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 baby is post term, which is the primary basis of the physician's order to induce labor.

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

Prostaglandins are used to help with the cervical ripening, which is the softening of the cervix that helps dilation in combination with the forces of labor.

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

Testing and the evaluation of the cervical assessment, monitoring of FHR, UA, Bishop score and confirmation of gestational ages should be performed before induction of labor occurs to create a safe delivery for the fetus and a healthy recover of the mother.

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

Oxytocin is used to stimulate contractions during labor and prevent hemorrhage after the birth of the fetus. While administering Oxytocin during labor, it's important to monitor the amount given to the mother to prevent late decelerations of the FHR, Fluid intoxication, and further complications that arise while monitoring the mother and fetus. It's the nurses responsibility to know and properly implement the nursing interventions that will keep mom and baby safe if a complication occurs.

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.

Diabetes in the first trimester of pregnancy can cause hypo and hyperglycemic episodes that can lead to spontaneous abortions or major malformation of the fetus. Mothers that experience Ketoacidosis while pregnant can have a quicker onset that can lead to the death of both fetus and mother. Macrosomia and dystocia are likely to occur during delivery.

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

The risk for fetal malformations is 2 to 6 times higher if mother's hyperglycemia is not controlled. The most common risks associated are neural tube defects, caudal regression syndrome and cardiac defects. Other effects that are likely to occur are hyperglycemia, hypocalcemia, hyperbilirubinemia, and respiratory distress syndrome.

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

In order to help this mother take control of her diabetes, it's important to educate on the basics on what causes hypo and hyperglycemic episodes and how to monitor, treat, and prevent these episodes from happening. One intervention we can do is provide a healthy meal plan that incorporates their favorite foods. It will be important to teach her about insulin and how the amount my vary from trimester to trimester.

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 classified as a LGA baby. If the mother is hyperglycemic, so is the fetus. Although the maternal insulin does not cross the placenta barrier, the fetus produces insulin by the 10th week of gestation. Fetal macrosomia occurs when elevated levels of blood glucose stimulates the over production of fetal insulin which acts as a growth hormone.

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 signs and symptoms of preeclampsia. The patients signs and symptoms are: BP 160/110, weight gain of 5 lbs, 3+ pitting edema, facial edema, severe HA, blurred vision, and 3+ proteinuria.

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

Due to this being the patient's first pregnancy, having a late start and irregular intake pattern of her prenatal care puts her at an increased risk for pregnancy induced hypertension.

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

   Heart- Severe hypertension that could lead to hypertension crisis, congested heart failure, increase vascular resistance, increased stroke volume and increased cardiac output.

   Lungs- pulmonary edema characterized by difficulty breathing and crackles on auscultation

   Kidneys- Acute kidney failure characterized by proteinuria and altered kidney function

   Brain- seizures, cerebral edema, stroke characterized by increased ICP and alteration of cerebral autoregulation

   Liver- Hepatic rupture, coagulation defects characterized by increase hepatic artery resistance and necrosis

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

After examining the mother and fetus, immediate delivery is required to save the fetus. This condition may be managed through reduced activity, self-monitoring of her blood pressure, daily weights, urinalysis to monitor protein levels, increased fetal assessments, a diet high in protein and calories minimizing the intake of salt and fluid. Patient teaching about preeclampsia will be important for the mother to understand the severity of the situation and will allow for decision making of the mother to be easier.

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 preeclampsia is Magnesium Sulfate due to the few side effects. Labetalol, hydralazine, and nifedipine are drugs that could be considered for treatment. Diazepam and phenytoin are not recommended but may also be used in some cases.

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

Magnesium Sulfate is a mineral and electrolytes replacement, with this drug its important to warn the patient of the following side effects: Drowsiness, decreased respiratory rate, flushing, sweating, and muscle weakness. When giving magnesium sulfate, its important to monitor for toxemia, newborn hypotension and respiratory depression, monitoring the I/O and taking as ordered by the physician.