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?
   a. The indication for induction of labor is because the patient is post-term (41 weeks' gestation) and does not show signs of going into labor soon. Based on the patient's history, she has already delivered a large baby and by inducing labor, the physician will be able to deliver the baby vaginally before it gets too big.

2. Why did the physician order prostaglandins the evening before the induction?
   a. Because the patient's cervix is dilated 2 cm and still firm, the physician ordered prostaglandins to initiate the ripening of the cervix. By administering prostaglandins the evening before the induction, the patient's cervix will have softened throughout the night, leading to dilation to prepare for the birth of the baby.

3. What tests or evaluation should be performed prior to the induction?
   a. Prior to the induction, a Bishop score should be obtained to estimate cervical readiness for labor. The Bishop scoring system measures cervical dilation, effacement, consistency, position, and fetal station. The patient should also be assessed for contraindications for induction such as placenta previa, umbilical cord prolapse, active genital herpes, or an abnormal fetal presentation.

4. What are the nursing considerations when administering an Oxytocin infusion?
   a. When administering an Oxytocin infusion, the nurse should assess the FHR for at least 20 minutes before the induction and perform Leopold's maneuver or a vaginal exam to assess fetal presentation. The nurse should then assess the UA to establish an effective labor pattern. If tachysystole occurs or FHR patterns become abnormal, the nurse should stop the oxytocin 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.
   a. Some maternal risks associated with diabetes and pregnancy include hypertension, urinary tract infections, ketoacidosis, polyhydramnios, and organ damage.

2. Discuss fetal-neonatal risks associated with diabetes and pregnancy.
   a. Some fetal-neonatal risks associated with diabetes and pregnancy include fetal death, macrosomia, respiratory distress syndrome, hypoglycemia, congenital anomalies, prematurity, and hyperbilirubinemia.

3. What educational topics should be covered to assist the patient in managing her diabetes?
   a. Topics that should be covered with the patient include teaching the patient to monitor her blood glucose levels throughout the day, knowing the symptoms of hypoglycemia and always carrying fast-acting carbohydrates with her, and teaching that she will need more insulin during the second and third trimesters.

4. What classification (SGA, AGA, LGA) will this patient's baby most likely be classified as? Discuss your answer.
   a. The baby will most likely be classified as LGA due to the combination of high blood glucose levels from the mother and high insulin levels in the fetus. This combination results in large fat deposits which cause the fetus to grow very large.

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?
   a. This patient is exhibiting severe preeclampsia. Her blood pressure is 160/110, proteinuria is 3+, pitting edema is 3+, and she has hyperreflexia (3+) with ankle clonus. She also has CNS symptoms such as a severe headache and blurred vision.

2. What in the patient's history places her at risk for Pregnancy-Induced Hypertension?
   a. The patient is at risk for Pregnancy-Induced Hypertension because this is her first pregnancy.

3. Describe how Pregnancy-Induced Hypertension affects each organ and how these effects are manifested.
   a. Cardiovascular: vasoconstriction causes the organs to not receive adequate perfusion resulting in organ damage. The placenta is also not receiving adequate perfusion resulting in late decelerations of the FHR.

   b. CNS: hyperreflexia and severe headaches due to increased intracranial pressure. This can lead to seizures.

   c. Renal: decreased perfusion resulting in oliguria and renal failure.

4. What will the patient's treatment consist of?
   a. The patient's treatment consists of inpatient hospitalization where bed rest, reduction of external stimuli, fetal monitoring, seizure precautions, and magnesium sulfate will be provided.

5. What is the drug of choice for this condition? What other medication(s) might be ordered for this patient?
    a. The drug of choice for this patient is Magnesium Sulfate. Phenytoin and Diazepam could also be ordered, but typically are not used due to their decreased efficacy compared to Magnesium Sulfate.

6. What are the Nursing considerations when administering the drug of choice? (Side effects & medication administration guidelines)
    a. The nurse should assess the patient for respiratory rates above 12 breaths per minute, presence of DTRs, and urinary output greater than 30mL/hr before administering the medication. The nurse should also monitor the patient's blood pressure and ensure that calcium gluconate is readily available.