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 indication would be that the baby is post-term so the placenta will start to fail and not supply that baby with the necessary oxygen and nutrients.

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

Prostaglandin helps the cervix become ripe. The physician ordered the medication because the patient's cervix is not dilated or effaced enough for the baby to come out. Prostaglandin also helps contractions to occur, which will help push the baby out when the doctor induces her.

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

Some tests and evaluations that should be done are the bishop screening, fetal heart monitoring, evaluation of the fetal heart pattern, evaluate how the baby is positioned in utero by doing Leopold's Maneuver, a vaginal exam, and evaluation of contractions for intensity and frequency.

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

Before administering oxytocin you want to monitor FHR for 20 minutes to make sure the baby is doing well. Also, Leopold's maneuver's or a vaginal exam to verify cephalic fetal presentation. Observe uterine activity to see if they are having an effective labor pattern. Watch fetal heart rate to look for any heart rate abnormalities.

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.

In the first trimester, spontaneous abortion or major fetal malformations because of an abnormal metabolic environment. The mother is more likely to get hypertension, especially preeclampsia. If the mother were to develop ketoacidosis it could be fatal for both her and her baby. Diabetic mothers are also more prone to UTIs. Maternal diabetes can cause the baby to be LGA, causing the mother to have a higher likelihood of having a c-section, which in turn increases the risk of having a postpartum hemorrhage.

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

Fetal- neural tube defects, caudal regression syndrome, cardiac defects, SGA, intrauterine growth restriction, and Oligohydramnios.

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

Some topics would include preconception care so that she can be healthy before she gets pregnant, diet during pregnancy to help keep her weight and glucose in check, and how to monitor her blood glucose herself.

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 because the mother has higher amounts of blood glucose which is being given to the baby. Because of the extra blood glucose, the baby will make more insulin which causes more tissue and fat deposits in the baby's body.

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 the 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 preeclampsia because the hypertension is after 20 weeks gestation and she is having problems with edema and proteinuria.

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

   Not eating enough throughout the day, being 17 years old, and this being her first pregnancy.

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

   - Cardiovascular- increase in resistance of blood vessels causing decreased intravascular volume, pulmonary edema, and congestive heart disease.
   - Neurological- can cause the formation of blood clots in the arteries leading to the brain causing strokes, cerebral edema, and intracerebral hemorrhage.
   - Hepatic- reduced liver circulation impairs function and leads to hepatic edema and subscapular hemorrhage.
   - Renal- renal profusion is decreased so it reduces the glomerular filtration rate, sp then the BUN, creatinine, and uric acid levels rise.
   - Pulmonary- decreased colloid oncotic pressure can lead to pulmonary capillary leakage that results in pulmonary edema. Dyspnea is a primary symptom.
   - Uterus- decreased placental circulation results in infarctions that increase the risk for placental abruption.

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

   Treatment should include frequent rest, monitoring blood pressure two to four times a day in the same arm, daily weight, urine dipstick testing for protein, fetal assessment, and a high protein and calorie diet.

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

   Antihypertensive medications like Laberalol, Hydralazine, and Nifedipine are considered the drug of choice for pregnancy-induced hypertension. Anticonvulsant medications like magnesium sulfate are also given to prevent seizures.

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

   Side effects include maternal tachycardia, palpations, flushing, headaches, dizziness, and nausea. Contraindications are asthma, obstructive airways disease, severe bradycardia, high degree heart block, and Raynaud's disease. Caution is important when antihypertensive medications are given with magnesium sulfate because hypotension can result. We need to monitor the patient's blood pressure when giving these medications to make sure they do not become hypotensive.