<u>CASE STUDY - INDUCTION OF LABOR - Leslie Boatman</u>

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?

   Induction of labor is indicated because the patient is at 41 weeks pregnant. This is post-term, which could mean that the placenta is no longer able to give nutrients and oxygen to the fetus. She is also not far along in the labor process considering she is not fully dilated, effaced, or at 0 station. It could take a long time to get the second stage of labor.

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

   Prostaglandins are naturally released by mom's body when she is in labor to prepare the uterus for oxytocin stimulation. However, because mom is still in the active phase of labor, her body might not have released prostaglandin yet. Therefore, we have to give the uterus time to prepare for oxytocin before we give it.

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

   Before starting oxytocin to induce labor, there are three assessments that need to be done. The three tests are uterine activity, fetal heart rate baseline, and variability.

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

   Oxytocin is a powerful drug, so it must be hung as a piggyback, that way it can be stopped quickly if needed. Always start it at a low and slow dose so you can assess how it is affecting the mom and baby before giving more. The fetus must be continuously monitored with this drug. Oxytocin must be stopped of decreased if tachysystole or if there are abnormal fetal heart rate patterns.

<u>CASE STUDY - Diabetes in Pregnancy</u>

A 30-year-old, G2, P1, is in her 10^{th} 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.

   If mom has diabetes, this could make the baby large for gestational age. This puts the mom in the high-risk category for labor. If the baby is too big for the mom's pelvis, a vaginal birth would not be successful. If mom is able to have a vaginal birth, there is a high risk for tearing of the perineum and excessive bleeding after giving birth.

2. Discuss fetal-neonatal risks associated with diabetes and pregnancy.

   If the mother has uncontrolled diabetes, this could mean that the fetus is getting a lot of sugar throughout the three trimesters. To compensate, the baby's body has to make a lot of insulin. After the baby is born, it is no longer receiving the sugar, but its body still thinks it has to make insulin. This puts the baby at risk for hypoglycemia until the body learns that it does not have to make insulin any longer. A baby who is large for gestational age might also have birth injuries.

3. What educational topics should be covered to assist the patient in managing her diabetes?

   The patient should be educated about healthy food options that are lower in sugar and carbs. She should be educated about how to count carbs as well. She should be educated on how exercise can help manage diabetes. She should also be educated on how to properly take her medications and how to check her blood sugar. She should be taught the signs and symptoms of hypoglycemia and hyperglycemia and what to do when these occur.

4. What classification (SGA, AGA, LGA) will this patient's baby most likely be classified as? Discuss your answer.

   The patient's baby will most likely be LGA. This is due to the increased amount of insulin the baby has to make in utero.

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 seems to be experiencing preeclampsia. The protein in her urine as well as her severe headache weight gain, edema, and blurred vision are all indicators of this disease.

2. What in the patient's history places her at risk for Pregnancy-Induced Hypertension?

   The patient is an adolescent. The number one pregnancy complication in adolescents is hypertension. She also did not start to get prenatal care until she was 18 weeks, and she misses appointments.

3. Describe how Pregnancy-Induced Hypertension affects each organ and how these effects are manifested.

   High blood pressure causes arteries to narrow, allowing less blood flow through them. This can lead to an enlarged heart, CAD, and heart failure. It can also lead to a stoke. High blood pressure can lead to damages blood vessels. This can cause the kidneys to be unable to filter properly, leading to kidney failure.

4. What will the patient's treatment consist of?

   Treatment is typically medications. Patients with high bp may get antihypertensives, anticonvulsants, or corticosteroids. If the bp cannot be managed with medications, labor might need to be induced. She will also need to be watched closely at the hospital to make sure her blood pressure is under control.

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

   The drug of choice is magnesium sulfate. She may also be prescribed anticonvulsants, antihypertensives, or corticosteroids.

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

   Magnesium sulfate can be used, but it can be risky for the fetus, so risk verse benefit should really be assessed. It should be given slowly to prevent hypermagnesemia.