Chapter 27: Hypertensive Disorders in Pregnancy

MULTIPLE CHOICE

1. A primigravida is being monitored in her prenatal clinic for preeclampsia. What finding concerns her nurse?

   1. Blood pressure (BP) increase to 138/86 mm Hg
   2. Weight gain of 0.5 kg during the past 2 weeks
   3. A dipstick value of 3+ for protein in her urine
   4. Pitting pedal edema at the end of the day

ANS: C

Proteinuria is defined as a concentration of 1+ or greater via dipstick measurement. A dipstick value of 3+ alerts the nurse that additional testing or assessment should be made. Generally, hypertension is defined as a BP of 140/90 or an increase in systolic pressure of 30 mm Hg or 15 mm Hg diastolic pressure.

Preeclampsia may be manifested as a rapid weight gain of more than 2 kg in 1 week.

Edema occurs in many normal pregnancies as well as in women with preeclampsia. Therefore, the presence of edema is no longer considered diagnostic of preeclampsia.

DIF: Cognitive Level: Analysis REF: 661 OBJ: ClientNeeds:PhysiologicIntegrity

TOP: Nursing Process: Diagnosis
2. The labor of a pregnant woman with preeclampsia is going to be induced. Before initiating the oxytocin (Pitocin) infusion, the nurse reviews the woman’s latest laboratory test findings, which reveal a platelet count of 90,000, an elevated aspartate transaminase (AST) level, and a falling hematocrit. The nurse notifies the physician because the lab results are indicative of:

1. Eclampsia
2. Disseminated intravascular coagulation (DIC)
3. HELLP syndrome
4. Idiopathic thrombocytopenia

ANS: C

HELLP syndrome is a laboratory diagnosis for a variant of severe preeclampsia that involves hepatic dysfunction characterized by hemolysis (H), elevated liver enzymes (EL), and low platelets (LP).

Eclampsia is determined by the presence of seizures.

DIC is a potential complication associated with HELLP syndrome.

Idiopathic thrombocytopenia is the presence of low platelets of unknown cause and is not associated with preeclampsia.

3. A woman with preeclampsia has a seizure. The nurse’s primary duty during the seizure is to:

1. Insert an oral airway
2. Suction the mouth to prevent aspiration
3. Administer oxygen by mask
4. Stay with the client and call for help

ANS: D

If a client becomes eclamptic, the nurse should stay with the client and call for help. Nursing actions during a convulsion are directed toward ensuring a patent airway and client safety.

Insertion of an oral airway during seizure activity is no longer the standard of care. The nurse should attempt to keep the airway patent by turning the client’s head to the side to prevent aspiration.

Once the seizure has ended, it may be necessary to suction the client’s mouth.

Oxygen is administered after the convulsion has ended.

DIF: Cognitive Level: Application REF: 667 OBJ: ClientNeeds:PhysiologicIntegrity
TOP: Nursing Process: Implementation
4. A pregnant woman has been receiving a magnesium sulfate infusion for treatment of severe preeclampsia for 24 hours. On assessment the nurse finds the following vital signs: temperature 37.3° C, pulse rate 88 beats/min, respiratory rate 10 breaths/min, blood pressure (BP) 148/90 mm Hg, absent deep tendon reflexes, and no ankle clonus. The client complains, “I’m so thirsty and warm.” The nurse:

1. Calls for a stat magnesium sulfate level
2. Administers oxygen
3. Discontinues the magnesium sulfate infusion
4. Prepares to administer hydralazine

ANS: C

The client is displaying clinical signs and symptoms of magnesium toxicity. Magnesium should be discontinued immediately. Additionally, calcium gluconate, the antidote for magnesium, may be administered. Regardless of the magnesium level, the client is displaying clinical signs and symptoms of magnesium toxicity.

The first action by the nurse should be to discontinue the infusion of magnesium sulfate. Hydralazine is an antihypertensive commonly used to treat hypertension in severe preeclampsia. Typically it is administered for a systolic BP greater than 160 mm Hg or a diastolic BP greater than 110 mm Hg.

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5. A woman at 39 weeks of gestation with a history of preeclampsia is admitted to the labor and birth unit. She suddenly experiences increased contraction frequency of every 1 to 2 minutes, dark red vaginal bleeding, and a tense, painful abdomen. The nurse suspects the onset of:

1. Eclamptic seizure
2. Rupture of the uterus
3. Placenta previa
4. Abruptio placentae

ANS: D

Uterine tenderness in the presence of increasing tone may be the earliest finding of abruptio placentae. Women with preeclampsia are at increased risk for an abruption due to decreased placental perfusion.

Eclamptic seizures are evidenced by the presence of generalized tonic-clonic convulsions. Uterine rupture presents as hypotonic uterine activity, signs of hypovolemia and, in many cases, the absence of pain.

Placenta previa presents with bright red, painless vaginal bleeding.
6. A woman with worsening preeclampsia is admitted to the hospital’s labor and birth unit. The physician explains the plan of care for severe preeclampsia, including the induction of labor, to the woman and her husband. The nurse determines that the couple needs further information when the woman’s husband says:

1. “I will help my wife use the breathing techniques that we learned in our childbirth classes.”
2. “I will give my wife ice chips to eat during labor.”
3. “Since we will be here for a while, I will call my mother so she can bring the two boys [2 years and 4 years of age] to visit their mother.”
4. “I will stay with my wife during her labor, just as we planned.”

ANS: C

Arranging a visit with their two children indicates that the husband does not understand the importance of the quiet, subdued environment that is needed to prevent his wife’s condition from worsening.

Implementing breathing techniques is indicative of adequate knowledge related to pain management during labor.

Administering ice chips indicates an understanding of nutritional needs during labor.

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Staying with his wife during labor demonstrates the husband’s support for his wife and is appropriate.

DIF: Cognitive Level: Application REF: 664 OBJ: ClientNeeds:PsychosocialIntegrity

TOP: Nursing Process: Evaluation

7. Your client has been on magnesium sulfate for 20 hours for treatment of preeclampsia. She just delivered a viable infant girl 30 minutes ago. What uterine findings do you expect to observe or assess in this client?

1. Absence of uterine bleeding in the postpartum period
2. A fundus firm below the level of the umbilicus
3. Scant lochia flow
4. A boggy uterus with heavy lochia flow

ANS: D

High serum levels of magnesium can cause relaxation of smooth muscle such as the uterus. Because of this tocolytic effect, the client most likely will have a boggy uterus with increased amounts of bleeding.

All women experience uterine bleeding in the postpartum period, especially those that have received magnesium therapy.
Due to the tocolytic effects of magnesium sulfate, this client most likely will have a boggy uterus.

Rather than scant lochial flow, this client will most likely have a heavy flow due to relaxation of the uterine wall caused by magnesium administration.


8. Your client is being induced because of her worsening preeclampsia. She is also receiving magnesium sulfate. It appears that her labor has not become active despite several hours of oxytocin administration. She asks the nurse, “Why is it taking so long?” The most appropriate response by the nurse is:

1. “The magnesium is relaxing your uterus and competing with the oxytocin. It may increase the duration of your labor.”

2. “I don’t know why it is taking so long.”

3. “The length of labor varies for different women.”

4. “Your baby is just being stubborn.”

ANS: A

Because magnesium sulfate is a tocolytic agent, its use may increase the duration of labor. The amount of oxytocin needed to stimulate labor may be more than that needed for the woman who is not receiving magnesium sulfate. The nurse should explain to the client the effects of magnesium sulfate on the duration of labor.
Although the length of labor varies for different women, the most likely reason this woman’s labor is protracted is the tocolytic effects of magnesium sulfate. The behavior of the fetus has no bearing on the length of labor.


9. What nursing diagnosis is the most appropriate for a woman experiencing severe preeclampsia?
   1. Risk for injury to mother and fetus related to central nervous system (CNS) irritability
   2. Risk for eclampsia
   3. Risk for deficient fluid volume related to increased sodium retention secondary to administration of magnesium sulfate
   4. Risk for increased cardiac output related to the use of antihypertensive drugs

ANS: A

Risk for injury is the most appropriate nursing diagnosis for this client scenario. Eclampsia is a medical, not a nursing, diagnosis. There is a risk for excess, not deficient, fluid volume related to increased sodium
There is a risk for decreased, not increased, cardiac output related to the use of antihypertensive drugs.

DIF: Cognitive Level: Application REF: 664 OBJ: ClientNeeds:PhysiologicIntegrity

TOP: Nursing Process: Diagnosis

10. Nurses should be aware that chronic hypertension:

1. Is defined as hypertension that begins during pregnancy and lasts for the duration of pregnancy
2. Is considered severe when the systolic blood pressure (BP) is greater than 140 mmHg or the diastolic BP is greater than 90 mm Hg
3. Is general hypertension plus proteinuria
4. Can occur independently of or simultaneously with preeclampsia

ANS: D

Women with chronic hypertension may develop superimposed preeclampsia, which increases the morbidity for both the mother and fetus.

Chronic hypertension is present before pregnancy or diagnosed before the twentieth week of gestation and persists longer than 6 weeks postpartum. Chronic hypertension becomes severe with a diastolic BP of 110 mm Hg or higher.

Proteinuria is an excessive concentration of protein in the urine. It is a complication
of hypertension, not a defining characteristic.


Test Bank 27-6

DIF: Cognitive Level: Comprehension REF: 656 OBJ:

ClientNeeds:PhysiologicIntegrity

TOP: “Nursing Process: Diagnosis, Planning”

11. In planning care for women with severe gestational hypertension, nurses should be aware that:

1. Induction of labor is likely, as near term as possible
2. If at home, the woman should be confined to her bed, even with mild gestational hypertension
3. A special diet low in protein and salt should be initiated
4. Vaginal birth is still an option, even in severe cases

ANS: A

By 34 weeks of gestation the risk of continuing the pregnancy may be considered greater than the risks of preterm birth.

Strict bed rest is controversial for mild cases; some women in the hospital are even allowed to move around.

Diet and fluid recommendations are much the same as for healthy pregnant women, although some authorities have suggested a diet high in protein.

Women with severe gestational hypertension should expect a cesarean delivery.
12. Magnesium sulfate is given to women with preeclampsia and eclampsia to: a. Improve patellar reflexes and increase respiratory efficiency 
b. Shorten the duration of labor 
c. Prevent and treat convulsions 
d. Prevent a boggy uterus and lessen lochial flow

ANS: C

Magnesium sulfate is the drug of choice to prevent convulsions, although it can generate other problems.

Loss of patellar reflexes and respiratory depression are signs of magnesium toxicity.

Magnesium sulfate can increase the duration of labor.

Women are at risk for a boggy uterus and heavy lochial flow as a result of magnesium sulfate therapy.
13. Preeclampsia is a unique disease process related only to human pregnancy. The exact cause of this condition continues to elude researchers. The American College of Obstetricians and Gynecologists has developed a comprehensive list of risk factors associated with the development of preeclampsia. Which client exhibits the greatest number of these risk factors?

1. A 30-year-old obese Caucasian with her third pregnancy
2. A 41-year-old Caucasian primigravida
3. An African-American client who is 19 years old and pregnant with twins
4. A 25-year-old Asian-American whose pregnancy is the result of donor insemination

ANS: C

There are three risk factors present for the 19-year-old African-American client. She is of African-American ethnicity, is at the young end of the age distribution, and has a multiple pregnancy. In planning care for this client the nurse must monitor blood pressure frequently and teach the woman regarding early warning signs.

The 30-year-old obese Caucasian client has only has one known risk factor: obesity.

Age distribution appears to be U-shaped, with women less than 20 years and more than 40 years being at greatest risk. Preeclampsia continues to be seen more frequently in primigravidas; this client is a multigravida woman.

Two risk factors are present for the 41-year-old Caucasian primigravida client. Her
age and status as a primigravida put her at increased risk for preeclampsia.
Caucasian women are at a lower risk than are African-American women.
The 25-year-old Asian-American client exhibits only one risk factor. Pregnancies
that result from donor insemination, oocyte donation, and embryo donation are at
an increased risk of developing preeclampsia.

14. Women with mild gestational hypertension and mild preeclampsia can be
safely
managed at home with frequent maternal and fetal evaluation. Complete or partial
bed rest is still frequently ordered by some providers. Which is not a complication of
bed rest?
a. Thrombophlebitis
b. Psychologic stress
c. Fluid retention
d. Cardiovascular deconditioning

ANS: C
No evidence has been found that the practice of bed rest improves pregnancy
outcome. Fluid retention is not an adverse outcome of prolonged bed rest. The
woman is more likely to experience diuresis with accompanying fluid and
electrolyte imbalance and weight loss.

Prolonged bed rest is known to increase the risk for thrombophlebitis.

Psychologic stress is known to begin on the first day of bed rest and continue for the duration of the therapy. Therefore, restricted activity, rather than complete bed rest is recommended.

Cardiovascular deconditioning is a known complication of bed rest.

DIF: Cognitive Level: Comprehension REF: 662 OBJ:
ClientNeeds:PhysiologicIntegrity
TOP: Nursing Process: Diagnosis

15. Hypertensive disorders of pregnancy contribute significantly to maternal and infant morbidity and mortality worldwide. Neonatal complications of hypertensive disorders in the mother include:

1. Intrauterine growth restriction (IUGR) and prematurity
2. Seizures and cerebral hemorrhage
3. Hepatic or renal dysfunction
4. Placental abruption and disseminated intravascular coagulation (DIC)

ANS: A

Neonatal complications are related to placental insufficiency and include IUGR, prematurity, and necrotizing enterocolitis.
Seizures and cerebral hemorrhage are maternal complications.

Hepatic and renal dysfunction are maternal complications of hypertensive disorders in pregnancy.

Placental abruption and DIC are conditions related to maternal morbidity and mortality.

DIF: Cognitive Level: Comprehension REF: 655 OBJ:

ClientNeeds: PhysiologicIntegrity

TOP: Nursing Process: Assessment

MULTIPLE RESPONSE

1. HELLP syndrome is associated with an increased risk for adverse perinatal outcomes, including (choose all that apply):

   1. Placental abruption
   2. Placenta previa
   3. Renal failure
   4. Cirrhosis
   5. Maternal and fetal death

ANS: A, C, E

HELLP syndrome is associated with an increased risk for adverse perinatal outcomes, including placental abruption, acute renal failure, subcapsular hepatic hematoma, hepatic rupture, recurrent preeclampsia, preterm birth, and fetal and
maternal death.

HELLP syndrome is associated with an increased risk for placental abruption, not placenta previa. It is also associated with an increased risk for hepatic hematoma, not cirrhosis.


Test Bank 27-9

DIF: Cognitive Level: Analysis REF: 658 OBJ: ClientNeeds:PhysiologicIntegrity
TOP: Nursing Process: Assessment

2. One of the most important components of the physical assessment of the pregnant client is the determination of blood pressure. Consistency in measurement techniques must be maintained to ensure that the nuances in variation of blood pressure (BP) readings are not the result of provider error. The nurse must be aware of which techniques are important in obtaining an accurate BP reading.

Choose all that apply.

1. The client should be seated.
2. The client’s arm should be placed at the level of the heart.
3. An electronic BP device should be used.
4. The cuff should cover a minimum of 60% of the upper arm.
5. The same arm should be used for every reading.

ANS: A, B, E
BP readings are easily affected by maternal position. Ideally the client should be seated. An alternative position is left lateral recumbent with the arm at the level of the heart. The arm should always be held in a horizontal position at approximately the level of the heart. The same arm should be used at every visit.

The manual sphygmomanometer is the most accurate device. If manual as well as electronic devices are used in the care setting, the nurse must use caution when interpreting the readings. A proper size cuff should cover at least 80% of the upper arm or be approximately 1.5 times the length of the upper arm.

DIF: Cognitive Level: Application REF: 660 OBJ: ClientNeeds:PhysiologicIntegrity

TOP: Nursing Process: Assessment

COMPLETION

1. The antidote administered to reverse magnesium toxicity is ____________________.

ANS:
Calcium gluconate

Calcium gluconate may be given by slow IV push (usually by the physician) over at least 3 minutes to prevent undesirable reactions such as arrhythmias, bradycardia, and ventricular fibrillation.

DIF: Cognitive Level: Comprehension REF: 665 OBJ:
ClientNeeds:PhysiologicIntegrity

TOP: Nursing Process: Planning