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 41 weeks gestation and once you reach 42 weeks the placenta begins to deteriorate.

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

- Prostaglandin prepares the uterus for oxytocin. It aids in cervical ripening.

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

- Before induction you should monitor uterine activity, fetal heart rate pattern for normal baseline, and variability for 20 min.

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

- Oxytocin should be diluted in an isotonic solution and given as a piggyback infusion
- Should be attached at the most proximal port and on primary tubing.
- Start slowly and increase gradually. Monitoring for tachysystole and late Decelerations.

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.**

- Hydramnios: may result from fetal hyperglycemia and consequent fetal diuresis and premature rupture of membranes, which may be caused by overdistention of the uterus by hydramnios or a large fetus.
- Macrosomia: infant weighing 8.8lbs or more. May cause difficult labor and shoulder dystocia.
- Increased risk for Cesarean birth
- Increased risk for postpartum hemorrhage

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

- The most common major congenital malformations associated with preexisting diabetes are neural tube defects, caudal regression syndrome (failure of sacrum, lumbar spine, and lower extremities to develop), and cardiac defects.
- Hypoglycemia: the fetus was producing a lot of insulin when inside mom to keep up with the blood glucose and now that the baby is out and not receiving the sugar the baby is still making a lot of insulin.
- Hypocalcemia, Hyperbilirubinemia, Respiratory distress syndrome,

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

- Nutrition
- Exercise
- Blood Glucose tests
- If the patient is on insulin she should be educated about her bodys insulin needs each trimester of pregnancy (1st = decreased, 2nd = increased, 3rd = increased, Postpartum = decreased)

4. **What classification (SGA, AGA, LGA) will this patient's baby most likely be classified as? Discuss your answer.**
   - This patient's baby is likely to LGA if she does not control her diabetes. However, if she has good glycemic control, eats well, and exercise she may have a baby that is AGA.

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. Her symptoms that support this concern are her BP (over 140/90), proteinuria, over 20 weeks gestation, and the patients age.

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

   - This is the patients first pregnancy and she is very young.

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

   - Increased vascular resistance, increased cardiac output and stroke volume, decreased osmotic pressure (increased BP, hyperdynamic cardiac activity, subendocardial hemorrhage, pulmonary edema, myocardial ischemia, left ventricular dysfunction.)
   - Proteinuria, impaired renal function (BUN increases, Creatinine decreases, at risk for oliguria, renal failure)
   - Hepatic dysfunction, Hepatic rupture (Elevations of liver function tests; associatin of microangiopathic anemia and elevations of AST/ALT carries ominous prognosis for mother and fetus, possible elevation in bilirubin, liver failure malaise nausea epigastric pain hypoglycemia hemolysis anemia)
   - Thrombocytopenia, Altered platelet function, Hemolysis
   - Hyperreflexia (signs of CNS alterations; headache, dizziness, changes in vital signs, diplopia, scotomata, blurred vision, amaurosis, tachycardia, alteration in LOC

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

   - Monitoring BP, Daily weights, Urinalysis, Kick count

   - Diet: ample protein and calories, a regular diet without salt or fluid restriction is usually prescribed.

5. **What is the drug of choice for this condition? What other medication(s) might be ordered for this patient?**
    - Magnesium Sulfate is the first-choice drug for this condition.
    - The doctor may use antihypertensive medications such as labetalol to help reduce BP.
6. **What are the Nursing considerations when administering the drug of choice? (Side effects & medication administration guidelines)**

    - Monitor for signs of toxicity (respiratory depression, chest pain, confusion, slurred speech, depresses DTR, sweating, lethargy, hypotension)
    - Implement seizure precautions.
    - Have resuscitation equipment in the room.
    - Have Calcium Gluconate available