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 being induced because she is 41 weeks' gestation, which is post-term and can place the fetus at risk for placental insufficiency, meconium aspiration syndrome, and as the fetus continues to grow, dysfunctional labor, lacerations or infections.

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

   - The physician ordered prostaglandins to help to create uterine contractions which help move the baby move down the birth canal to prepare for labor before inducing the labor.

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

   - Tests that should be performed prior to the induction may include, fetal heart rate and vaginal exam. Before an induction we want to evaluate for any possible contraindications such as placenta previa, umbilical cord prolapses, abnormal fetal presentation, active genital herpes or HIV, and previous uterine surgery. Before induction we want to assess how inducible the cervix is by a Bishop Score. A score of 6 or less indicates and "unfavorable" cervix.

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

   - An oxytocin infusion should be diluted in an isotonic solution such as lactated ringers or normal saline. It must always be administered as a secondary IVPB using an infusion pump, so it may be stopped quickly if necessary. It must be placed in the primary IV line's most proximal port (closest to the IV site, or closest to the patient), so that there is a less in the line that will be put into the patient during an emergency. During oxytocin infusion, continuous fetal monitoring is required. Monitor for tachysystole or any other abnormal fetal heart rate patterns in which you must decrease or stop the infusion.

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.

    - Maternal risks associated with diabetes and pregnancy include, infections, preeclampsia, hydramnios, ketoacidosis, hypoglycemia and hyperglycemia.

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

    - Fetal risks associated with diabetes and pregnancy include fetal death, macrosomia, respiratory distress syndrome, hyperbilirubinemia, hypoglycemia, prematurity, cardiomyopathy, congenital defects and psychiatric disorders.

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

    - We should teach the diabetic pregnant patient hoe insulin requirements will change throughout pregnancy and different trimesters. The patient should be advised to check their blood glucose levels 4-8 times a day, monitor for urine ketones, have a diet plan individualized for the patient, exercise 3 times and week for at least 20 minutes, and to be aware of the signs and symptoms of hypoglycemia and hyperglycemia.

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 classified as LGA, because the baby is constantly exposed to high blood sugar levels, and high levels of other nutrients. The baby begins to produce more insulin which causes energy to be stored as fat increasing the babies' size.

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 exhibiting severe preeclampsia. This is indicated by a blood pressure of 160/110, hyperreflexia (DTR's 3+), clonus, edema, severe headache, blurred vision and proteinuria.

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

    - The patient has had poor prenatal care. She did not begin care until 18 weeks' gestation, and missed scheduled appointments, as well as not eating.

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

    - The heart is affected by working harder, there is an increased cardiac output and cardiomegaly. The kidneys have to work harder to filter, and there is decreased urinary output. The brain is affected placing the patient at increased risk for stroke, risk for seizure, and CNS disturbances.

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

    - We will not restrict salt; the patient will stay on pregnancy diet. The only cure is the delivery of the fetus. The decision of early delivery will be based on severity of the disease and the degree of fetal maturity. Severe preeclampsia requires inpatient hospitalization, bed rest, and continuous fetal monitoring. The patient will be put on antihypertensives and magnesium sulfate.

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

    - The drug of choice for severe preeclampsia is antihypertensive, such as labetalol. Other drugs that may be ordered include magnesium sulfate to prevent seizures.

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

- Nursing considerations when administering antihypertensives is to monitor blood pressure, adverse effects, fetal distress, and to educate the indication for the risk of stroke or congestive heart failure. For magnesium sulfate we need to consider that signs of magnesium toxicity such as respiratory depression, chest pain, mental confusion, slurred speech, depressed deep tendon reflexes, and hypotension. With any of these we need to stop the magnesium sulfate, notify the provider and be prepared to administer calcium gluconate.