ECLAMPSIA

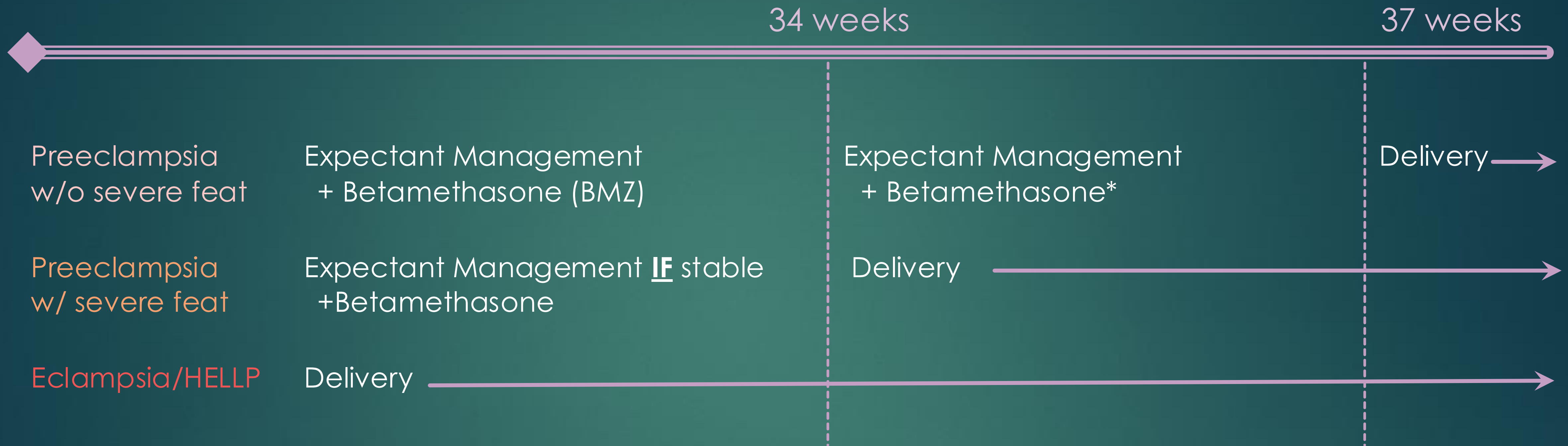
FLAME LECTURE: 106

STELLER 10.12.25

LEARNING OBJECTIVES

- Recognize the signs and symptoms to diagnose eclampsia
- Explain the management of a patient with eclampsia
- Describe the maternal and fetal complications of eclampsia
- See also:
  - FLAME 27 – Chronic HTN in Pregnancy
  - FLAME 104 – Diagnosis of Preeclampsia
  - FLAME 105 – Management of Preeclampsia

QUICK OVERVIEW OF TREATMENT



- Preeclampsia management involves balancing the benefits of continuing the pregnancy for fetal development versus taking on risks of continued HTN and endothelial dysfunction to maternal/fetal health

*Should be offered if no contraindications to BMZ (Gyamfi-Bannerman 2016)

DEFINITIONS

- New-onset Tonic-Clonic, Focal, or Multifocal seizures in patient with preeclampsia
  - Seizures cannot be attributed to another cause (epilepsy, cerebral arterial ischemia, infarction, intracranial hemorrhage, or drug use)
    - These alternative diagnoses should be investigated when these new-onset seizures occur 48-72 hours partum, occur while on therapeutic magnesium, or last longer than 4 minutes
- Patients with preE with severe features are at higher risk
  - Eclampsia occurs in 1.9% of pts with preE w/o SF, and 3.2% of pts with preE w/ SF
  - *However, **ANYONE** with preeclampsia can progress to eclampsia, regardless of severity. The cascade from preE w/o SF → preE w/ SF → eclampsia is not linear*
  - Recall preeclampsia diagnostic criteria *does NOT* require proteinuria, so a high index of suspicion is always warranted in the setting of elevated blood pressures
  - Notably, 20-38% of cases occur before a diagnosis of preE is made

COMPLICATIONS

- Maternal hypoxia
- Trauma
- Intracranial hemorrhage
- Stroke or hypoxic encephalopathy
- Thromboembolic events
- Aspiration pneumonia
- Long-term impaired memory and cognitive function
- Maternal death

EPIDEMIOLOGY

- When does eclampsia it occur:
  - Antepartum (38-55%)
  - Intrapartum (36%)
  - Postpartum
    - <48 hours = 5-39%
    - >48 hours = 5-17%

RISK FACTORS FOR PRE-E AND ECLAMPSIA

- Previous history of pre- eclampsia (RR 7.19)
- Antiphospholipid antibodies (RR 9.72)
- Pre-existing diabetes (RR 3.56)
- Twin pregnancy (RR 2.93)
- Nulliparity (RR 2.91)
- Family history of preeclampsia (RR 2.90)
- Obesity (RR 2.47)
- Maternal age ≥ 40 (RR 1.96)
- Chronic hypertension (RR 1.38)

ECLAMPSIA MANAGEMENT

- Clearly communicate diagnosis to team members and call for additional assistance
  - Extra nursing, anesthesia, and extra OB
- Positioning patient
  - Left lateral decubitus
  - Raise bed rails/keep patient in safe position
- Maternal Care
  - Provide O_2 by facemask and place pulse ox to monitor SpO2
  - Ensure good IV access
  - Don't neglect treating severe hypertension (>160/110) with IV medications
- Fetal Care
  - Continuous toco/FHRT
- Magnesium Sulfate (doesn't arrest seizure, but prevents the next one)
  - 6 grams IV over 15-20 minutes OR 10 grams IM (5 gram in each buttock)
  - If already on magnesium, give 2-4g bolus over 5 minutes

ECLAMPSIA MANAGEMENT CONT'D

- The FHRT will demonstrate significant decelerations during the seizure
- **Delivery**
  - Fetal heart tracings may show decelerations in response to seizure. If decelerations resolve with stabilization of mother, can induce vaginal delivery
  - Continue to monitor and consider moving to OR at minute 5-6, with urgent delivery if no resolution of fetal bradycardia at 6-10 minutes (range depends on tracing before inciting event)
- Continuing treatment with magnesium sulfate prevents recurrent seizures and decreases maternal mortality
- Treat hypertension aggressively as 15-20% of death from eclampsia is related to strokes

FUTURE CONSIDERATIONS

- With future pregnancies
  - Recommend preconception counseling and assessment for all women with a history of eclampsia
  - For women with a history of early-onset preE/eclampsia <34 weeks, or preE at any gestation in more than one pregnancy, recommend starting 81mg ASA in late first trimester
- Future surveillance
  - In women who have had pre-e/eclampsia <37 weeks or recurrent preE, recommend annual BP checks, lipids, fasting blood glucose, and BMI

REFERENCES & RESOURCES

- ACOG PB 222 – Gestational HTN & Preeclampsia. 2018.
- Hypertension in Pregnancy: Report of the American College of Obstetricians and Gynecologists' Task Force on Hypertension in Pregnancy. Obstet Gynecol, Nov 2013; 122(5):1122-1131.
- UpToDate:
  - Preeclampsia: Management and Prognosis
  - Eclampsia
  - Management of hypertension in pregnant and postpartum women
- Duckitt K, Harrnington D. Risk factors for pre-eclampsia at antenatal booking: systematic review of controlled studies. BMJ 2005;330:565.