

## 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?

- Some indications for labor induction may include gestational or chronic hypertension, preeclampsia, eclampsia, premature rupture of membranes, severe fetal growth restriction, and post term pregnancy. In this case, the indication for the induction of labor is the mother had a history of having delivered a 9-pound baby at 40 weeks, making her at risk of delivering another big baby that may post more complications to the mother including hemorrhage.

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

- Prostaglandins are used to induce labor which help cause the cervix to dilate and contractions to occur. This, along with Oxytocin should help with the softening of the cervix and produce successive contractions that will help with the delivery of the baby.

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

- The Bishop's score system is used to evaluate the dilation, position of cervix, effacement, fetal station, and cervical consistency that will determine if the baby can be delivered naturally. It is contraindicated for the baby to be delivered naturally if there is placenta previa, the baby is in breech or transverse lie, the mother has an active genital herpes infection and there is an umbilical cord prolapse.

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

- There should be a continuous Fetal Heart Rate monitoring to assess the baby. Furthermore, there should be a continuous monitoring of the mother's Vital Signs. The Oxytocin should run on its own pump and connected to the port nearest to the patient's insertion site. Other anomalies detected while Oxytocin is running should prompt the nurse to use the 4 turns. Turn the patient on to lateral side, turn off the oxytocin, turn on the oxygen at 10 L using a non-rebreather mask, and turn on an IV bolus.

## **CASE STUDY - Diabetes in Pregnancy**

A 30-year-old, G2, P1, is in her 10<sup>th</sup> 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 maternal risks associated with diabetes during pregnancy may include birth defects, C-section delivery, preeclampsia, preterm birth, hypoglycemia, miscarriage or stillbirth and an extra-large baby. Since the mother had a history of stillborn in her last pregnancy, it can be possible that it could have been due to diabetes during the pregnancy, and it is not far that it could be the same thing for the present pregnancy, hence the mother and the baby are at greater risks.

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

- Fetal-neonatal risks associated with diabetes and pregnancy may include metabolic and hematologic disorders, respiratory distress, cardiac disorders, and neurologic impairment due to perinatal asphyxia and birth traumas, among others. Other risks include excessive birth weight, preterm birth, stillbirth and obesity and type 2 diabetes later in life.

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

- The mother had to be educated about the need to maintain a manageable blood glucose level during pregnancy, hence, the mother must watch her diet. Maintaining a healthy diet while keeping the good nutrients to promote the health of the baby as well. Frequent clinical check ups are also recommended to monitor the baby's vital signs as well as blood sugar checks at home. Pregnancy may require the mother to continuously eat to support the growing baby, thus, the patient must be educated not to skip a meal but to eat in little amounts during the day to support the mother and the baby's needs.

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

- Unless the mother controls her blood sugar level, the baby will be born Large for Gestational Age (LGA). LGA can be expected for infants born with a mother who has gestational diabetes. It is a term used to describe babies who are born weighing more than the usual amount for the number of weeks of pregnancy. This can also mean that the baby can develop great risks later on in life.

## **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 the signs and symptoms of severe pregnancy induced hypertension (PIH) or also known as pre-eclampsia. The patient's blood pressure of 160/110 together with 3+ proteinuria are the key indications of preeclampsia. Swelling or edema, although hard to notice in a pregnant woman, can also indicate preeclampsia. The patient had also gain weight of 5 pounds which means that she is having water retention, another indication that she is exhibiting PIH.
2. What in the patient's history places her at risk for Pregnancy-Induced Hypertension?
  - The patient is an adolescent and a primigravida which make her at high risk for Pregnancy Induced Hypertension.
3. Describe how Pregnancy-Induced Hypertension affects each organ and how these effects are manifested.
  - Preeclampsia may result in damage to the kidneys, liver, lung, heart, or eyes, and may cause a stroke or other brain injury. HELLP syndrome is also another complication that may result from preeclampsia. HELLP stands for hemolysis, elevated liver enzymes and low platelet count. The signs and symptoms can include nausea and vomiting, headache, upper right belly pain, and general feeling of illness. It can be life-threatening to both the mother and the baby.
4. What will the patient's treatment consist of?
  - The patient should expect to be prescribed with anti-hypertensive medications, lifestyle changes and healthy choices would be encouraged and a prescription of anticonvulsant medication that will help prevent seizure for the complication that may result from severe preeclampsia.

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

- The drug of choice for the patient's condition would be anti-hypertensive medications along with magnesium sulfate to help prevent seizures.

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

- The nurse should consider the days of administration for magnesium sulfate because an intake of longer than 5-7 days in pregnancy can result to hypocalcemia, skeletal demineralization, osteopenia, and other skeletal adverse effects. These all can result to magnesium sulfate toxicity which can present as the loss of patellar reflexes as the first sign. Other early signs can include nausea, feeling of warmth, flushing, somnolence, double vision, slurred speech, and weakness. With the risk of having magnesium sulfate toxicity, it is important that the nurse asks the prescriber to prescribe calcium gluconate as an antidote for this.