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?

This patient is currently at 41 weeks' gestation. One of the indications stated in the book for induction is post term pregnancy. Since the patient is 41 weeks pregnant that is an indicator for induction in this patient.

PAGE 404 in the book states that the indicators are:

- Elective Induction due to 41 weeks gestation.
- Chorioamnionitis
- Post term pregnancy
- Fetal demise
- Hypertension associated with pregnancy or chronic hypertension, both of which are associated with reduced placental blood flow
- Placental abruption
- Maternal medical conditions that worsen with continuation of the pregnancy

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

- Prostaglandin was ordered because it is a drug that causes cervical ripening. With a bishop score of 4, the Dr. ordered this prior to inducing her so that her cervix will start to ripen.

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

- Prior to inducing this patient, we want to do a cervical assessment to see if the cervix is favorable for the induction. We will use the bishop score for this assessment.

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

- We need to dilute the oxytocin in an isotonic solution and hang it as a secondary bag so if we need to stop it, we can do so quickly.
- The oxytocin line is inserted into the primary IV line and put it as close to the iv site which is the proximal port so we can limit th amount of the drug going in.
- Oxytocin is started slowly, increased gradually, and regulated with an infusion pump.

- UA, FHR, and fetal heart patterns are monitored before induction for a baseline, when oxytocin is started, and throughout labor.

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
   - UTIs
   - Ketoacidosis the mother and fetus are both at risk
   - shoulder dystocia, cesarean birth, uterine atony with hemorrhage after birth
   - Birth injury to maternal tissues

2. Discuss fetal-neonatal risks associated with diabetes and pregnancy.
   - congenital anomalies
   - perinatal death
   - macrosomia
   - intrauterine fetal growth restriction
   - preterm labor
   - Ketoacidosis
   - premature rupture of membranes
   - preterm birth
   - birth injury
   - hypoglycemia
   - polycythemia
   - hyperbilirubinemia
   - hypercalcemia
   - respiratory distress syndrome

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

   - According to the book we should teach the patient how to
     - use a glucometer
     - how to prick finger to obtain a small amount of blood
     - test the blood to find the blood glucose level
     - how to mix and inject insulin
     - teach her how to manage the hypoglycemia/hyperglycemia s/s
     - teach her different dietary needs to obtain now that she has diabetes

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

- Because the patient previously had a stillborn baby at 32 weeks old the new baby will most likely be born as an SGA

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.

- What disease process is this patient exhibiting? What in the assessment supports your concern?
  - Protein urea
  - Severe headache
  - DTR 3+
  - Pitting edema
  - Facial edema
  - BP of atleast 160/110
  - Blurred vision

- What in the patient's history places her at risk for Pregnancy-Induced Hypertension?
  - The risks would be
    - She never eats breakfast
    - She is under 20 years old
    - She doesn't eat healthy meals when she does eat
- Describe how Pregnancy-Induced Hypertension affects each organ and how these effects are manifested.
  - Decreased placental circulation results in infarctions that increase the risk for placental abruption and HELLP syndrome. In addition, the fetus is likely to experience intrauterine growth restriction, persistent hypoxemia, and acidosis when maternal blood flow through the placenta is reduced.

- Decreased colloid oncotic pressure can lead to pulmonary capillary leakage that results in pulmonary edema. Dyspnea is the primary symptom.

- Vasoconstriction of cerebral vessels leads to pressure-induced rupture of thin-walled capillaries, resulting in small cerebral hemorrhages. Symptoms of arterial vasospasm include headache and visual disturbances such as blurred vision, “spots” before the eyes, and hyperactive DTRs.

- Reduced liver circulation impairs function and leads to hepatic edema and subcapsular hemorrhage, which can result in hemorrhagic necrosis. This is manifested by elevation of liver enzymes in maternal serum. Epigastric pain is a common symptom.

- Loss of protein from the kidneys reduces colloid osmotic pressure and allows fluid to shift to interstitial spaces. This may result in edema and a reduction in intravascular volume, which causes increased viscosity of the blood and a rise in Hct level. Generalized edema often occurs.

- Reduced renal blood flow results in glomerular damage, allowing protein to leak across the glomerular membrane, which is normally impermeable to large protein molecules.

- Decreased renal perfusion reduces the glomerular filtration rate. Blood urea nitrogen, creatinine, and uric acid levels rise.

- What will the patient’s treatment consist of?

  - We are going to do daily weights on this patient

  - We are going to do anti hypertensives for the patient

  - We might also put this patient on some activity restrictions

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

  - We also want to prevent seizures so we will put the patient on magnesium sulfate and anticonvulsants

- What are the Nursing considerations when administering the drug of choice? (Side effects & medication administration guidelines)
  - With this medication we want to advise the patient to not participate in activities that require mental alertness.

  - Some S/E for this drug include

    - Nausea
    - Fatigue
    - HF
    - Orthostatic hypotension
    - Decreased cardiac output
    - Dizziness
    - Anaphylaxis
    - Tingling
- Because this medication causes orthostatic hypotension I would advise the patient to rise slowly when getting up.