Learn simply

Eclampsia

Passion profession same

Confirm the diagnosis[1,2]

Initial management of a witnessed seizure[3]

- **Maintain maternal vital signs and protect her airway**
- Document fetal well-being
- √ stat CBC, T&S, coagulation studies
- Consider urgent MFM, NICU, anesthesia consultation
- Evaluate for other features of preeclampsia with severe features[4]
- Admit to Labor and Delivery

Nonreassuring fetal testing

- **Resuscitate the fetus *in utero***[6]
- √ ultrasound to confirm fetal viability, document gestational age, and exclude large placental abruption

Persistent nonreassuring fetal testing

Consider emergency cesarean delivery

Fetal testing reassuring

Fetal well-being confirmed

- Continuous fetal monitoring
- √ ultrasound to document gestational age, and exclude large placental abruption
- **Prevent recurrent seizures**[5]
- **Antenatal corticosteroid administration if <34 0/7**
- Administer GBS chemoprophylaxis, if indicated
- Control BP[7]
- *Consider head imaging*[8]

Evaluate for immediate delivery regardless of gestational age[9]

1. Eclampsia is defined as the presence of new-onset grand mal seizures in a woman with preeclampsia in the absence of other neurologic explanations. It is one manifestation of preeclampsia with severe features Symptoms that may predict impending eclampsia include persistent occipital or frontal headaches, blurred vision, photophobia, epigastric or right upper quadrant pain, and altered mental status.

2. Eclampsia is an obstetric emergency. Both the fetus and the mother are at immediate risk of death or life-long neurologic disability.

3. Major maternal complications include placental abruption (10%), HELLP syndrome (10%), DIC (5%), neurological deficits and aspiration pneumonia (5-10%), pulmonary edema (5%), cardiopulmonary arrest (1–5%), acute renal failure (1–5%), and maternal death (1%). In developed countries, the reported incidence of eclampsia ranges from 1 in 2000 to 1 in 3500 pregnancies.

4. Eclampsia can occur antepartum, intrapartum, or postpartum. The majority of cases (>90%) develop at 28 weeks of gestation or greater. Most cases of postpartum eclampsia occur within the first 48 hours of delivery; however, late postpartum eclampsia can occur up to 4 weeks after delivery.

1. The immediate management of an eclamptic seizure should include maintaining maternal vital functions, controlling convulsions and blood pressure, prevention of subsequent seizures, and evaluation for delivery.
2. If witnessed, the parturient should be rolled onto her left side and a padded tongue blade placed in her mouth to maintain airway patency and prevention of aspiration, which are the first responsibilities of management. The bedside rails should be elevated and physical restraints may be needed. During the convulsive episode, hypoventilation and respiratory acidosis often occur and so it is important to administer supplemental oxygen via a face mask at 8–10 L/min.
3. Other manifestations of preeclampsia with severe features may co-exist with eclampsia, including HELLP syndrome (Hemolysis, Elevated Liver enzymes and Low Platelets), disseminated intravascular coagulopathy (DIC), renal failure, hepatocellular injury, liver rupture, congestive cardiac failure, and pulmonary edema.

1. Transient fetal bradycardia lasting 3–5 min is a common finding after a seizure and does not necessitate immediate delivery.
2. Resolution of maternal seizure activity is often associated with compensatory fetal tachycardia and even with transient fetal heart rate decelerations. These changes usually resolve spontaneously within 3–10 min after the termination of convulsions and the correction of maternal hypoxemia.
3. Every attempt should be made to stabilize the mother and resuscitate the fetus in utero before making a decision about delivery. However, if the bradycardia or recurrent late decelerations persist beyond 10–15 min despite all resuscitative efforts, then a diagnosis of abruptio placentae should be considered
4. The magnitude of BP elevation is predictive of cerebrovascular accident (stroke), but not eclampsia (seizures). The degree of systolic hypertension (as opposed to the level of diastolic hypertension or relative increase or rate of increase of mean arterial pressure from baseline) may be the most important predictor of cerebral injury and hemorrhagic infarction. Acute-onset severe systolic hypertension (>160 mmHg) and/or severe diastolic hypertension (>110 mmHg) should be treated with antihypertensive therapy with the aim of achieving BP of 140–150/90–100 mmHg.
5. First line treatment for the management of acute severe hypertension includes IV labetalol, IV hydralazine, or oral nifedipine. Hydralazine is administered as 5 mg IV push followed by 5–10 mg boluses as needed every 20 min. The initial dose of labetalol is 10–20 mg IV push followed by repeated doses every 10–20 min with doubling doses not to exceed 80 mg in any single dose for a maximum total cumulative dose of 300 mg. The initial dose of nifedipine is 10 mg orally followed by 20 mg orally every 20 min, not to exceed a cumulative dose of 50 mg in one hour.

1. Eclampsia is indistinguishable clinically or by EEG from other causes of generalized tonic-clonic seizures. Not all women with eclampsia require head imaging. However, if the seizure lasts >10 min, is recurrent, occurs postpartum or on seizure prophylaxis, or if there is evidence of localizing neurologic signs, head imaging is indicated. The differential diagnosis includes cerebrovascular accident (intracerebral hemorrhage, cerebral venous thrombosis), hypertensive encephalopathy, space-occupying lesions (brain tumor, abscess), metabolic disorders (hypoglycemia, uremia, inappropriate antidiuretic hormone secretion resulting in water intoxication), infectious etiology (meningitis, encephalitis), thrombotic thrombocytopenic purpura (TTP), and idiopathic epilepsy.
2. Eclampsia is an absolute contraindication to continued expectant management of preeclampsia with severe features. Immediate delivery is indicated regardless of gestational age. However, immediate delivery does not mean cesarean. Induction of labor and attempted vaginal delivery are a reasonable option, but prolonged induction of labor should be avoided. The decision about route of delivery should be individualized based on such factors as parity, gestational age, cervical examination (Bishop score), and fetal status and presentation. Regional anesthesia is preferred for women with eclampsia so long as close attention is paid to volume expansion and anesthetic technique, and there is no thrombocytopenia. Eclampsia always resolves following delivery although this may take a few days to weeks. Diuresis (>4 L/day) is the most accurate clinical indicator of resolving preeclampsia.