

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 late in gestational age and there can be risks associated with a post term baby. Also, the longer the baby is inside the mom the bigger it can get causing issues with postpartum hemorrhage. The fetus can have insufficiency in amniotic fluid and other complications if post term.

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

Prostaglandins can cause cervical ripening and softening and help with the induction of labor. It also helps the cervix to dilate and contractions to begin.

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

Blood type and cross with emphasis on Rh factor, any infectious diseases that can be passed on such as HIV, herpes, Hep B, blood glucose test, fetal heart rate monitoring, amniocentesis, bishop score, and any contraindications for anything that would not allow for a vaginal delivery.

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

Proper assessment of the uterine contractions ensuring that they are not too long in duration or close together, monitor fetal heart rate pattern and ensure there are no category II or III FHR patterns, ensure no respiratory or cardiac distress of the mom or baby, assess for hypertension, assess for hypersensitivity, assess for possibility of uterine rupture.

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 risks that can occur when the patient is pregnant and has diabetes includes; pre-eclampsia, polyhydramnios, early labor, postpartum hemorrhage, hypoglycemia or hyperglycemia, and increased possibility of morbidity in labor.

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

If the mother has diabetes while pregnant the fetus or infant is at risk for being an infant of a diabetic mother. This is an umbrella for multiple complications such as metabolic disorders, increased chance of hyper or hypoglycemia (can cause a severe drop in blood sugar after delivery due to the mothers sugar no longer being passed through to the baby), cardiac complications, birth trauma due to large size, stillbirth, shoulder dystocia, and a higher risk of DM2 or obesity later in life.

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

Teach the patient about diets and exercise that are appropriate for both her and the baby to help control and maintain health with diabetes. Teach the patient how and when to self-administer insulin and how and when to properly test her blood sugar. The patient also needs to be educated on signs of high blood sugar and of low blood sugar.

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

Due to the mother having diabetes the infant of the diabetic mother is most likely to be large for gestational age. The baby receives a lot of sugar from the mother but is unable to pass her insulin into its circulation as well. The baby then has to make his own supply of insulin. The increased levels of sugar and need for increased insulin leads the body to make extra fat to store sugar. This leads to an increase in the baby's size and weight.

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 presenting with signs of pre-eclampsia or hypertension during pregnancy. Assessments supporting this are the elevated blood pressure of 160/110, the elevated DTR and clonus, severe headaches, edema, blurred vision and elevated proteinuria.

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

The patient has missed prenatal care appointments and does not have a healthy diet or sleep schedule with a high stress environment.

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

Increased blood pressure increases the chance of stroke or heart attack by placing extra force on the arterial and venous walls. Additionally, the brain can be affected by the extra pressure in the brain causing seizures. The heart has to compensate for the additional venous pressure and will have to work harder to compensate, this could lead to hypertrophy, increased workload, MI. Hypertension affects the kidneys by increasing the glomerular flow rate and not allowing the kidneys to work as they need to leading to proteinuria and increased albumin levels. The liver can be affected in similar ways by increased pressure and demand to the organ causing overworking, manifested by increased liver enzymes. The placenta can be affected by hypertension and can lead to placental abruption which is manifested by bleeding and fetal distress.

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

Possible best rest and hospitalization (low stimulation) depending on tolerance of medications and ability to control the hypertension, fetal heart rate monitoring, antihypertensives, magnesium sulfate, a non-stress test for the fetus as well as BPP, continuous lab test, and possible induction of labor if needed.

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

Magnesium sulfate. Methyldopa, labetalol, hydralazine, and nifedipine. Anticonvulsants, antihypertensives, and corticosteroids are used.

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

Always prepare for the possibility of a seizure and put in place precautions such as padding on the bed and suction. The drug of choice is Magnesium Sulfate, side effects of this drug include flushing, hot flashes, sweating, nausea, vomiting, headache, muscle weakness, and blurred vision. It is important to note that this medication can cause low calcium levels and lead to bone abnormalities with the baby or higher risk of fractures during birth. This medication can also cause hypotonia and hypotension, it is important to pay close attention to the fetal heart monitoring to catch fetal distress as quickly as possible and apply interventions to help the baby. This can also affect the mother, placing her on her left lateral side and assisting her when she gets up are interventions that can help as well as fluid replacement and oxygen if needed.