UNIT 2: OBSTETRICS
SECTION B: ABNORMAL OBSTETRICS

Educational Topic 30: Postterm Pregnancy

Rationale: Perinatal morbidity and mortality increase significantly in a prolonged pregnancy. Prevention of complications associated with postterm pregnancy is one of the goals of antepartum and intrapartum management.

Intended Learning Outcomes:
A student should be able to:

• Identify the normal duration of gestation
• List the complications of prolonged gestation
• Describe the evaluation and evidence-based management options for prolonged gestation

TEACHING CASE

CASE: A 35-year-old, G1P0 woman, presents to your office for a routine prenatal exam. She is 5 days past her due date that was determined by her last menstrual period and a second trimester ultrasound. While reviewing her chart, you note that she has gained 32 pounds during this uncomplicated pregnancy with 1/2 pound weight gain since last week’s visit. Her BP is 110/65. She has no glycosuria or proteinuria. The fundal height measures 38 cm and fetal heart tones are auscultated at 120 bpm in the left lower quadrant. The fetus has a cephalic presentation and an estimated weight of 8 lbs.

Just before you go into the room, your nurse pulls you to the side, and tells you, “She has a lot of questions!” Once you walk into the room, the patient expresses her disappointment that she has not had the baby yet. She assumed that she would be having the baby on her due date. She asks you about potential harm to her and the baby from going past her due date, and she would like to know her options.

COMPETENCY-BASED DISCUSSION & KEY TEACHING POINTS:
Competencies addressed:

• Patient Care
• Medical Knowledge
• Systems-Based Practice
1. What would you tell this patient is the normal duration of pregnancy and what is the usual time for the onset of spontaneous labor?

   • The normal duration of pregnancy is 280 days (40 0/7 weeks) from the first date of the last menstrual period or
   • Preterm pregnancy is defined as a gestational age less than 37 0/7 weeks
   • Early Term pregnancy is defined as a gestational between 37 0/7 weeks and 38 6/7 weeks
   • Full Term pregnancy is defined as a gestational age between 39 0/7 weeks and 40 6/7 weeks
   • Late Term pregnancy is defined as a gestational age between 41 0/7 weeks and 41 6/7 weeks
   • Postterm pregnancy is defined as a gestational age of 42 0/7 weeks or greater
   • In the United States, approximately 12% of pregnancies deliver preterm
   • Approximately 80% of pregnancies are delivered at a "term" gestation
   • Postterm pregnancy is estimated to have an incidence of 6%
   • Accurate gestational age assignment with first trimester ultrasound results in a decreased incidence of postterm pregnancy

2. What are the risks associated with postterm pregnancy?

   The key teaching point for this question is for the student to identify the relationship between gestational age and perinatal morbidity and mortality and the specific antenatal, intrapartum, and neonatal concerns associated with postterm pregnancy.

   • Perinatal morbidity/mortality declines up to term and then gradually increases with advancing gestational age
   • Perinatal mortality at 42 0/7 weeks of gestation or greater is twice that at full term (4 to 7 versus 2 to 3 per 1000 deliveries)
   • Antenatal concerns:
     ■ Macrosomia – estimated prevalence of 25% in prolonged pregnancy
     ■ Postmaturity syndrome – (see discussion below)
     ■ Oligohydramnios
     ■ Perinatal death – rate increases steadily after 37 weeks, approaching 1 in 300 at 42 weeks.
   • Intrapartum concerns:
     ■ Labor dystocia
     ■ Infant birth trauma
     ■ Maternal perineal trauma
     ■ Cesarean delivery
     ■ Postpartum hemorrhage
     ■ Meconium passage
   • Neonatal concerns:
     ■ Meconium aspiration syndrome
     ■ Hypoglycemia
     ■ Hyperbilirubinemia
3. What are the features of postmaturity syndrome?

- Although the true incidence of the fetal postmaturity (dysmaturity) syndrome is unknown, it has been estimated to occur in 10% of pregnancies between 41 and 43 weeks.
- The syndrome results from placental insufficiency due to aging and infarction.
- Typical features of postmaturity syndrome include:
  - Loss of subcutaneous fat resulting in a long, thin body
  - Long fingernails
  - Dry, peeling, wrinkled skin
  - Abundant hair
- Postmature infants have an increased risk of perinatal mortality, as compared to other postterm infants.

4. What management plan would be appropriate for this patient?

The key teaching point for this question is for the student to identify the role of expectant management with antepartum surveillance versus labor induction for prolonged and postterm pregnancies.

- Labor Induction:
  - Appropriate at 41 0/7 weeks regardless of cervical status
  - Is associated with a decreased risk of perinatal mortality, cesarean delivery, and cost
  - Pre-induction cervical ripening may be required if the cervix is unfavorable
- Expectant Management:
  - Should include antenatal testing beginning between the 41 and 42 weeks
  - Induction is indicated if there is evidence of non-reassuring fetal testing
  - Expectant management should be pursued no longer than 43 weeks, and only with antepartum testing

REFERENCES


ACOG Practice Bulletin 146, Management of Late-Term and Postterm Pregnancies, August 2014.

ACOG Committee Opinion Number 579, Definition of Term Pregnancy, November 2013.