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 close to post-term without rupture of membranes.

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

Prostaglandins help the cervix to dilate or ripen the cervix to prepare for the induction of childbirth.

3. **What tests or evaluation should be performed prior to the induction?**
   Evaluating the cervix to see if it is ripened (using the Bishop Scale) will be performed prior to the induction of labor, as well as continuous FHR monitoring.

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

Always dilute (isotonic solution) and use as secondary infusion with primary tubing, use most proximal port, start slowly and titrate gradually and always administer via infusion pump, Oxytocin line is inserted as primary or maintenance IV line as close as possible to venipuncture site, uterine activity and fetal heart rate patterns are monitored for normal baseline and variability 20 min before starting oxytocin, continuous fetal monitoring is required, you must decrease or stop infusion for tachysystole or abnormal fetal heart rate patterns, and titration is based on maternal and fetal response.

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 infection risks, preeclampsia, hydramnios, ketoacidosis, hypoglycemia, and hyperglycemia.

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

Fetal-neonatal risks associated with diabetes and pregnancy include fetal death, macrosomia, IUGR (if mother is Type 1 with vascular changes), respiratory distress syndrome, hyperbilirubinemia, hypoglycemia, prematurity, cardiomyopathy or cardiac anomaly, congenital defects, psychiatric disorders

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

The patient should know that her blood glucose level should be check and recorded 4-8 times per day, she should keep a food diary, self-monitor of urine ketones, make diet changes according to physicians orders, urine dipstick for glucose and protein during each visit, exercise 3 times a week for at least 20 minutes unless contraindicated, know symptoms of hypoglycemia (have fast-acting carbohydrate!), and measure daily kick counts.

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

This patient's baby will most likely be a Large for Gestational Age baby. This baby will most likely be LGA due to the patient having elevated blood glucose levels. One of the risks for expecting mothers who are experiencing hyperglycemia is having a baby who is LGA. This could be due to the mother experiencing diabetes during pregnancy or obesity.

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?**

This patient is demonstrating severe preeclampsia, due to the BP at 160/110, hyperreflexia with 2 beats clonus, 3+ proteinuria, blurred vision, edema, and severe headache.

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

   The patient began prenatal care at 18 weeks, has missed two appointments, and has an irregular diet for a pregnant woman (never eats breakfast, snacks for lunch, eats dinner at 10:00 pm)

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

Pregnancy-Indudced hypertension is associated with placental abruption, kidney failure and hepatic rupture. High blood pressure can also affect the development of the placenta, leading to inadequate nutrient and oxygen administration to the fetus. These instances often occur due to a vasospasm that leads to poor tissue perfusion. Kidney failure is often contributed due to an increase of protein found in the urine due to pregnancy induced hypertension, known as proteinuria. Placental abruption is caused by the vasospasm that leads to poor perfusion. Blood clotting problems can also happen when placental abruption occurs due to an increase of bleeding. Poor perfusion can also lead to problems in the patients brain such as a stroke. Severe preeclampsia, a complication of pregnancy-induced hypertension, causes liver enzyme abnormalities leading to hepatic rupture as well.

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

   This patient will require inpatient hospitalization, bed rest, and fetal monitoring

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 Magnesium sulfate. Other medications that may be ordered for this patient are Hydralazine hydrochloride, Labeatelol, and Nifedipine.

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

   Medication administration guidelines include IV loading dose is 4 to 6 g administered over 15 to 20 min. Continuous infusion to maintain control is 1 to 2 g/hr. Always deliver via pump, piggyback into mainline IV infusion to most proximal port. Side effects for Magnesium Sulfate include respiratory depression/difficulty, chest pain, mental confusion/slurred speech, depressed DTRs, flushing, sweating, lethargy, hypotension, FHR deceleration.