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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?

There are lots of things that could indicate the need for induction of labor. It is the healthcare provider's responsibility to evaluate certain criteria about the mother and infant, including their overall health, to determine if induction is needed. The main reason for induction of labor in this scenario is because of the baby's gestational age. The baby is nearly considered post-term which can cause other complications as well. The mom's previous birth history is also another indication that induction is needed. Her last baby was already 9 pounds at 40 weeks old. Her assessments and data also show poor results for a successful vaginal delivery.

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

Prostaglandin is a hormone that is typically ordered well in advance before the induction to allow the cervix the time it needs to ripen. Prostaglandins cause reflex of the smooth muscles and produce vasodilation for the delivery. Due to this patient's current condition and previous birth experience, the goal is to provide the mom and baby the most positive possible birthing experience for her second delivery. This will help prevent further delays that may cause harm or trauma.

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

There are lots of tests and evaluations that are recommended prior to induction of labor to ensure the safety of both the mom and baby. The nurse and physician, along with other healthcare members, should work together to ensure these are taken care of. The goal is to be sure that induction is not contraindicated for any reason. These contraindications could include abnormal fetal position, umbilical prolapse, active genital herpes, or diagnoses of HIV. After these are evaluated, the Bishop score will also be performed. This assesses the state of the cervix. If the score is less than 6, then a successful vaginal delivery is not favorable. This patient has a score of 3, therefore prostaglandins were administered.

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

One of the most important nursing considerations when giving an oxytocin infusion is to perform the vital assessments needed. These include uterine activity monitoring and continuous fetal heart monitoring. This will gather baseline data and helps monitor and watch for tachysystole. When prepping this drug, oxytocin needs to be diluted in an isotonic solution. It should always be given as a secondary infusion and administered through an IV pump. When first giving the medication, introduce it slowly then gradually increase to be sure the mother and fetus are stabilized. Lastly, while oxytocin is infusing, monitoring of the fetus

must never be stopped. If tachysystole, Category II or III, or abnormal fetal patterns occur, stop the infusion immediately and intervene with the appropriate nursing action.

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.

Any woman who is pregnant with any type of diabetes is already at a higher risk for complications during her pregnancy. Whether it is type 1, type 2 or gestational diabetes, it can cause a negative effect on the mother, and there needs to be proper education on the risks that are associated. The biggest risk is high blood sugar throughout the pregnancy which can result in the need for a cesarean delivery. It can lead to the baby being much larger which makes the actual birth more traumatic for the mother.

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

A big risk for the fetal-neonatal is the mother having elevated blood sugar levels at the time of conception. This increases the risk of birth defects, still birth, and preterm birth. The baby may also be born large for gestational age which can lead to the development of obesity or type 2 diabetes in the future.

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

The mother should be talking with their doctor about managing diabetes even before becoming pregnant to ensure the healthiest pregnancy possible. The initial lab work obtained determined an elevated blood glucose for her second pregnancy. Since the mother is only at 10 weeks, there needs to be lots of teaching on what to do before, during, and after the pregnancy and birth. She needs to be educated on how to monitor her blood sugars regularly, create a healthy eating plan that she should stick to, be physically active as much as possible, and take insulin as directed if needed. After delivery, she will need to be retested 4-12 weeks after the baby is born. During the mother's first pregnancy, she may not have had proper prenatal care. Teaching about the importance of having a provider can prevent and manage results. This can include preconception care, review lab work, adjustment of medications, and check for and treat health problems that are related.

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

The baby will most likely be classified as an LGA (large for gestational age) because of the mother having diabetes. A mother with high blood sugar can pass this on to her baby. In the womb, the baby will adapt by making their own insulin, and will be used to fighting off the extra amounts of blood sugar from the mom's blood. The extra levels of sugar and insulin can lead to fast growth and an accumulation of fat deposits. This will often result in a larger baby than normal.

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 exhibiting pregnancy induced hypertension. Her blood pressure is recorded as 160/110, edema is present which is swelling, and there is protein in the urine. These are all primary characteristics of pregnancy induced hypertension. She is also experiencing sudden weight gain and blurred vision which can also be symptoms.

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

One of her biggest risks is the delay of prenatal treatment. According to her history, she did not begin prenatal care until 18 weeks of being pregnant. The goal is for pregnant women to start prenatal care as close to conception as possible to prevent any complications. This patient is also at risk because of young age, and she has already missed 2 of her scheduled appointments. All of these things combined increase her risk for pregnancy induced hypertension significantly, especially since she isn't getting the proper care, or could be missing complications that are might not be caught in a timely manner. Due to her age, it is most likely that she is also not getting the proper nutrients that are essential for her and the baby during pregnancy.

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

One of the biggest issues with pregnancy induced hypertension is the resistance of the blood vessels. This leads to poor blood flow to the kidneys, brain, heart, uterus, and placenta. When there is poor blood flow in the body, the mom's body will naturally revert to sending the blood to her vital organs, leaving out the placenta and uterus. The placenta then starts to reduce in placental perfusion. The uterus obtains clots and the kidneys don't filter appropriately due to the lack of nutrition and hindered blood flow. The brain and heart can increase in resistance which could lead to a heart attack, stroke, or possible seizures. These are late signs that can cause harm to both the mother and baby, and could lead to death.

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

The patient treatment will begin by preventing the condition from becoming worse and to prevent it from causing other complications. This can include bed rest at home or in the hospital. The patient will have fetal monitoring and kick counting. We want to perform these as soon as possible to gather a baseline. A non-stress test will be performed and a biophysical profile. Lab work testing of the urine and blood can determine if the condition is getting better or worse. The extensive amount of test and assessments is vital to establish the well-being of mom and baby.

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

The drug of choice in this case would be an anti-hypertensive drug, specifically Methyldopa. The focus of these medications would be to correct the hypertension for the mother which helps prevent complications for the baby. For emergency treatment, you could also include hydralazine, labetalol, and oral nifedipine. Corticosteroids may also help mature the lungs of the fetus. Angiotensin-converting enzyme inhibitors are not recommended.

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

When administering this medication, make sure that the patient does not have liver disease or any history of liver problems. The patient needs to be instructed to take the medication even if they are feeling well. High blood pressure tends to have no symptoms and/or may cause you to feel fatigue. Avoid getting up to fast from sitting or lying position you may become dizzy. Patient will have their own therapeutic range to a medication. This medication can be 500 mg to 2 g orally divided into 2 to 4 doses a day, up to a maximum of 3 g a day. If the patient is experiencing a hypertensive emergency, 250 to 500 mg IV can be administrated over 30 to 60 minutes every 6 hours or 4 g a day.