Chelsie Callesen

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 currently at 41 weeks gestion, which falls under a late term pregnancy.

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

   The hormone prostaglandin is given to help ripen the cervix, to prepare for delivery.

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

   UA, FHR, and fetal heart patterns are monitored before induction for a baseline when oxytocin is started, and throughout labor. Perform Leopold's maneuver's, vaginal examination, or both to verify cephalic fetal presentation.

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

   Oxytocin is started slowing, increased gradually, and regulated with an infusion pump. We want to monitor for any signs of fetal distress or asphyxia, such as; decreased fetal heart rate, arrhythmias, meconium discharge, or decreased or absent fetal movements. Monitor for any adverse reactions and intervene as needed.

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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.**

   Hypertension, preeclampsia, UTI's, ketoacidosis, labor dystocia, cesarian birth, uterine atony with hemorrhage after birth, birth injury to maternal tissues (hematoma, lacerations), increased fetal and neonatal risks.

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

   Perinatal death, macrosomia (>4000 g), intrauterine fetal growth restriction, preterm labor, premature rupture of membranes, preterm birth, birth injury, hypoglycemia, polycythemia, hyperbilirubinemia, hypocalcemia, respiratory distress syndrome.

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

   Establish optimal time to conceive, identify whether complications of diabetes exist in other organ systems, educate on how to use a glucometer and how to properly obtain blood glucose levels. Educate on what a normal blood sugar is. Take daily vitamins high in folic acid and educated on important diet recommendations. Educate on the importance in maintaining a normal blood glucose level before conception, and throughout pregnancy.

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

   Due to the patient's last baby being born at 32 weeks gestation, as still born, I would imagine the patient's next baby would fall under the classification of SGA (small for gestational age.) The patient is already concerned for this baby because of her last and her blood glucose levels are elevated. Elevated blood glucose levels may increase the patient's risk of delivering her baby early.

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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 (systolic blood pressure of 160 mm Hg or greater or a diagnostic blood pressure of 110 mm Hg or greater than at least 1 occasion at least 4 to 6 hours apart while the patient is on bed rest), > 20 weeks gestation, proteinuria, edema

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

   The patient's age, late and infrequent prenatal care, and poor diet.

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

   Decreased renal perfusion, reduced renal blood flow resulting in glomerular damage, loss of protein from the kidneys, reduced colloid osmotic pressure, reduced intravascular volume triggering the retention of both sodium and water, reduced liver circulation impairs function and leads to hepatic edema and subcapsular hemorrhage, which can lead to hemorrhagic necrosis. Vasoconstriction of cerebral vessels leading to cerebral hemorrhages. Decreased colloid oncotic pressure leading to pulmonary edema. Decreased placental circulation resulting in infarction and the risk for placental abruption and HELLP syndrome.

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

   Bed rest, fetal monitoring, and antihypertensive medications.

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

   Labetalol – has less maternal tachycardia and fewer adverse effects.

   Hydralazine (Apresoline) – higher doses are associated with maternal hypotension, headaches, and fetal distress.

   Nifedipine – may be associated with reflex tachycardia and headaches

* Caution is essential when hypertensive medications are given to the woman receiving magnesium sulfate because hypotension may result, reducing placental perfusion.

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

   Magnesium sulfate – contraindicated in persons with myocardial damage, heart block, myasthenia gravis, or impaired renal function. Magnesium toxicity, possibly related to incomplete renal drug excretion, may be evidenced by respiratory difficulty, lethargy, mental confusion, slurred speech, visual disturbances, or a decrease in reflexes.

   Reactions result from magnesium overdose and include flushing sweating, hypotension, depressed DTRs, and central nervous system depression, including respiratory depression.

   Monitor blood pressure closely during administration. Assess the woman for respiratory rate above 12 breaths per minute, presence of DTRs, and urinary output greater than 30 mL/hr before administering equipment (suction and oxygen) in the room. Ensure that calcium gluconate, which acts as an antidote to magnesium, is readily available.