

## 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?

Hostile Intrauterine Environment, SROM, PROM, PPRM, postterm pregnancy, chorioamnionitis, Hypertension associated with pregnancy, Placental abruption, Maternal Medical conditions, or fetal demise

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

Prostaglandins can be used for cervical ripening.  
Ex. Misoprostol

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

Bishop Score - used to estimate cervical readiness for labor.  
A score of 6 or less means that the cervix is "unfavorable" for a vaginal delivery.

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

- Assess FHR for 20 mins before administering.
- observe UA for est. of effective labor pattern.
- observe FHR for bradycardia, tachycardia, decreased variability, or variable, late, or prolonged decelerations
- If anything above occurs, begin IUR
- Record Maternal BP, respirations, and pulse every hour or with dose increase
- I/O
- Assess and massage Fundus, observe for lochia, assess for cramping. Monitor vital signs q 15 minutes. Monitor I/O and breath sounds. (post partum)

## 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.

Hypo/Hyperglycemia and ketosis can lead to major fetal malformations or spontaneous abortion. Mother is more likely to develop preeclampsia. Untreated ketoacidosis can progress to maternal and fetal death. Diabetic mothers are at increased risk for UTIs, hydramnios, shoulder dystocia, and macrosomia.

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

- Congenital malformation - neural tube defects
- Variations in fetal size - SGA, Macrosomia, IUGR
- Hypoglycemia - neonatal insulin exceeds available glucose
- Hypocalcemia
- Hyperbilirubinemia - prematurity (IDM)
- RDS - inhibits cortisol production

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

Self-monitoring blood glucose levels, insulin administration, dietary management, management of hypoglycemia, and management of hyperglycemia

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

LGA. By the 10<sup>th</sup> week of gestation, the fetus begins to produce insulin. Because of the mother's elevated blood glucose levels, this stimulates the baby to produce excessive amounts of insulin, which acts as a 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? The patient is exhibiting preeclampsia/eclampsia. Preeclampsia is the onset of hypertension after 20 wks of labor that may be accompanied by proteinuria ( $\geq 1+$ ) and generalized edema. The patient has facial and pitting edema and 3+ proteinuria.
2. What in the patient's history places her at risk for Pregnancy-Induced Hypertension? 1st pregnancy, 17 years old (Adolescent)
3. Describe how Pregnancy-Induced Hypertension affects each organ and how these effects are manifested.
  - Vascular bed - endothelial dysfunction, altered coagulation, altered response to vasoactive substances
  - Cardio/Pulm -  $\uparrow$  vascular resistance,  $\uparrow$  cardiac output,  $\downarrow$  colloid osmotic pressure
  - Renal - proteinuria, altered function.
  - Hepatic - hepatic dysfunction and rupture
  - Hematologic - thrombocytopenia, altered platelet function, hemolysis
  - CNS - hyperreflexia
  - Fetal - intolerance to labor, preterm, oligohydramnios, IUGR, IUFD, placental abruption
  - uteroplacental - spiral arteries, DS consistent with hypoxia
4. What will the patient's treatment consist of? Activity Restrictions, BP monitoring, Daily weights, urinalysis, fetal monitoring, antepartum management, Antihypertensive meds
5. What is the drug of choice for this condition? What other medication(s) might be ordered for this patient? Magnesium sulfate? Labetalol, hydralazine, Nifedipine, phenytoin, diazepam
6. What are the Nursing considerations when administering the drug of choice? (Side effects & medication administration guidelines) IV administration. Give a loading dose and then continuous infusion via pump. May cause arrhythmias, bradycardia, hypotension, or respiratory depression.