and shifted to NICU.

Postoperative Course & Neurological Events

The patient developed persistent fever and recurrent seizures postoperatively. Initial management with IV Labetalol and $MgSO_4$ was inadequate; hence neurology consultation was sought. Additional treatments included IV Levetiracetam, Phenytoin, and Mannitol. Fundus examination revealed left disc edema, indicating raised ICP.

Neuroimaging Findings

MRI Brain showed:

T2/FLAIR hyperintensities in bilateral frontal and parieto-occipital lobes and right cerebellar hemisphere → PRES

Left parietal lesion with rim enhancement and central hyperintensity → Neurocysticercosis

3. Final Diagnosis

- PRES secondary to severe preeclampsia
- NCC as co-existing CNS infection
- Dual etiology of seizures

4. Outcome

The patient responded to antiepileptics and antihypertensives. BP stabilized, seizures subsided, and she was discharged with Levetiracetam and Amlodipine. Follow-up with neurology was advised.

5. Discussion

PRES is a reversible condition commonly associated with preeclampsia/eclampsia. NCC remains an important differential diagnosis for seizures in endemic regions. Persistent postpartum seizures warrant immediate neuroimaging. Coexistence of PRES and NCC complicates diagnosis and management, necessitating multidisciplinary evaluation and care.

Key Learning Points

Not all seizures in pregnancy are eclamptic.
PRES is reversible with early diagnosis.
NCC should be considered in endemic areas.
MRI is essential for atypical neurological presentations.
Dual pathology can exist and requires comprehensive workup.

References

[1] Hinchey J, et al. A Reversible Posterior Leukoencephalopathy Syndrome. N Engl J Med. 1996.
[2] García HH, Del Brutto OH. Neurocysticercosis: updated concepts. Lancet Neurol. 2005.
[3] Bartynski WS. PRES: imaging and features. AJNR. 2008.
[4] Ghosh R, Dubey S. Neurological complications of preeclampsia/eclampsia. Neurol India. 2020.
[5] Singh G, Burneo JG. Neurocysticercosis: global perspective. Semin Neurol. 2012.

Figures, Tables, Flowchart (with Legends)

Table 1: Summary of Laboratory Findings
(Already shown above; legend retained.)

Figure 1: MRI Findings in PRES
Legend: T2/FLAIR images showing bilateral frontal and parieto-occipital hyperintensities typical of PRES.

Figure 2: MRI Findings in NCC
Legend: Left parietal lesion with rim enhancement and central hyperintensity consistent with neurocysticercosis.

Flowchart 1: Clinical Course of the Patient
1. Presentation → 2. Diagnosis of Severe Preeclampsia → 3. Emergency LSCS → 4. Post-op Se.