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 for induction of labor in this particular scenario is the fact that the patient is 41 weeks gestation, and that is considered a post term pregnancy. Also, the patient's Bishop score is a 2, and vaginal births are more likely if the score is above 8.

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

   Prostaglandins causes cervical ripening, which is a process used to soften the cervix and make it more likely to dilate with the forces of labor.

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

   The Bishop scoring system should be used prior to induction. A cervical exam should also be performed, along with monitoring the fetal heart and confirming the gestational age.

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

The nursing considerations when administering an Oxytocin infusion include assessing the FHR for at least 20 minutes before induction, performing Leopold's maneuvers, a vaginal exam. If tachycardia, bradycardia, decreased variability, or pathologic decelerations occur, stop the oxytocin infusion. Oxytocin is started slowly, increased gradually, and regulated with an infusion pump. UA, FHR, and fetal heart patterns are monitored.

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.

The increased maternal risks are hypertension, preeclampsia, UTI, ketoacidosis, Labor dystocia, cesarean birth, uterine atony with hemorrhage after birth, and birth injury to maternal tissues.

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

The fetal-neonatal risks associated with diabetes and pregnancy are congenital anomalies, perinatal death, macrosomia > 400 g, intrauterine fetal growth restriction, preterm labor, premature rupture of membranes, preterm birth, birth injury, hypoglycemia, polycythemia, hyperbilirubinemia, hypocalcemia, and respiratory distress syndrome.

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

Preconception care, diet, self-monitoring of blood glucose levels, and insulin therapy are all educational topics that should be covered to assist the patient in managing her diabetes.

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. Fetal macrosomia results when elevated levels of blood glucose stimulate the production of fetal insulin, which acts as a strong 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 preeclampsia as evidence by hypertension of 160/110 at 34 weeks gestation, edema, and proteinuria 3+, blurred vision, and severe headaches.

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

The patients history that places her at risk for Pregnancy- Induced Hypertension are that this is her first pregnancy, started prenatal care later than recommended, has poor nutritional habits, and has skipped two of her prenatal care appointments.

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

Heart- increases blood pressure, arteriolar narrowing, increases sympathetic activity, and increases capillary permeability, as manifested as an increased vascular resistance, and increased cardiac output and stroke volume.

Lungs- pulmonary edema and hypoxemia. Manifestations are SOB and dyspnea.

Kidneys- Oliguria, acute renal failure, and impaired drug metabolism and excretion. Manifestations are proteinuria and altered kidney function. Proteinuria is present, as well as decreased creatinine levels and increased BUN.

Brain- seizures, cerebral edema, intracerebral hemorrhage, stroke, visual disturbances, blindness. Manifestations are hyperreflexia, increased intracranial pressure, and changes in cerebral autoregulation.

Liver- Hepatocellular dysfunction, hepatic rupture, hypoglycemia, coagulation defects, and impaired drug metabolism and excretion. Manifested as hepatic dysfunction and hepatic rupture. Liver function tests are elevated. Also has elevations in bilirubin, and signs of liver failure; malaise, nausea, epigastric pain, hypoglycemia, hemolysis, and anemia.

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

The patient should rest frequently, monitor their blood pressure, obtain a daily weight, and perform urinalysis. Frequent fetal assessments should also be performed because vasoconstriction can reduce placental flow.

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

The patient's treatment will consist of Labetalol, Hydralazine, or Nifedipine. Magnesium sulfate can also be used to prevent seizures, and well as Phenytoin and diazepam. Labetalol is the drug of choice because it has less maternal tachycardia ad fewer adverse effects.

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

Labetalol is contraindicated in patients with asthma, heart disease, CHF, hypoglycemia, and small for gestational age infants. The side effects are tingling of skin, nausea, dizziness, and fatigue. Medication administration guidelines are to administer IV over 2 minutes, and patient needs to remain supine during and for up to 3 hours following if given as an injection. Can also be given as a continuous infusion diluted in NS, D5W, LR, D5LR, D5-0.2% NaCl, D5NS, 3.5% dextrose and 0.45% NaCl, or 5% dextrose and 0.33% sodium chloride.