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 not dilating like she should. The induction of labor is to help with the cervical ripening due to a dilation of 2 cm and a firm cervix, so that they can speed up the labor process.

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

Prostaglandins are hormones used to soften and shorten the cervix (cervical ripening). Because the patient's cervix is so firm the doctor ordered prostaglandins to help with the labor process. You need to have a soft cervix before augmenting labor with the oxytocin, or else giving the UC medication would be pointless if not ready.

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

    - Confirmation of fetal gestational age is a priority. Before 40 weeks, the fetus is at risk for respiratory complications and this also reduces the risk of a cesarean delivery.
    - A cervical assessment needs to be performed before induction and augmentation to decide if the cervix is favorable for the procedure. This is based on a Bishop score.
    - You also want to assess the FHR for at least 20 minutes before induction to assess fetal well being as well as perform Leopold's maneuvers- to verify fetal presentation.

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

    As stated above, before giving Oxytocin, the FHR needs to be assessed. It also needs to be assessed during and after the administration.

We want to give via IVPB w/ an isotonic solution; LR or NS. It must be given in a slow and titrated intervals, continuously monitoring the FHR and UC patterns as well as the mom’s vs for hypotension.

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.

Risks associated w/ DM and pregnancy include:

- Abnormal metabolic environment can cause a spontaneous abortion or major fetal malformations in the 1st trimester.
- Hypertension, especially preeclampsia is more likely to develop in someone with DMI.
- Ketoacidosis can be fatal in women with lower thresholds of hyperglycemia
- UTIs are common
- Hydramnios r/t fetal hyperglycemia
- Macrosomia and shoulder dystocia are risks

2. Discuss fetal-neonatal risks associated with diabetes and pregnancy.
   - Variations in fetal size
   - Congenital abnormalities
   - IUGR
   - Preterm labor/ PROM
   - Polycythemia
   - Birth Injuries
   - Hypocalcemia
   - Hyperbilirubinemia
   - Hypoglycemia
   - Respiratory Distress Syndrome

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

   - Education on what DM is and how it can affect herself and the neonate.
   - How GDM is identified
   - If they are diagnosed with GDM, what they need to do
     - Diet
     - Exercise
     - Blood glucose monitoring
     - Fetal surveillance
     - S/s of hypoglycemia/ hyperglycemia

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

- This patient’s baby will most likely be small. She has already had a spontaneous abortion before and that increases her risk for either having another stillbirth or going into preterm labor.

• 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 has s/s of HTN with fluid retention. She is positive for proteins in her urine so that tells me that she has signs of kidney failure r/t preeclamsia.

    - Preeclamsia s/s:

        - BP>160/110 P
        - Oliguria <500ml/ 24hrs P
        - Cerebral or visual disturbances P
        - Epigastric or RUQ pain
        - Impaired liver function
        - Thrombocytopenia
        - Renal Insufficiency P due to the s/s of fluid retention

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

    The patient is at risk for hypertension due to:

    - Her age
    - Her diet
    - First pregnancy
    - Poor prenatal care/ pregnancy care

- Poor sleep schedule

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

Gestational HTN can go away by the 12th week PP. This patient however is displaying signs of severe preeclampsia and is having effects on multiple organs.

- Cardiovascular- decreased intravascular volume, Severe HTN including HTN crisis, Pulmonary edema, CHF, future cardiac diseases/dysfunction
- Pulmonary- pulmonary edema, hypoxemia/acidemia
- Renal- oliguria, acute renal failure, impaired drug metabolism/excretion
- Hematologic- hemolysis, anemia, thrombocytopenia, coagulation defects
- Neurologic- seizures, cerebral edema, intracerebral hemorrhage, stroke, visual disturbances, blindness
- Hepatic- hepatocellular dysfunction, hepatic rupture, hypoglycemia, coagulation defects, impaired drug metabolism/excretion
- Uteroplacental- abruption, decreased uteroplacental perfusion

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

The only cure for preeclamsia is delivery of the baby and the placenta. However, delivery is decided on the degree of HTN disorder and degree of fetal maturity.

Since the fetus is only 34 weeks gestation, steroids are given to accelerate fetal lung maturity, and delay delivery for 48 hrs

- Antepartum management
- Bed rest and fetal monitoring
- Anti-HTN medications
- Anti-convulsant medications
- Possibly diuretics

5. What is the drug of choice for this condition? What other medication(s) might be ordered for this patient?
    - The drug of choice is Labetalol because it has fever a/e.
    - The anticonvulsant that may be given is Magnesium sulfate
6. What are the Nursing considerations when administering the drug of choice? (Side effects & medication administration guidelines)

Labetalol is not given in patients w/ asthma, heart disease, or CHF r/t hypoglycemia.

Magnesium sulfate: is contraindicated in people with myocardial damage, heart block, myasthenia gravis, or impaired renal function.

- A/e: flushing, sweating, hypotension, and depressed DTRs, CNS depression, and Respiratory depression.

- Monitor bp closely and assess the respiratory rate and urinary output before administration.
- Resuscitation equipment needs to be placed in the room
- Calcium gluconate needs to be readily available