ECLAMPSIA

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PRESENTING COMPLAINT: Generalized tonic-clonic seizure or coma after 20 weeks of gestation and up to 3 weeks postpartum.

FINDINGS

- **A** Consider intubation for airway protection
- **B** Hypoxia
- **C** ↑ BP (mother), ↓HR (fetus) during seizure
- **D** Variable altered (V,P,U,D)*
- **E** Neurological excitability (brisk deep tendon reflexes and clonus)
- **U_{PC}** Intrauterine growth retardation
- **L_{PC}** ↓Platelets, ↑Cr, ↑BUN

  Other labs: Urine: Protein, ↑AST, ↑ALT, ↑Bilirubin, ↑LDH

***V** (verbal), **P (**pain), **U** (unconsciousness), **D** (delirious)

U_{PC} (point of care ultrasound) **L_{PC}** (point of care labs)

OTHER HISTORY

Signs & Symptoms: SBP>140 mmHg and/or DBP>90, visual symptoms before onset; neurological excitability(brisk deep tendon reflexes and clonus) before onset; Seizure;

- **Predisposing conditions:** preeclampsia, hypertension, kidney disease, obesity, gestational diabetes
- **Differential Diagnosis:** ruptured aneurysm, thrombotic thrombocytopenic purpura [TTP], hemolytic uremic syndrome [HUS], HELLP syndrome, cerebral venous thrombosis, molar pregnancy, stroke, brain tumor, metabolic abnormalities (e.g., hypocalcemia, hyponatremia, hypoglycemia), toxins (drug or alcohol withdrawal, drug intoxication), infection (meningitis, encephalitis, sepsis), or recent head trauma.

THERAPEUTIC/ DIAGNOSTIC INTERVENTIONS

2) MANAGEMENT

- **Initial Actions**

  - Airway protection: may need to consider intubation and mechanical ventilation if convulsions are prolonged or for mental status deterioration that is not conducive to airway protection)
  - Oxygenation: O_2, pulse oximetry, arterial blood gas assessment
  - Access: ensure adequate IV access. Preferrably two large bore IVs.
  - **Stop convulsions:** Magnesium sulphate.
    MgSO4 should be administered as per the pre-eclamptic regimen; Loading dose: 6 g IV over 20-30 min (6 g of 50% solution diluted in 150 mL D_5W); Maintenance dose: 2-3 g IV per hour (40 g in 1 L D_5LR at 50 mL/h);
  - Recurrent seizures: Reload with 2 g over 5-10 min, 1-2 times and/or 250 mg sodium; amobarbital IV
  - Diazepam, lorazepam, or phenytoin may be used if seizures persist
  - Control blood pressure (Goal SBP 140-160, DBP 90-110; risk of poor perfusion to fetus if too low)
  - Move toward delivery (corticosteroids if < 30 weeks and stable condition)
- **Evaluation**
  - With prolonged seizures neuro-imaging is warranted to diagnose intracranial pathology which may influence management decisions.
  - If the seizure occurs antenatally or intra-partum, fetal delivery should be expedited by Caesarean section once the patient is stabilized.

3) CAUTIONS

- Patients receiving MgSO4 are at increased risk for postpartum hemorrhage due to uterine atony. This should be anticipated and steps should be taken to ensure availability of crossmatched blood, if the need arises.
- Monitoring patients for potential signs of magnesium toxicity should be done throughout the course of administration; this includes eliciting deep tendon reflexes, assessing mental status, and checking respiratory rate.

4) REFERENCES & ACKNOWLEDGMENT

Acknowledgment: *Hajrunisa Cubro, MD*

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