Interactive Group Case Discussion

Eclampsia

10th Edition

Learning Objectives

- Use the 2020 American College of Obstetricians (ACOG) Practice Bulletin criteria for the diagnosis of preeclampsia with severe features
- Using a case-based approach:
  - Formulate a prevention and management strategy for eclampsia to include assessment for severe complications

History

19 year-old G1P0 at 39 weeks' gestational age

- Presents to Labor and Delivery for regular, painful contractions
- From out of town-no access to her prenatal record
- Reports pregnancy uncomplicated except for 1st trimester UTI
- Reports GBS negative at 36 weeks
- 60 pound weight gain during pregnancy
- Recent generalized edema
- Denies allergies, medication use (except prenatal vitamins), no other medical problems

Initial Evaluation

- Admission BP 164/102 mm HG, repeat BP 160/100 mm HG taken five minutes later
- Dipstick urine with 1+ protein
- Membranes intact, no vaginal bleeding
- Cervical exam: 4 cm/100% effaced/-3 station
- Denies headache, epigastric pain or visual changes
- Continuous external fetal monitor shows:
  - Baseline FHR 140, moderate variability, no decelerations
  - Contractions every 3 minutes
  - Category 1 Tracing

Group Discussion

What blood work would you order?

Group Discussion

What other data would be helpful at this point in your assessment of the patient?

Group Discussion

What are you concerned about with this patient given the information provided thus far?

Case Continues: 30 Minutes Later

- Before labs can be drawn, you are called STAT to the patient’s room
- The RN reports the patient just had a grand mal seizure that lasted 60 seconds
- Moments later while an IV is being inserted, you witness the patient having a second grand mal seizure that lasts another 60 seconds
- EFM shows a fetal heart rate in the 80’s shortly after the second seizure

Group Discussion

What would you do in response to the seizures?

Group Discussion

What is the likely cause of fetal bradycardia in this situation?

Group Discussion

Should you proceed to a stat cesarean delivery at this time?

Case Continues: After the Seizures

- Patient was given Magnesium Sulfate-6 gram IV loading dose and is now on a maintenance dose of Magnesium Sulfate at 2 gm/hr
- Foley catheter placed
- Carefully observe intake and outtake as increased risk of pulmonary edema with preeclampsia and magnesium sulfate
- Amniotomy - thin meconium; FSE & IUPC placed
- Shortly after the second seizure when oxygen was administered and the patient was placed in the left lateral position, fetal bradycardia recovered quickly
- Baseline FHR is now 160 with minimal variability
- Operative team alerted and on standby
- Maternal BP 180/110 mm Hg
- Contractions every 2-3 minutes, lasting 60-90 seconds

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Group Discussion

What should you focus on doing right now with this patient?

Group Discussion

Why should you be concerned about their blood pressure?

Group Discussion

What range should the diastolic blood pressure be lowered to?

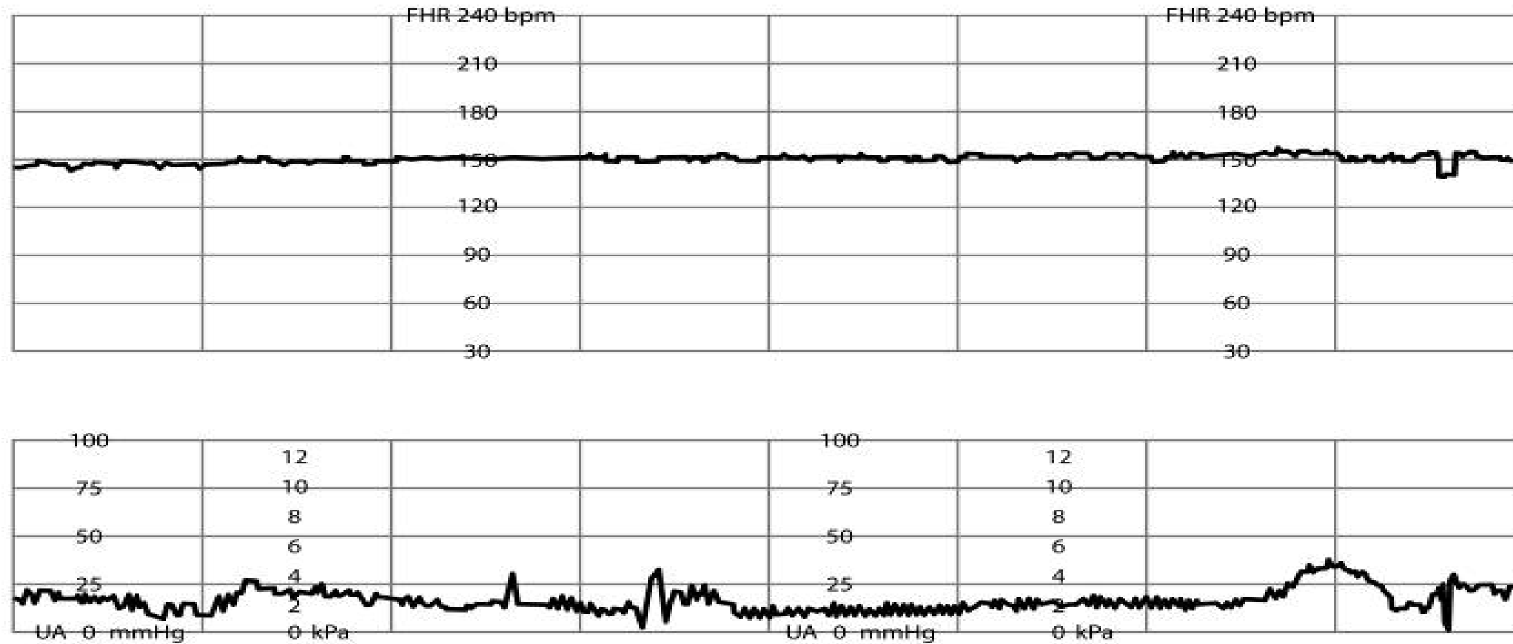
Group Discussion

Will Magnesium Sulfate lower their blood pressure?

Group Discussion

What are the antihypertensive medication options and dosages that could be used to lower blood pressure in this patient?

Given the circumstances of this case, what might be the reason(s) for this FHR tracing?



Case Continues: Patient Data

After administering blood pressure medications, the patient has the following vital signs:

- Blood pressure 140/95 mm Hg
- Pulse 90
- Respirations 12
- Temperature 100.2 F
- Urine output = 30 mL over the past hour

Case Continues: Lab Results

- Hemoglobin: 12 g/dL
- Hematocrit: 36%
- WBC: 21,000/uL
- Platelet count: 185,000/uL
- Liver enzymes: normal (except for alkaline phosphatase of 200)
- PTT, PT-INR, and fibrinogen levels: normal
- Magnesium level: 7 mg/dl

Group Discussion

The patient has another grand mal seizure. Considering they have a therapeutic Magnesium level, what would you do next?

Group Discussion

Do they have HELLP Syndrome?

Group Discussion

- Should antibiotics be started?
- Are they septic?

Group Discussion

Would treatment of the patient have been different if her seizures were focal seizures?

Case Continues: The Delivery

- With oxytocin augmentation, patient progresses to complete dilation
- Vaginal delivery of an 8 lb, 3 oz baby is achieved with Apgar Scores of 6 and 9
- Placenta delivers spontaneously and appears intact
- No evidence of uterine atony, lacerations, or hemorrhage

Group Discussion

- Do you continue Magnesium Sulfate?
- If so, at what point would you discontinue it?

Group Discussion

- If this patient had experienced uterine atony and increased bleeding postpartum, what uterotonic drug would you avoid using?
- What would be the first intervention and medication of choice to stop the increased bleeding instead?

Group Discussion

How would your seizure treatment have differed if this patient had a history of grand mal seizures?

Group Discussion

What would you do if this patient had presented with an eclamptic seizure at 36 weeks' gestation, an unripe cervix, and no evidence of labor?

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