

CASE STUDY - INDUCTION OF LABOR

A G3, P2 patient at 41 weeks gestation is admitted for induction of labor. Assessment data reveals: cervix dilated 2 cm, 40% effaced, -2 station, cervix firm, and membranes intact. The patient's last baby was delivered at 40 weeks and weighed 9 pounds. The physician has ordered Prostaglandin administration the evening before Oxytocin in the morning.

1. What is the indication for induction of labor?

- The patient is 41 weeks' gestation with a history of delivering a 9lb baby at 40 weeks gestation, we want to prevent mom from having a difficult delivery free of trauma and to reduce macrosomia

2. Why did the physician order prostaglandins the evening before the induction?

- Prostaglandins are used to soften the cervix and stimulate uterine contractions.

3. What tests or evaluation should be performed prior to the induction?

- GBS
- Type and cross match for blood
- Fetal station and presentation
- Cervical exam

4. What are the nursing considerations when administering an Oxytocin infusion?

- Monitor FHR, maternal VS, I&O
- Monitor frequency, duration, and force of contractions and resting uterine tone

- Monitor for signs and symptoms of water intoxication (HA, irritability, confusion)

CASE STUDY - Diabetes in Pregnancy

A 30-year-old, G2, P1, is in her 10th week of pregnancy. Her first baby was stillborn at 32 weeks, so she is very worried about this pregnancy. Initial lab work obtained two weeks ago included testing for diabetes, due to the patient's history a stillborn. The physician explains during the first prenatal visit there is a concern for diabetes due to an elevated glucose level. The nurse realizes patient education regarding diabetes, the effects of diabetes on both the patient and baby and how to manage diabetes it is essential.

1. Discuss maternal risks associated with diabetes and pregnancy.
 - Hypertension especially preeclampsia will develop
 - UTIs- increased bacteria growth in nutrient rich urine
 - Hydramnios form fetal hyperglycemia and consequent fetal diuresis and premature rupture of membranes
 - Macrosomia leads to a difficult labor
 - Increase likelihood of a c-section which leads to post-partum hemorrhage

2. Discuss fetal-neonatal risks associated with diabetes and pregnancy.
 - Fetal
 - Congenital malformation: caudal regression syndrome (failure of sacrum, lumbar spine, and lower extremities to develop)
 - Cardiac defects
 - Variations in fetal size: SGA
 - Neonatal
 - Hypoglycemia: neonate is at higher risk for hypoglycemia because fetal insulin production would have been accelerated during pregnancy to metabolize the excessive glucose received from the mother.
 - Hypocalcemia: due to a relative hyperparathyroidism seen in many diabetic mothers
 - Hyperbilirubinemia: due to a relative hyperparathyroidism seen in many diabetic mothers
 - Respiratory distress syndrome: Fetal hyperinsulinemia retards cortisol production, which is necessary for the synthesis of surfactant needed to keep the newborn's alveoli open after birth, thereby increasing the risk for respiratory distress syndrome.

3. What educational topics should be covered to assist the patient in managing her diabetes?
 - Maintaining normal blood glucose levels
 - Diet
 - Pharmacologic treatment: insulin
 - Exercise
 - Fetal surveillance

4. What classification (SGA, AGA, LGA) will this patient's baby most likely be classified as? Discuss your answer.
 - SGA because mom more than likely has and impaired placental perfusion that decreased the supply of glucose and oxygen that is delivered to the fetus.

CASE STUDY - Pregnancy Induced Hypertension

A single 17-year-old patient Gr 1 Pr 0 at 34 weeks gestation comes to the physician's office for her regular prenatal visit. The patient's assessment reveals BP 160/110, DTR's are 3+ with 2 beats clonus, weight gain of 5 pounds, 3+ pitting edema, facial edema, severe headache, blurred vision, and 3 + proteinuria.

Patient's history – single, lives with her parents, attending high school, works at local grocery store in the evenings as a cashier, began prenatal care at 18 weeks, has missed two of her regularly scheduled appointments for prenatal care, never eats breakfast, snacks for lunch and eats dinner after she gets off work at 10:00 pm.

1. What disease process is this patient exhibiting? What in the assessment supports your concern?
 - The patient is experiencing pregnancy induced hypertension
 - Patients BP: 160/110, proteinuria, swelling, HA, sudden wt. gain, blurred vision
2. What in the patient's history places her at risk for Pregnancy-Induced Hypertension?
 - Single young adolescent, first pregnancy, stress from job, nutrition is not good, late start to prenatal care, and has missed appointments for prenatal care
3. Describe how Pregnancy-Induced Hypertension affects each organ and how these effects are manifested.
 - Liver: increased liver enzymes, hemolysis, elevated LFTs, low platelets
 - Kidneys: increased protein in urine, acute kidney injury
 - Brain: seizures and death
 - Uterus and placenta: nutrients and oxygen supply is limited due to an increased blood flow
4. What will the patient's treatment consist of?
 - Magnesium sulfate, bed rest, antihypertensives, delivery of baby, FHR monitoring, continuous blood pressure monitoring, daily weight, urinalysis, diet
5. What is the drug of choice for this condition? What other medication(s) might be ordered for this patient?

- Magnesium sulfate, labetalol, hydralazine, nifedipine, methyldopa

6. What are the Nursing considerations when administering the drug of choice? (Side effects & medication administration guidelines)

- Magnesium sulfate:
 - o Contraindicated in pt. w/ myocardial damage, heart block, impaired renal function
 - o Monitor BP, RR, and I&Os,
 - o Place resuscitation equipment in room (suction and O2)
 - o Have antidote ready (calcium gluconate)
 - o SE: hypotension, HA, flushing, decreased FHR