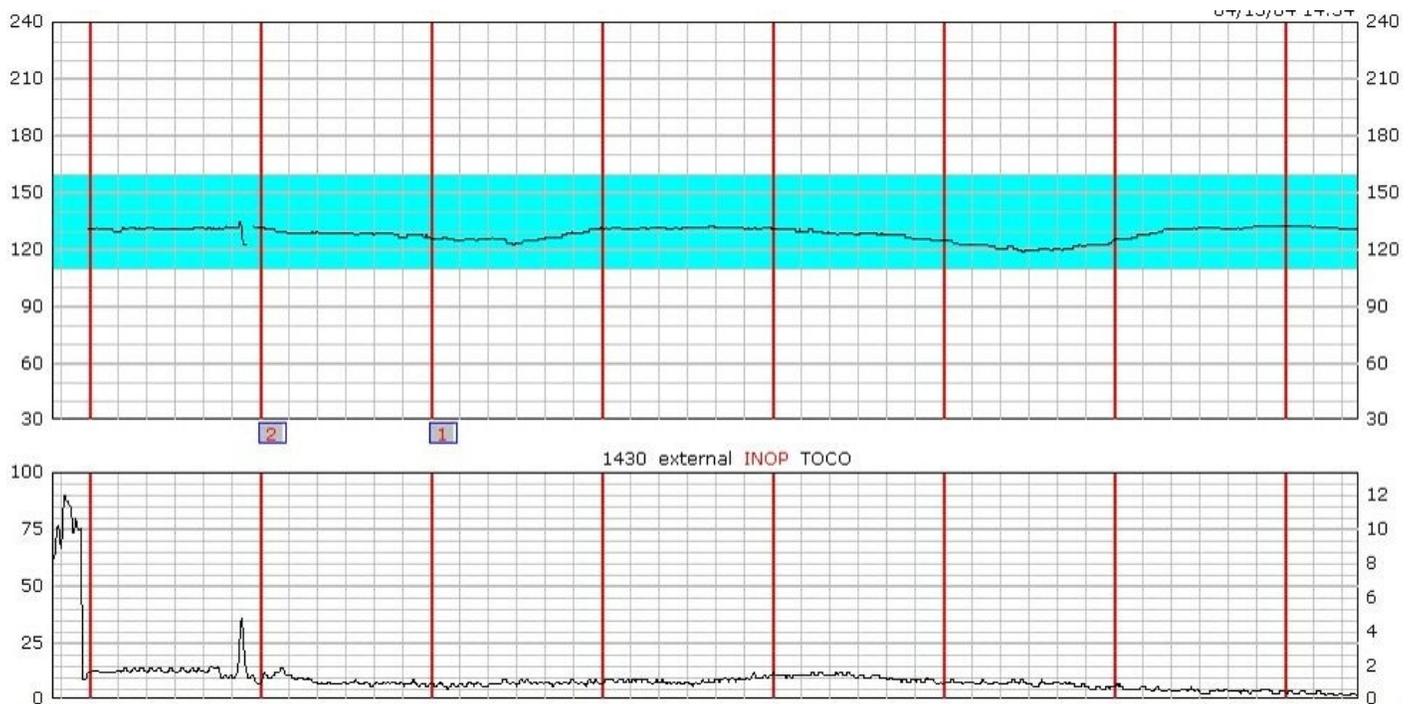


## Electronic Fetal Monitoring Case Study Quizzes

### Case Study 1: MS. PS

Ms. PS is a 24 yo G2P0100 at 32.4 weeks gestation admitted for severe preeclampsia. She has a history of a classical Cesarean Delivery at 24.2 in a pregnancy complicated by HELLP syndrome with a subsequent neonatal demise. At admission, her fetal tracing had a baseline of 135 with minimal variability, no accelerations, and no decelerations 4 hours ago. She has received one dose of Betamethasone for fetal lung maturity approximately 3 hours ago. Ultrasound reveals a fetus with 4%ile growth and a lagging abdominal circumference. There is absence of end-diastolic flow in the umbilical artery. She is currently on magnesium sulfate at 2 g/hr, and has received one dose of intravenous Labetolol, 20 mg, approximately two hours ago. Her current blood pressure is 153/97, pulse 86, temperature 99.1, respirations 18, O2 saturation is 96% on room air. Her deep tendon reflexes are 3+/4, her lungs are clear, and she has had 250 ml of urine output in the last 4 hours. Her urinalysis reveals 3+ proteinuria. Her liver enzymes are within normal limits and her platelets are 112. She presently denies headache, visual changes, shortness of breath, chest pain, or right upper quadrant pain. Below is her current fetal tracing:



Please answer the following questions: Please answer each question..

1. What is the baseline of the FHT?

- a. 120
- b. 125
- c. 130
- d. 135
- e. 140

2. Describe the variability.

- a. Absent.
- b. Minimal.
- c. Moderate.
- d. Marked.

3. Are there accelerations present?

- a. No.
- b. Yes.
- c. Yes, and the strip is reactive.

4. Are there decelerations present?

- a. None.
- b. Variable.
- c. Early.
- d. Late.
- e. Prolonged.

5. Are contractions present?

- a. None.
- b. Occasional.
- c. Regular.
- d. Hyperstimulation.

6. Is this FHT reassuring?

- a. Yes. It is reassuring and reactive.
- b. It is overall reassuring, but not reactive.
- c. This tracing is nonreassuring and requires intervention.

**Case 1 Interventions: Which of the following interventions are appropriate in this context?**

1. Turn patient to left, lateral side.

- a. No.
- b. Yes.

2. Change maternal position to various positions until fetal improvement.

- a. No.
- b. Yes.

3. Fluid bolus, lower maternal head.

- a. No.
- b. Yes.

4. Vasopressor (e.g. Ephedrine).

- a. No.
- b. Yes.

5. Supplemental Oxygen.

- a. No.
- b. Yes.

6. Stop Magnesium Sulfate.

- a. No.

b. Yes.

7. Give tocolytic (e.g. Terbutaline).

- a. No.
- b. Yes.

8. Perform vaginal exam.

- a. No.
- b. Yes.

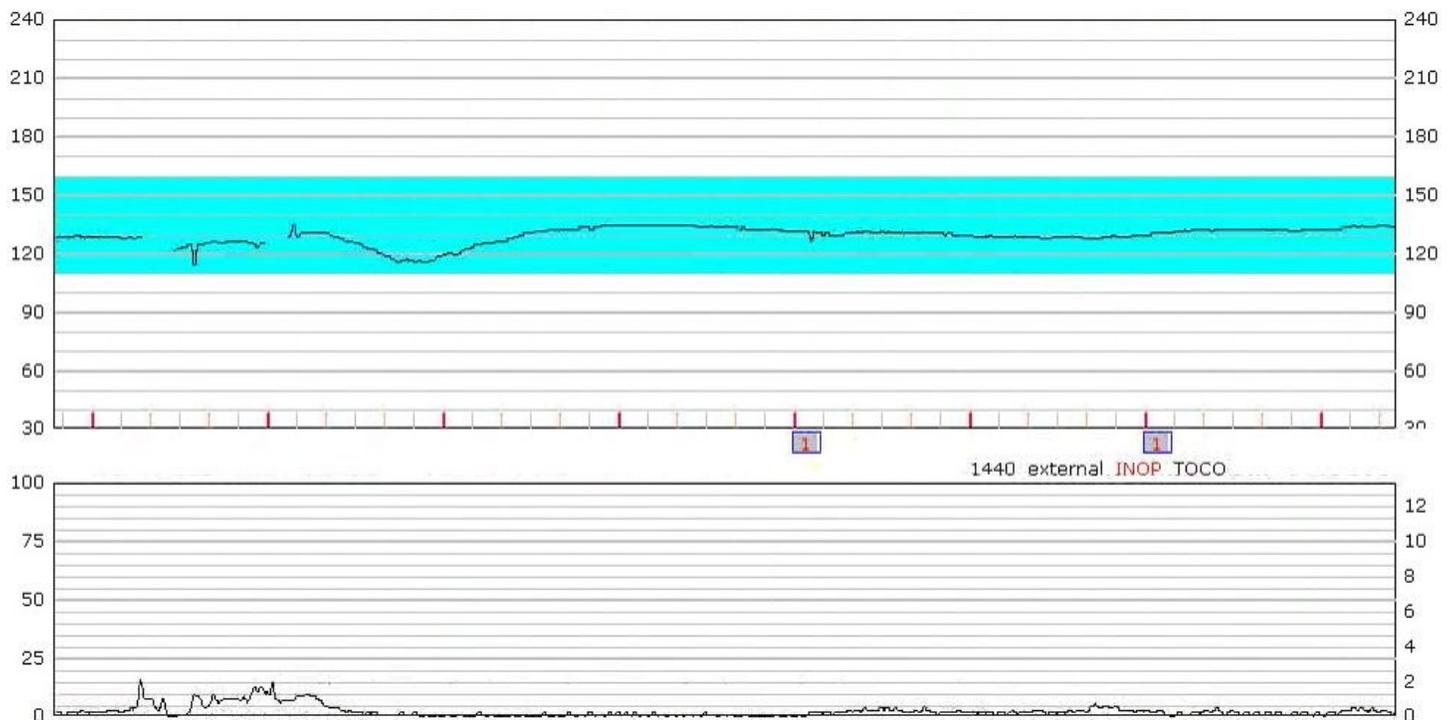
9. Perform emergent Cesarean delivery or operative vaginal delivery if the possible

- a. No.
- b. Yes.

10. Perform fetal scalp stimulation.

- a. No.
- b. Yes.

**Case Study 1 cont..Ten minutes after completing the previous interventions, the following fetal tracing is obtained:**



**Please answer below: Please answer each question.**

1. What is your current assessment?

- a. Improved from before and now overall reassuring.
- b. The same or possibly worse and persistently nonreassuring.

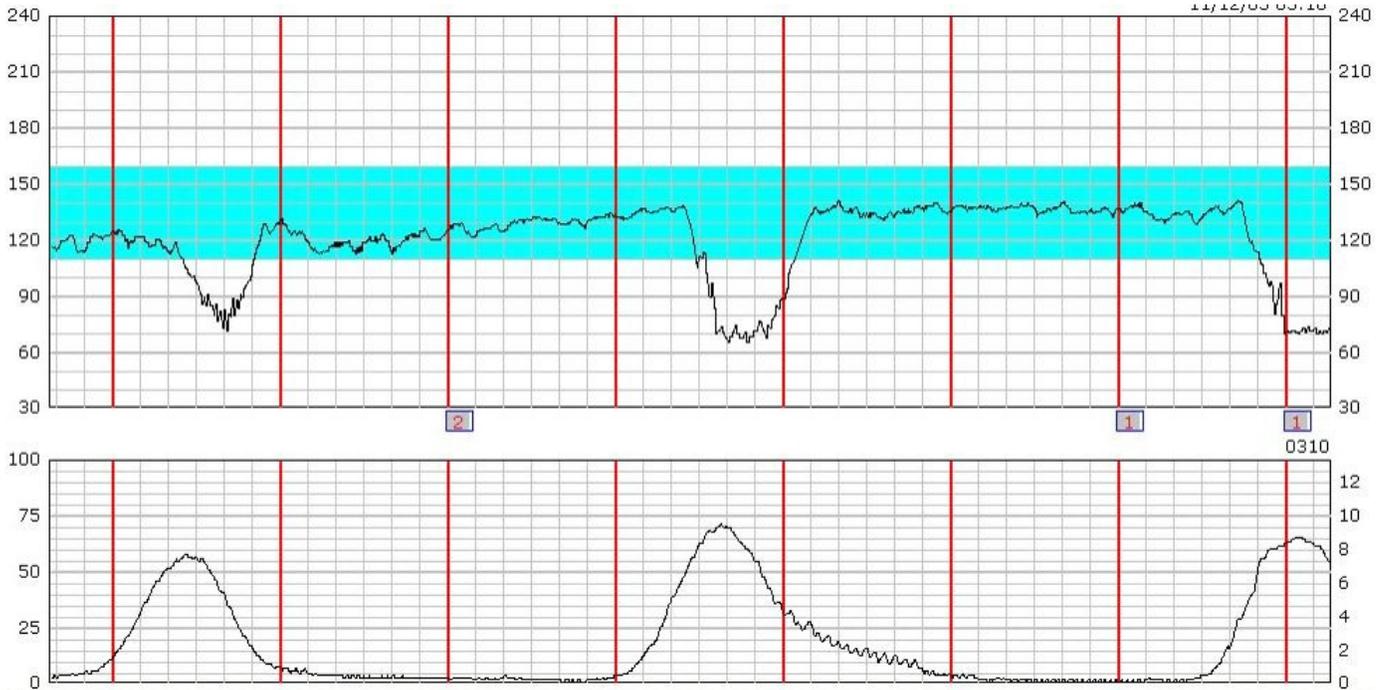
2. Which of the following is appropriate at this time.

- a. No further intervention required.
- b. Continue the interventions already being undertaken.
- c. Deliver immediately by Cesarean delivery.

## Case Study 2: Ms. CD

Ms. CD is a 37 yo G4P3003 at 40.2 who presented in active labor with spontaneous rupture of membranes. On initial exam, she is 5 cm dilated, 80% effaced, and the vertex is at 0 station. There is light meconium staining of the amniotic fluid. She has had three previous vaginal deliveries. Her pregnancy has been otherwise normal. Her pulse is 104, BP 123/78, respirations 20, and pulse oximetry is 99%. Below is her current fetal tracing one hour after admission:

Based upon the section of FHT that follows, please answer the questions below:



Please answer the following questions: Please answer each question.

1. What is the baseline of the FHT?

- a. 120
- b. 125
- c. 130
- d. 135
- e. 140

2. Describe the variability.

- a. Absent.
- b. Minimal.
- c. Moderate.
- d. Marked.

3. Are there accelerations present?

- a. No.
- b. Yes.
- c. Yes, and the strip is reactive.

4. Are there decelerations present?

- a. None.
- b. Variable.
- c. Early.
- d. Late.
- e. Prolonged.

5. Are contractions present?

- a. None.
- b. Occasional.
- c. Regular.
- d. Hyperstimulation.

6. Is this FHT reassuring?

- a. Yes. It is reassuring and reactive.
- b. It is overall reassuring, but not reactive.
- c. This tracing is nonreassuring and requires intervention.

**Case 2 Interventions:** Which of the following interventions are appropriate in this context?

1. Turn patient to left, lateral side.

- a. No.
- b. Yes.

2. Change maternal position to various positions until fetal improvement.

- a. No.
- b. Yes.

3. Fluid bolus, lower maternal head.

- a. No.
- b. Yes.

4. Vasopressor (e.g. Ephedrine).

- a. No.
- b. Yes.

5. Supplemental Oxygen.

- a. No.
- b. Yes.

6. Start amnioinfusion.

- a. No.
- b. Yes.

7. Give tocolytic (e.g. Terbutaline).

- a. No.
- b. Yes.

8. Perform vaginal exam.

- a. No.
- b. Yes.

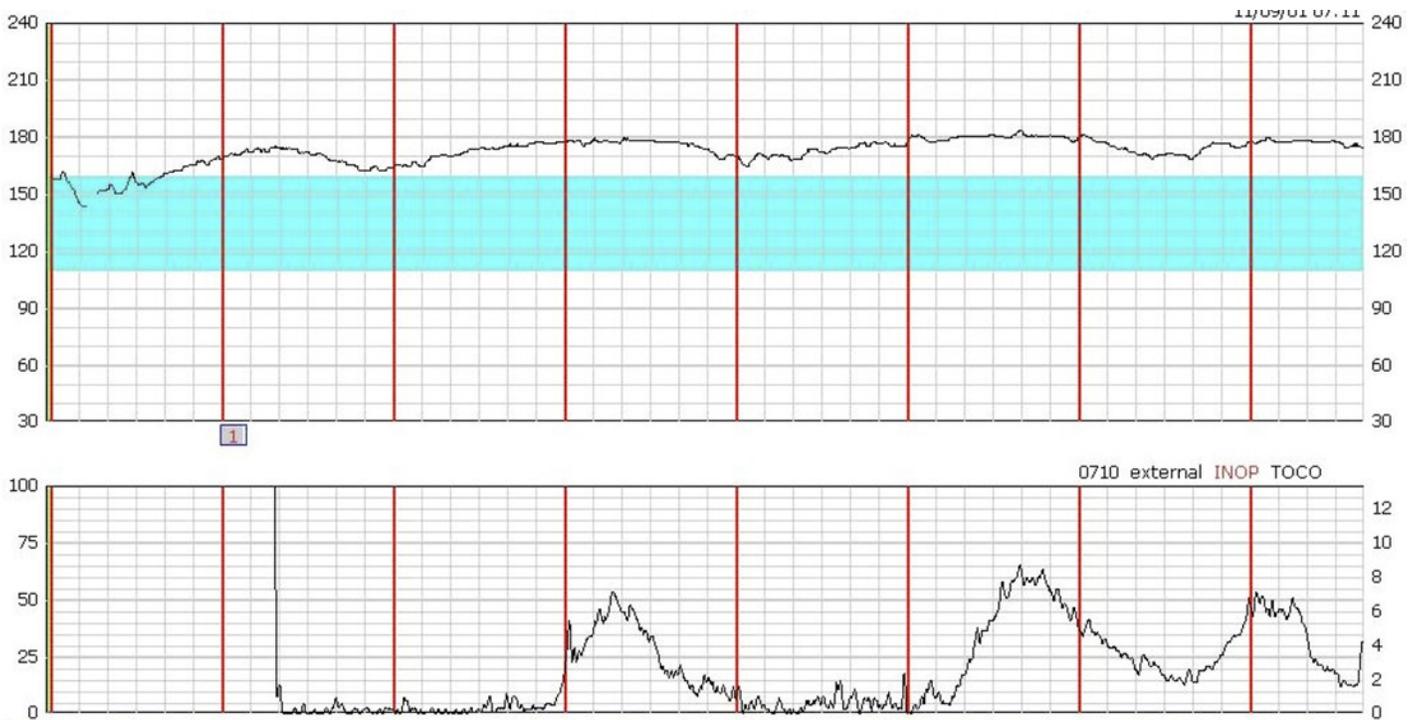
9. Perform expeditious (emergent) delivery (operative vaginal delivery or Cesarean delivery)

- a. No.
- b. Yes.

10. Perform fetal scalp stimulation.

- a. No.
- b. Yes.

Case study 2 continued . . . Ten minutes after completing the previous interventions, the cervix is 6 cm dilated and the following fetal tracing is obtained:



Please answer below:

1. What is your current assessment?

- a. Improved from before and now overall reassuring.
- b. The same or possibly worse and persistently nonreassuring.

2. Which of the following is appropriate at this time.

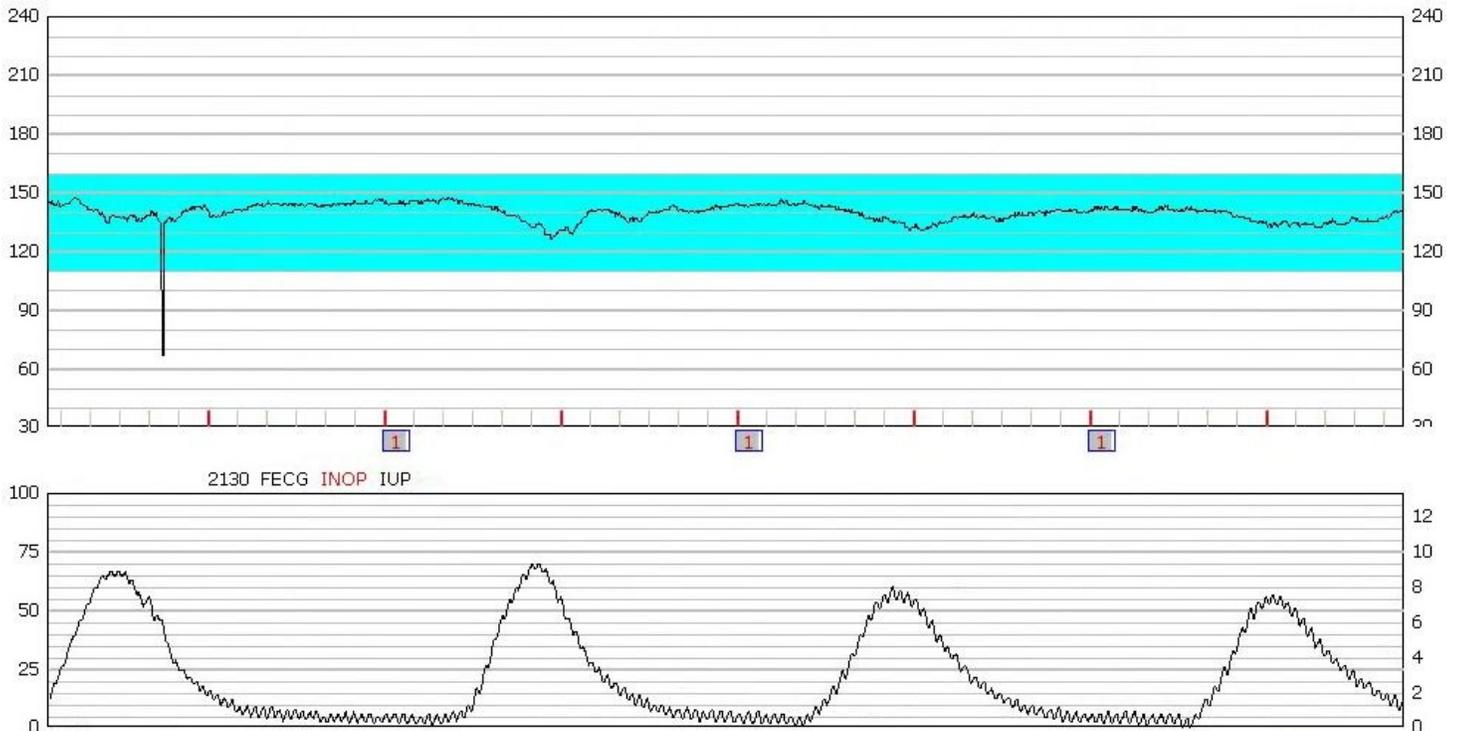
- a. No further intervention required.
  - b. Immediately try new interventions for this change in the tracing.
  - c. Deliver immediately by Cesarean delivery.
-

### Case 3: Ms. GA

Ms. GA is a 31 year old G4P1203 with intrauterine pregnancy at 35.3 weeks presenting with regular uterine contractions and spontaneous rupture of membranes 8 hours ago. Her medical history is significant for hypothyroidism and one previous cesarean section with two successful vaginal births after cesarean (VBAC). She has desired a trial of labor in this pregnancy. Her labor was augmented after four hours of no cervical change and currently her Pitocin is on 4 mu/min.

Below is her current fetal tracing:

Based upon the section of FHT that follows, please answer the questions below:



Please answer the following questions: Please answer each question.

1. What is the baseline of the FHT?

- a. 120
- b. 125
- c. 130
- d. 135
- e. 140

2. Describe the variability.

- a. Absent.
- b. Minimal.
- c. Moderate.
- d. Marked.

3. Are there accelerations present?

- a. No.

- b. Yes.
- c. Yes, and the strip is reactive.

4. Are there decelerations present?

- a. None.
- b. Variable.
- c. Early.
- d. Late.
- e. Prolonged.

5. Are contractions present?

- a. None.
- b. Occasional.
- c. Regular.
- d. Hyperstimulation.

6. Is this FHT reassuring?

- a. Yes. It is reassuring and reactive.
- b. It is overall reassuring, but not reactive.
- c. This tracing is nonreassuring and requires intervention.

### Case Study 3 Interventions

Which of the following interventions are appropriate in this context?

1. Turn patient to left, lateral side.

- a. No.
- b. Yes.

2. Change maternal position to various positions until fetal improvement.

- a. No.
- b. Yes.

3. Fluid bolus, lower maternal head.

- a. No.
- b. Yes.

4. Vasopressor (e.g. Ephedrine).

- a. No.
- b. Yes.

5. Supplemental Oxygen.

- a. No.
- b. Yes.

6. Stop Magnesium Sulfate.

- c. No.
- d. Yes.

6. Start amnioinfusion.

- a. No.
- b. Yes.

7. Give tocolytic (e.g. Terbutaline).

- a. No.
- b. Yes.

8. Perform vaginal exam.

- a. No.
- b. Yes.

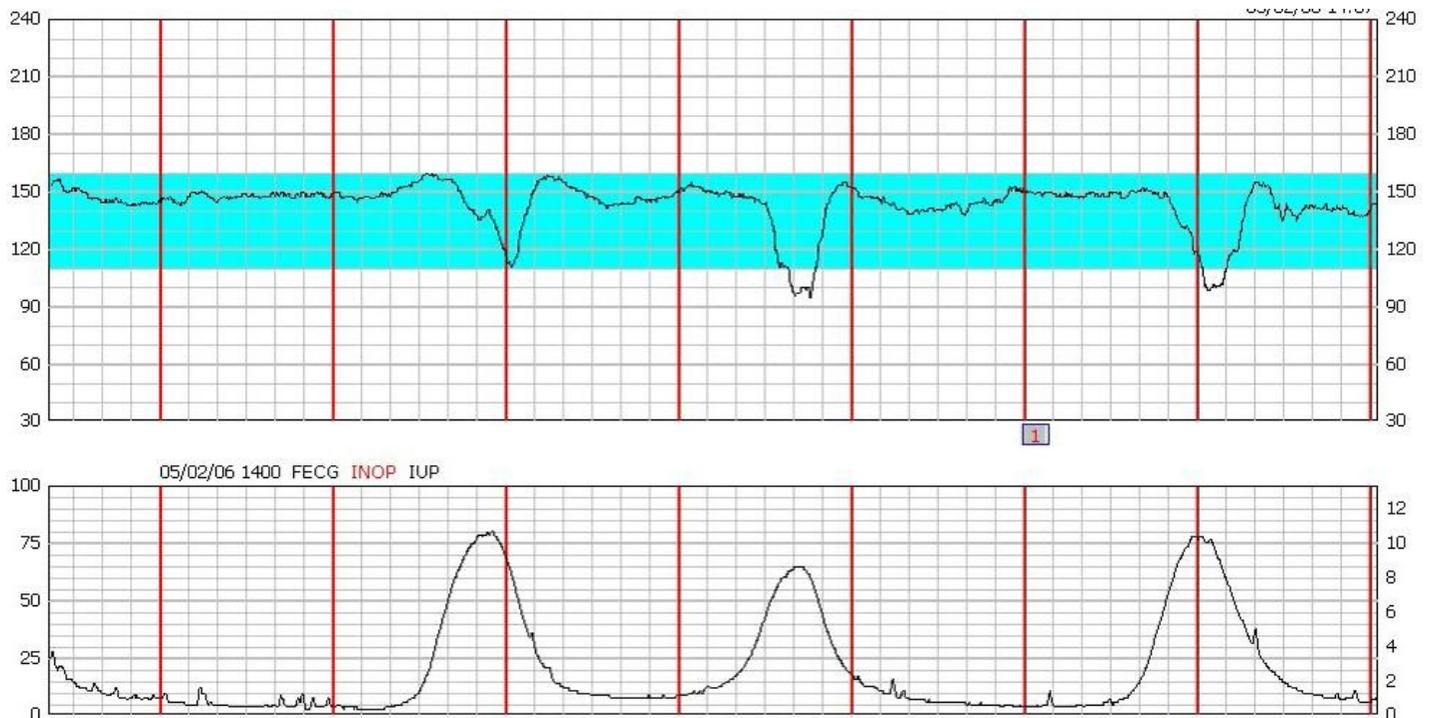
9. Perform expeditious (emergent) delivery (operative vaginal delivery or Cesarean delivery)

- a. No.
- b. Yes.

10. Perform fetal scalp stimulation.

- a. No.
- b. Yes.

Case 3 conti... Ten minutes after completing the previous interventions, at which time the patient was 9cm dilated, the following fetal tracing is obtained:



**Please answer below: Please answer each question.**

1. What is your current assessment?

- a. Overall reassuring.
- b. The same or possibly worse and nonreassuring.

2. Which of the following is appropriate at this time.

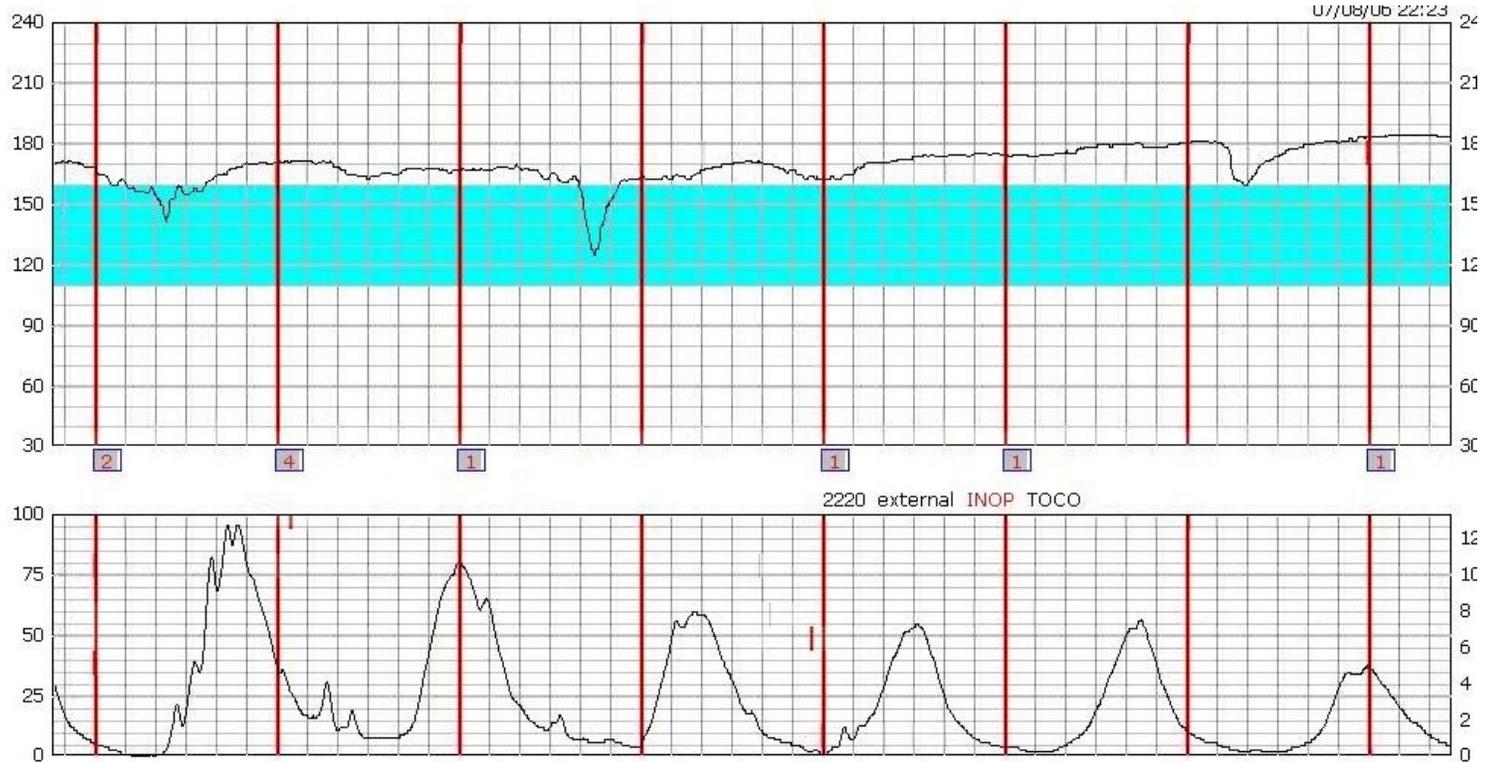
- a. No further intervention required.

- b. Examine cervix and anticipate vaginal delivery.
- c. Deliver immediately by Cesarean delivery.

**Case 4: Ms. RB**

Ms. RB is a 29 year old G1 at 40.5 who underwent induction of labor secondary to oligohydramnios. At 4cm dilation, she underwent artificial rupture of membranes and the amniotic fluid was noted to have moderate meconium staining. Her obstetric history has been unremarkable. Currently she is on 12 mu/min of Pitocin. Below is her current fetal tracing:

The section of FHT that follows, please answer the questions below:



**Please answer the following questions: Please answer each question.**

1. What is the baseline of the FHT?

- a. 150
- b. 155
- c. 160
- d. 165
- e. 170

2. Describe the variability.

- a. Absent.
- b. Minimal.
- c. Moderate.
- d. Marked.

3. Are there accelerations present?

- a. No.
- b. Yes.
- c. Yes, and the strip is reactive.

4. Are there decelerations present?

- a. None.
- b. Variable.
- c. Early.
- d. Late.
- e. Prolonged.

5. Are contractions present?

- a. None.
- b. Occasional.
- c. Regular.
- d. Hyperstimulation.

6. Is this FHT reassuring?

- a. Yes. It is reassuring and reactive.
- b. It is overall reassuring, but not reactive.
- c. This tracing is nonreassuring and requires intervention.

#### **Case 4 Interventions**

Which of the following interventions are appropriate in this context?

1. Turn patient to left, lateral side.

- a. No.
- b. Yes.

2. Change maternal position to various positions until fetal improvement.

- a. No.
- b. Yes.

3. Fluid bolus, lower maternal head.

- a. No.
- b. Yes.

4. Vasopressor (e.g. Ephedrine).

- a. No.
- b. Yes.

5. Supplemental Oxygen.

- a. No.
- b. Yes.

6. Start amnioinfusion.

- a. No.
- b. Yes.

7. Give tocolytic (e.g. Terbutaline).

- a. No.
- b. Yes.

8. Perform vaginal exam.

- a. No.
- b. Yes.

9. Perform expeditious (emergent) delivery (operative vaginal delivery or Cesarean delivery)

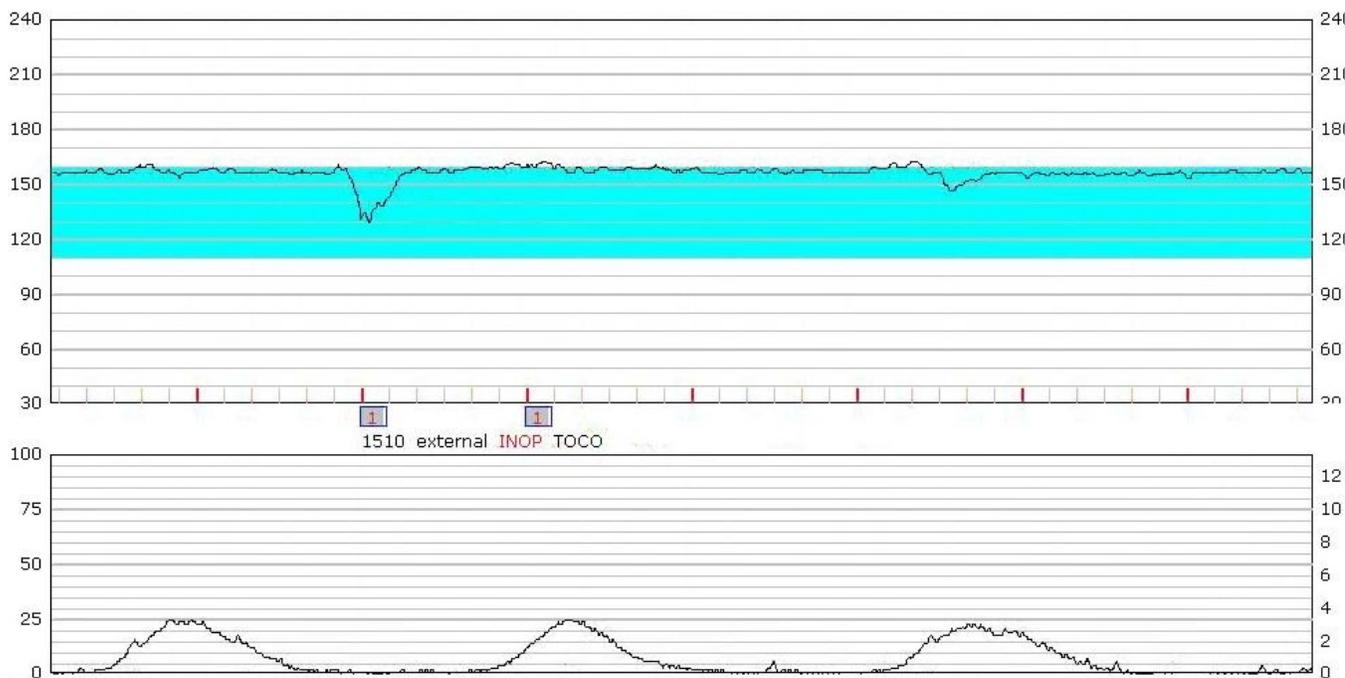
- a. No.
- b. Yes.

10. Perform fetal scalp stimulation.

- a. No.
- b. Yes.

#### Case 4: Ms. RB continued . . .

Thirty minutes after completing the previous interventions, the following fetal tracing is obtained:



Please answer below: Please answer each question.

1. What is your current assessment?

- a. Improved from before and now overall reassuring.
- b. The same or possibly worse and persistently nonreassuring.

2. Which of the following is appropriate at this time.

- a. No further intervention required.
  - b. Continue the interventions already being undertaken.
  - c. Deliver immediately by Cesarean delivery.
-

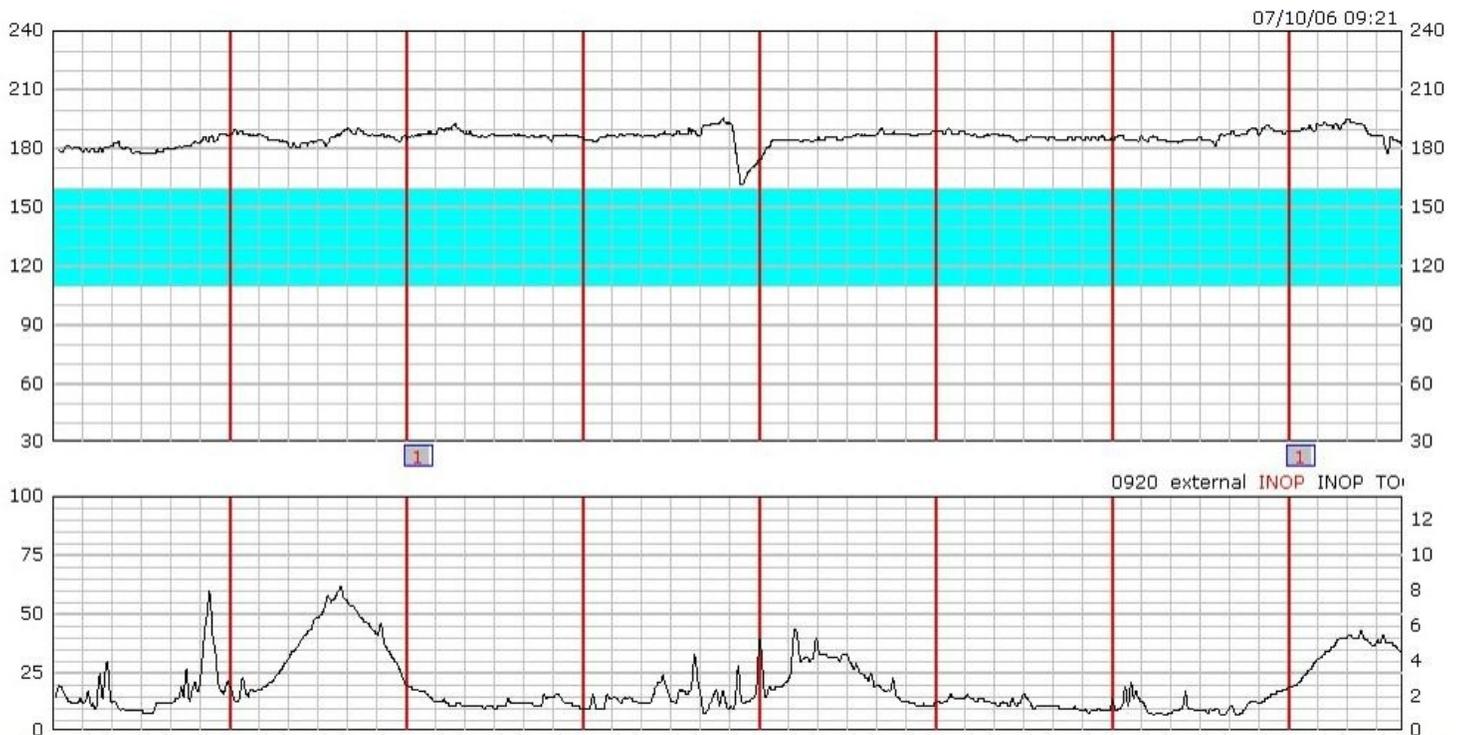
### Case Study 5: Ms. AR

Ms. AR is a 19 yo G1P0 at 39.5 weeks gestation admitted for rupture of membranes. She presented 8 hours ago with a nonspecific history complaining of pain and occasional contractions. On history, she reports leaking some fluid over the last two or three days. Her prenatal history is complicated by previous substance abuse and she now is on Methadone maintenance (90 mg daily). She is Hepatitis C positive. Her medical and surgical history is otherwise negative. Her GBS status is unknown.

On exam, she is grossly ruptured and the cervix is 2 cm dilated, 50% effaced, and the vertex is -3 station. She has no fundal tenderness at the time of admission. Her WBC is 14.6. Her temperature at admission is 98.9 degrees. She is admitted and started on Pitocin for augmentation of labor and Penicillin G secondary to suspected prolonged rupture of membranes.

Currently, you are called to see her with the fetal tracing below. Her pulse is 118 bpm, her temperature is 100.6 degrees. She has fundal tenderness on exam. Below is her current tracing:

Based upon the section of FHT that follows, please answer the questions below:



Please answer the following questions: Please answer each question.

1. What is the baseline of the FHT?

a. 165

- b. 170
- c. 175
- d. 180
- e. 185

2. Describe the variability.

- a. Absent.
- b. Minimal.
- c. Moderate.
- d. Marked.

3. Are there accelerations present?

- a. No.
- b. Yes.
- c. Yes, and the strip is reactive.

4. Are there decelerations present?

- a. None.
- b. Variable.
- c. Early.
- d. Late.
- e. Prolonged.

5. Are contractions present?

- a. None.
- b. Occasional.
- c. Regular.
- d. Hyperstimulation.

6. Is this FHT reassuring?

- a. Yes. It is reassuring and reactive.
- b. It is overall reassuring, but not reactive.
- c. This tracing is non-reassuring and requires intervention.

### Case 5 Interventions

Which of the following interventions are appropriate in this context?

1. Turn patient to left, lateral side.

- a. No.
- b. Yes.

2. Change maternal position to various positions until fetal improvement.

- a. No.
- b. Yes.

3. Fluid bolus, lower maternal head.

- a. No.

b. Yes.

4. Vasopressor (e.g. Ephedrine).

a. No.

b. Yes.

5. Supplemental Oxygen.

a. No.

b. Yes.

6. Start antibiotic coverage for chorioamnionitis.

a. No.

b. Yes.

7. Give tocolytic (e.g. Terbutaline).

a. No.

b. Yes.

8. Perform vaginal exam.

a. No.

b. Yes.

9. Perform expeditious (emergent) delivery (operative vaginal delivery or Cesarean delivery)

a. No.

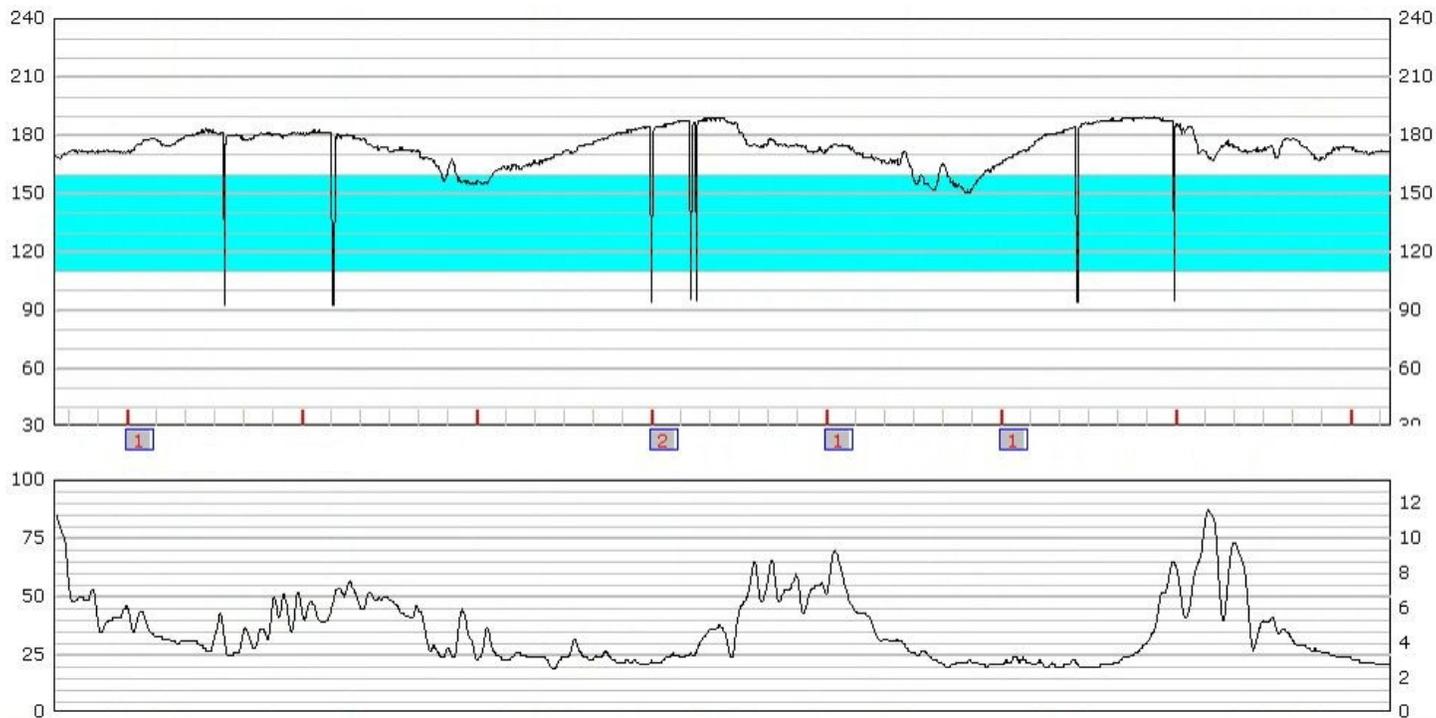
b. Yes.

10. Perform fetal scalp stimulation.

a. No.

b. Yes.

Case study 5 conti....Thirty minutes after completing the previous interventions, the following fetal tracing is obtained:



Please answer below: Please answer each question.

1. What is your current assessment?
  - a. Improved from before and now overall reassuring.
  - b. The same or possibly worse and persistently nonreassuring.
2. Which of the following is appropriate at this time.
  - a. No further intervention required.
  - b. Continue the interventions already being undertaken.
  - c. Deliver immediately by Cesarean delivery.