Peri-Cesarean Seizure in a High Risk Parturient

Luke Johnson, Benjamin Andre MD, Shilen Thakrar, MD, MSHA

31F G1P0, 32w5d, triplet gestation; Pre-eclampsia w/ severe features → C-section (neuraxial)

❖ **Intraoperative Event**
- Minutes after delivery → acute visual loss (“eyes closed”)
- Unable to track movement across visual field
- Generalized tonic–clonic seizure (~1 min)

❖ **Vitals / Monitoring**
- Normotensive pre-seizure
- Postictal SBP ~140s (arterial line placed)

❖ **Management**
- Midazolam 1 mg + Mg 6 g → seizure resolved
- Continued Mg infusion (2 g/hr)
- Airway support + positive-pressure ventilation

❖ **Postictal Course**
- Prolonged postictal state, reactive but disconjugate pupils
- CT considered → deferred (clinical improvement)

❖ **Outcome**
- Neuro exam: no focal deficits
- Returned to L&D: AOx4

Differential Diagnosis

Takeaway

Peri-cesarean seizures → **Eclampsia vs PRES vs LAST**

Visual symptoms + Mg onboard → think PRES vs atypical eclampsia

✓ **Eclampsia**
- Can occur despite magnesium therapy
- Mechanism: BBB disruption → neuronal excitability
- Mg = NMDA antagonism, but **breakthrough seizures possible**

✓ **PRES**
- **Visual symptoms = key clue** (occipital involvement)
- Consider with transient hypertension + seizure
- Often **reversible**
- MRI confirmatory but may not be needed if rapid resolution

✓ **LAST (Less Likely)**
- Dose within safe limits (bupivacaine + lidocaine)
- No prodrome (tinnitus, metallic taste, agitation)
- No cardiovascular instability
- Resolved without lipid therapy

✓ Other (metabolic/acid-base/electrolytes)

References

1. ACOG Practice Bulletin No. 222: Gestational Hypertension and Preeclampsia. Obstet Gynecol. 2020;135(6):e237-e260.

2. Edlow JA, Caplan LR, O'Brien K, Tibbles CD. Diagnosis of acute neurological emergencies in pregnant and post-partum women. Lancet Neurol. 2013;12(2):175-185.

3. Fugate JE, Hawkes MA, Rabinstein AA. Posterior reversible encephalopathy syndrome: evolving insights in diagnosis, management, and outcomes. Lancet Neurol. 2025;24(9):789-800.

4. Cao D, Arens AM, Chow SL, et al. Part 10: Adult and Pediatric Special Circumstances of Resuscitation: 2025 American Heart Association Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiovascular Care. Circulation. 2025;152(16*suppl*2):S578-S672.

5. Ives CW, Sinkey R, Rajapreyar I, Tita ATN, Oparil S. Preeclampsia-Pathophysiology and Clinical Presentations: JACC State-of-the-Art Review. J Am Coll Cardiol. 2020;76(14):1690-1702.