

## **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 baby's gestational age is 41 weeks, which is past the due date and the membranes have not ruptured. Labor has not started naturally on its own.

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

- Because prostaglandins are used to cause cervical ripening. Cervical ripening is indicated since the mom's bishop score is less than 4.

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

- The mom and baby's health should be evaluated. Baby's weight and size, position in the uterus, and status of the cervix

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

- When to start, change, and stop an oxytocin infusion using facility protocols. The nurse must observe the fetal response continuously monitoring the FHR and observe the mom's response by assessing the uterus for excessive uterine activity

## **CASE STUDY - Diabetes in Pregnancy**

A 30-year-old, G2, P1, is in her 10<sup>th</sup> 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.
  - Overweight, maternal age >25, previous weight with gestational diabetes, hx of abnormal glucose tolerance, hx of diabetes in a first degree relative, ethnicity: African American, Hispanic, American Indian, Asian American, Pacific islanders), hx or PCOS,
  
2. Discuss fetal-neonatal risks associated with diabetes and pregnancy.
  - Poorly controlled gestational diabetes is associated with increased neonatal morbidity and mortality. Major fetal complications include macrosomia (big baby head), IUGR, and neonatal hypoglycemia. Hypocalcemia, hyperbilirubinemia, and respiratory distress may also occur.
  
3. What educational topics should be covered to assist the patient in managing her diabetes?
  - Diet, exercise, blood glucose monitoring, pharmacologic treatment, fetal surveillance
  
4. What classification (SGA, AGA, LGA) will this patient's baby most likely be classified as? Discuss your answer.
  - LGA, when DM is poorly controlled the baby gets too much sugar from mom. They baby is used to making a lot of insulin then when the cord is cut the baby is no longer receiving sugar but in still making insulin

## **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?
  - Severe preeclampsia, the BP is equal to 160/110, deep tendon reflexes are 3+, blurred vision, edema, and 3+ proteinuria
  
2. What in the patient's history places her at risk for Pregnancy-Induced Hypertension?
  - The patient age and it being her first pregnancy
  
3. Describe how Pregnancy-Induced Hypertension affects each organ and how these effects are manifested.
  - Kidneys: decreased renal perfusion reduces GFR
  - Liver: reduced liver circulation impairs function and leads to hepatic edema (epigastric pain is common)
  - Hematologic: vasoconstriction of cerebral vessels lead to pressure induced rupture of thin walled capillaries
  - CNS: hyperreflexia may indicate increasing CNS involvement
  - Fetus: alteration in placental function and late decels
  
4. What will the patient's treatment consist of?

- Inpatient hospitalization, antepartum management, bed rest, and fetal monitoring. Give patient hypersensitive medications, decreased lighting because CNS is irritable and monitor mom frequency

5. What is the drug of choice for this condition? What other medication(s) might be ordered for this patient?

- Magnesium sulfate is for seizure prevention. It relaxes smooth muscles like the uterus. Decreased vasoconstriction promotes circulation to the vital organs of the mother and increases placental circulation. Other medications that might be used are Labetalol, Hydralazine, and Nifedipine.

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

- Monitor BP closely, assess RR, assess for presence of deep tendon reflexes, and urinary output greater than 30mL/hr before administration. Have resuscitation equipment in the room such as suction and oxygen. Ensure calcium gluconate (antidote) is readily available in case of emergency