

UNIT 2: OBSTETRICS
SECTION B: ABNORMAL OBSTETRICS

Educational Topic 22: Abnormal Labor

Rationale: Labor is expected to progress in an orderly and predictable manner. Careful observation of the mother and fetus during labor will allow for early detection of abnormalities so that management can be directed to optimize outcome.

Intended Learning Outcomes:

A student should be able to:

- List abnormal labor patterns
- Describe the causes and methods of evaluating abnormal labor patterns
- Discuss fetal and maternal complications of abnormal labor
- List indications and contraindications for oxytocin administration
- Describe risks and benefits of trial of labor after Cesarean delivery
- Discuss strategies for emergency management of breech presentation, shoulder dystocia and cord prolapse.

TEACHING CASE

CASE: Charlene is a 31 year-old G1 woman at 40 weeks and 6 days gestation as determined by in vitro fertilization dating, who presents with a chief complaint of contractions. Her prenatal care has been uncomplicated. Her past medical history is unremarkable. She has been having contractions about every 5-7 minutes for about 10 hours, and she is exhausted. She denies leaking of fluid or vaginal bleeding.

A cervical exam reveals her cervix to be about 2cm dilated, 100% effaced, with a vertex presentation at -3 station. Fetal heart tones are in the 140s with an external monitor. A tocodynamometer confirms uterine contractions about every 5 minutes. Her vital signs are stable and her physical examination is otherwise unremarkable.

Dipstick urinalysis reveals no protein, glucose or ketones. A blood specimen for type and hold is sent to the laboratory per hospital policy. CBC is within normal limits.

Charlene is admitted to labor and delivery where an IV line is placed. Two hours later, there has been no change in the cervical exam and she asks for pain medicine. Narcotic medication is ordered and she soon falls asleep. The fetal heart tones remain stable and the contraction frequency has decreased.

Charlene is awakened about two hours after the narcotic dose by painful contractions that appear on the monitor about every 3 minutes. A cervical exam reveals a change to 5cm dilation, 100% effacement. The fetus is at -2 station with

some caput noted. The membranes are artificially ruptured, revealing copious amounts of clear fluid; fetal scalp electrode and intrauterine pressure catheter are placed. Charlene requests an epidural, and the anesthesiologist places one.

The epidural functions well and the intrauterine pressure catheter show uterine contractions every 7-10 minutes. The strength of the uterine contractions average out to approximately 100 Montevideo units (MVU's). The fetal heart tracing remains reassuring. After another two hours, the cervix is unchanged and the station has remained at -2. Oxytocin is started by intravenous pump. The uterine contractions become more frequent, every 2-4 minutes, and the contractions measure out at 200 MVU's over 10 minutes. Her temperature has climbed slightly, to 99.8° F. Two hours later the cervix is still 5 cm dilated and she has a temperature of 101° F; the fetal heart rate is reassuring, but the baseline has increased to the 160's. A Cesarean section is planned.

COMPETENCY-BASED DISCUSSION & KEY TEACHING POINTS:

Competencies addressed:

- Patient Care
 - Medical Knowledge
 - Systems-Based Practice
1. What is the reason for this patient's Cesarean section? What are some patterns of abnormal labor? What are the causes of abnormal labor?

 2. How do you evaluate labor?

 3. If this patient had refused Cesarean section and proceeded with labor despite an abnormal pattern, what maternal and fetal complications could have occurred?

 4. What are indications and contraindication for oxytocin administration?

 5. In her subsequent pregnancies, this patient would like to attempt a vaginal delivery. What are risks and benefits of a trial of labor after Cesarean?

 6. How do you manage breech presentation, shoulder dystocia and cord prolapse?

REFERENCES

Beckman CRB, et al. *Obstetrics and Gynecology*. 7th ed. Philadelphia: Lippincott, Williams & Wilkins, 2013.

Hacker NF, Moore JG, et al. *Essentials of Obstetrics and Gynecology*. 5th ed. Philadelphia: Saunders, 2010.

ACOG Committee Opinion 340, Mode of Term Singleton Breech, July 2006, reaffirmed 2012.

ACOG Practice Bulletin 40, Shoulder Dystocia, November 2002, reaffirmed 2013

ACOG Practice Bulletin 13, External Cephalic Version, February 2000, reaffirmed 2012

ACOG Practice Bulletin 115, Vaginal Birth after Cesarean, August 2010.