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 last baby was weighting 9lbs and the baby that she is fixing to have can be weighting more than 9lbs. This can be an issue for mom who is delivering the baby. If baby becomes too big, then she may have a c-section.

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

   Prostaglandins are drugs that may be used to cause cervical ripening. Cervical ripening is a process used to ripen 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?

   Cervical assessment: cervical dilation, effacement, consistency, position, and fetal station

   Cervical ripening

   Fetal heart rate

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

   -Oxytocin is diluted in an isotonic solution and given as a secondary infusion so it can be stopped quickly if complications develop. The oxytocin line is inserted into the primary IV line as close as possible to the venipuncture site to limit the amount of drug infused if discontinued. It is started slowly, increased gradually, and regulated with an infusion pump. UA, FHR, and fetal heart patterns are monitored before induction for a baseline, when oxytocin is started, and throughout labor.

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 age older than 25 years
-Overweight (BMI)
-Previous birth outcome often associated with GDM (neonatal macrosomia, maternal hypertension)
-Gestational diabetes in previous pregnancy
-History of abnormal glucose intolerance
-History of diabetes in a close first degree relative
-History of prediabetes
-History of polycystic ovary syndrome
-Member of a high-risk ethnic group (African American, Hispanic, American Indian)

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

Fetal Effects
-Congenital malformation
-Variations in Fetal size

Neonatal Effects
-Hypoglycemia
-Hypocalcemia
-Hyperbilirubinemia
-Respiratory Distress syndrome

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

-Teaching Self-Care skills
-Teaching Dietary Management
-Managing Hypoglycemia and Hyperglycemia

4. What classification (SGA, AGA, LGA) will this patient's baby most likely be classified as? Discuss your answer.
   -Fetal macrosomia results when elevated levels of blood glucose stimulate excessive production of fetal insulin, which acts as a powerful 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?

   Preeclampsia because the patient has a blood pressure of 160/110 after 20 weeks of pregnancy. The patient also has 3+ proteinuria and pitting edema.

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

   First pregnancy and a poor diet.

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

   Preeclampsia is a result of generalized vasoconstriction and vasospasm resulting in a multiple system organ failure disease in pregnancy. Vasospasm decreases the diameter of blood vessels, which results in endothelial cell damage, decreasing EDRF, and increasing capillary permeability. Vasoconstriction also results in impeded blood flow and elevated blood pressure.

   Decreased renal perfusion reduces the glomerular filtration rate. Blood urea nitrogen, creatinine, and uric acid levels rise.

   Reduced renal blood flow results in glomerular damage, allowing protein to leak across the glomerular membrane, which is normally impermeable to large protein molecules

   Loss of protein from the kidneys reduces colloid osmotic pressure and allows fluid to shift to interstitial spaces

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

Activity Restrictions
Blood Pressure Monitoring
Daily Weight
Urinalysis
Fetal Assessment
Fetal Monitoring

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

    Antihypertensive Medications such as labetalol, Hydralazine, and Nifedipine.

    Anticonvulsants Medications- magnesium sulfate, phenytoin

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

Labetalol- Has less maternal tachycardia and fewer adverse effects: contraindicated in patients with asthma, heart disease, or CHF; associated with hypoglycemia and small for gestational age infants

Hydralazine-Higher doses are associated with maternal hypotension, headaches, and fetal distress

Nifedipine- May be associated with reflex tachycardia and headaches; because of mechanism of action, a synergistic effect with magnesium sulfate may result in hypotension and neuromuscular blockade