N305-Focus Sheet Unit 3—Summer 2019—Complications of Pregnancy, Labor, and Delivery

Ricci, Kyle & Carman Ch 19, 20 & 21; ATI Ch 7-10

Some of the problems which cause complications of Pregnancy as well as Labor and Delivery were discussed during Unit 1 e.g. some of the infections, and during Unit 2 on labor and delivery. So be sure and look at this information from Unit 1 & 2 as you work through this focus sheet. The information will be used to compare and analyze the normal versus the abnormal occurrences in order to make the decision for nursing interventions. So, even while you fill out the focus sheet, be thinking about assessments and actions you "as a nurse" can make in the midst of these complications.

Bleeding during; Medical Conditions; Early Onset of Labor

RKC Ch 19; ATI Ch 7, 9, 10 (Bleeding)

1. List 5 factors that can place a woman at risk during pregnancy.

- Genetic conditions
- chromosomal abnormalities
- multiple pregnancies
- defective genes
- Smoking
- caffeine
- diabetes

2. Define abortion, miscarriage, and stillbirth.

- Abortion: loss of early pregnancy, before 20 weeks of gestation
- Miscarriage: used by nonmedical people to denote an abortion that occurred
- Stillbirth: the birth of an infant that has died in the womb after surviving at least 28 weeks of pregnancy

3. Describe the following for spontaneous abortion: p 687-689

Pathophysiology	most common cause for the first trimester is fetal genetic abnormalities, unrelated to the mother. The second semester are most likely related to maternal conditions such as the incompetent cervix, the congenital or acquired anomaly of the uterine cavity, hypothyroidism, diabetes, chronic nephritis, use of cocaine, inherited thrombo, lupus, rubella, herpes, vaginosis, and toxoplasmosis
Nursing Assessment	Vaginal bleeding, low back pain, abdominal cramping, and passage of products of conception tissue. Ask about color (bright red is significant) and the amount
Testing	clinical criteria, ultrasonography, and quantitative beta-hCG.
Management	Continuous monitoring and psychological support. Monitor for vaginal bleeding through pad counts and observe for passive of products of conception tissue. Assess pain management
Patient education needs	avoid having sex or putting anything into the vagina, such as a douche or tampon, for two weeks. Women have traditionally been

	told to wait two to three months before trying to become pregnant again

4. Define threatened abortion, inevitable abortion, incomplete abortion, complete abortion, missed abortion and habitual abortion. P 689

- Threated – cramping, bleeding, nothing's happened yet
- Inevitable – moderate to heavy bleeding, possibly dilated
- Incomplete – expelled some products of conception but not all, still bleeding/cramping
  - · Procedure: D&C or D&E – dilate, go in and clean out uterus and products of conception.
  - · D&C – for inevitable or incomplete abortions
  - · D&E - after 16 weeks - evacuation
- Complete – All products of conception have been expelled from the uterus
- Missed – Fetus has passed, no heartbeat. It happened but wasn't aware

5. What are the actions and implications of the use of Cytotec, Cervidil (dinoprostone)/Prepidil(Gel), Rh Immunoglobulin Rhogam related to abortions (elective or spontaneous)? Chart p 690

DRUG GUIDE 19.1 MEDICATIONS USED WITH SPONTANEOUS ABORTIONS

Medication	Action/Indications	Nursing Implications
Misoprostol (Cytotec)	Stimulates uterine contractions to terminate a pregnancy; to evacuate the uterus after abortion to ensure passage of all the products of conception	• Monitor for side effects such as diarrhea, abdominal pain, nausea, vomiting, dyspepsia. • Assess vaginal bleeding and report any increased bleeding, pain, or fever. • Monitor for signs and symptoms of shock, such as tachycardia, hypotension, and anxiety.
Mifepristone (RU-486)	Acts as progesterone antagonist, allowing prostaglandins to stimulate uterine contractions; causes the endometrium to slough; may be followed by administration of misoprostol within 48 hours	• Monitor for headache, vomiting, diarrhea, and heavy bleeding. • Anticipate administration of antiemetic prior to use to reduce nausea and vomiting. • Encourage client to use acetaminophen to reduce discomfort from cramping.
PGE2, dinoprostone (Cervidil, Prepidil Gel, Prostin E2)	Stimulates uterine contractions, causing expulsion of uterine contents; to expel uterine contents in fetal death or missed abortion during second trimester, or to efface and dilate the cervix in pregnancy at term	• Bring gel to room temperature before administering. • Avoid contact with skin. • Use sterile technique to administer. • Keep client supine 30 minutes after administering. • Document time of insertion and dosing intervals. • Remove insert with retrieval system after 12 hours or at the onset of labor. • Explain purpose and expected response to client.
Rh(D) immunoglobulin (Gamulin, HydroRho-D, RhoGAM)	Suppresses immune response of nonsensitized Rh-negative patients who are exposed to Rh-positive blood; to prevent isoimmunization in Rh-negative women exposed to Rh-positive blood after abortions, miscarriages, and pregnancies	• Administer intramuscularly in deltoid area. • Give only MICRhoGAM for abortions and miscarriages <12 weeks unless fetus or father is Rh negative (unless patient is Rh positive, Rh antibodies are present). • Educate woman that she will need this after subsequent deliveries if newborns are Rh positive; also check lab study results prior to administering the drug.

6. Describe the following for ectopic pregnancy:

Pathophysiology	The ovum implants outside the uterus. The most common site for implantation is the fallopian tubes, but some ova may implant in the cornea of the uterus, the ovary, the cervix, or the abdominal cavity.
Nursing Assessment	Assess for signs and symptoms that may suggest an ectopic pregnancy. Usually, it occurs around week eight or nine of gestation. A missed period, adnexal fullness, and tenderness may suggest unruptured tubal pregnancies
Testing	Transvaginal ultrasound to visual misplaced pregnancy and low levels of serum beta-hCG assist in diagnosing
Management	Prepare the woman for treatment, provide support, and provide education
Patient education needs	Reduce risk factors such as intercourse with multiple partners or without a condom, regular STI testing, avoid IUD, seek prenatal care

7. Describe the following for Gestational Trophoblastic Disease.

Pathophysiology	Benign neoplasm of the chorion in which the chorionic villi degenerate and become transparent vesicles containing clear, viscid fluid. Hydatidiform mole is disfigured by differences. The complete mole has no fetal tissue and is an empty egg fertilized by normal sperm. It is not viable and dies.
Nursing Assessment	Amenorrhea, breast tenderness, fatigue, brown vaginal bleeding, anemia, fluid retention and swelling, morning sickness, large uterine size high HCG levels, the expulsion of grapelike vesicles, no fetal heart
Testing	High hCG levels and ultrasound
Management	Prepare client for D&C, provide support, educate on the risk of cancer and encourage follow up appointments
Patient education needs	Chemotherapy (methotrexate), use contraceptives for one year, track hCG levels, adhere to therapy

When would you anticipate that Methotrexate would be prescribed?

- Chemotherapy started prophylaxis

8. Describe the following for Cervical Insufficiency:

Pathophysiology	cervix has less elastin and more smooth muscle.
Nursing Assessment	Vaginal discharge or pelvic pressure, pink-tinged vaginal discharge
Testing	Transvaginal ultrasound at 20 weeks to determine the cervical length and funneling
Management	Monitor closely for preterm labor: backache, increased vaginal discharge, rupture of membranes, and uterine contractions. PRovide support, preoperative care
Patient education needs	Teach signs and symptoms of preterm labor and to report immediately. Also, activity restrictions.

9. Describe the following for Placenta Previa:

Pathophysiology	Unknown. Initiated by implantation of the embryo in the lower uterus. With placental attachment and, the cervix is covered by the placenta. Total placenta previa: the internal cervical os is completely covered by the placenta. Partial placenta previa: the internal os is partially covered by the placenta. Marginal placenta previa: the placenta is at the margin or edge of the

	internal os Low-lying placenta previa: the placenta is implanted in the lower uterine segment and is near the internal os but does not reach it
Nursing Assessment	• Advancing maternal age (more than 35 years) • Previous cesarean birth • Multiparity • Uterine insult or injury • Cocaine use • Prior placenta previa • Infertility treatment • Asian ethnic background (incidence is increased in Asian cultural groups) • Multiple gestations • Previous induced surgical abortion • Smoking • Previous myomectomy to remove fibroids
Testing	transvaginal ultrasound is done. In addition, magnetic resonance imaging may be ordered when preparing for the delivery because it allows identification of placenta accreta
Management	monitoring the maternal-fetal status, including assessing for signs and symptoms of vaginal bleeding and fetal distress, and providing support and education to the client and her family,
Patient education needs	events and diagnostic studies are being performed, prepare for cesarean birth, record daily movements

10. Why is it important to know if a woman who is presenting to labor and delivery has a placental Previa?

- **How would her care be altered?**
- Avoid vaginal exams

11. Describe the following for Abruptio Placentae (Abruption):

Pathophysiology	- Premature separation of the placenta from the uterus. Can be partial or complete detachment - This separation occurs 20 weeks of gestation (usually in the third trimester) - <u>Significant maternal and fetal morbidity and mortality and is the leading cause of maternal death</u> - Coagulation defect- DIC, often moderate to severe abruption. Nose bleeding and gums bleeding
Nursing Assessment	- Sudden onset of intense localized uterine pain with <u>dark vaginal bleeding</u> - Area of uterine tenderness can be localized of diffuse over the uterus - Contractions w/ hypertonicity - Fetal distress

	- Clinical findings of hypovolemic shock
Testing	- Hgb and Hct decreased - Coagulation factors decreased - Clotting defects - Cross and type match for possible blood transfusions - Kleihauer – Betke test (used to detect fetal blood in maternal circulation) - Ultrasound or placental assessment - Biophysical profile to ascertain the fetal well being
Management	Immediate care to provide the best outcome
Patient education needs	Encourage the woman to avoid drinking, smoking, or using drugs during pregnancy. Urge her to seek early and continuous prenatal care and to receive prompt health care if any signs and symptoms occur in future pregnancies.

12. In your own words describe Disseminated intravascular coagulation (DIC).

13. Describe the following for Hyperemesis Gravidarum

Pathophysiology	Although the exact cause of nausea and vomiting is unknown, its effects—decreased placental blood flow, decreased maternal blood flow, and acidosis—can threaten the health of the mother and fetus. Dehydration can also lead to preterm labor. Endocrine theory—high levels of hCG and estrogen during pregnancy • Metabolic theory—vitamin B6 deficiency • Psychological theory—psychological stress increases the symptoms
Nursing Assessment	neurologic disturbances, renal damage, retinal hemorrhage, or death, Begin the history by asking the client about the onset, duration, and course of her nausea and vomiting. Ask her about any medications or treatments she used and how effective they were in relieving her nausea and vomiting. Obtain a diet history from the client. Also ask about any complaints of ptyalism (excessive salivation), anorexia, indigestion, and abdominal pain or distention. Ask if she has noticed any blood or mucus in her stool.
Testing	• Liver enzymes—elevations of aspartate aminotransferase (AST) and alanine aminotransferase (ALT) are usually present

	• CBC—elevated levels of red blood cells and hematocrit, indicating dehydration • Urine ketones—positive when the body breaks down fat to provide energy in the absence of inadequate intake • Blood urea nitrogen (BUN)—increased in the presence of salt and water depletion • Urine specific gravity—greater than 1.025, possibly indicating concentrated urine linked to inadequate fluid intake or excessive fluid loss • Serum electrolytes—decreased levels of potassium, sodium, and chloride resulting from excessive vomiting and loss of hydrochloric acid in stomach • Ultrasound—evaluation for molar pregnancy or multiple gestation
Management	Control the client's nausea and vomiting and promoting adequate nutrition
Patient education needs	Teach the client about therapeutic lifestyle changes, such as avoiding stressors and fatigue that may trigger nausea and vomiting. Offer ongoing support and encouragement and promote active participation in care decisions

14. What three medications are commonly used for hyperemesis gravidarum? What nursing considerations should be addressed for each of these?

DRUG GUIDE 19.2 MEDICATIONS USED FOR HYPEREMESIS GRAVIDARUM

Medication	Action/Indications	Nursing Implications
Promethazine (Phenergan)	Diminishes vestibular stimulation and acts on the chemoreceptor trigger zone (CTZ) Symptomatic relief of nausea and vomiting, and motion sickness	Be alert for urinary retention, dizziness, hypotension, and involuntary movements. Institute safety measures to prevent injury secondary to sedative effects Offer hard candy and frequent rinsing of mouth for dryness.
Prochlorperazine (Compazine)	Acts centrally to inhibit dopamine receptors in the CTZ and peripherally to block vagus nerve stimulation in the GI tract Controls severe nausea and vomiting	Be alert for abnormal movements and for neuroleptic malignant syndrome such as seizures, hyper-/hypotension, tachycardia, and dyspnea. Assess mental status, intake/output Caution patient not to drive as a result of drowsiness or dizziness Advise to change position slowly to minimize effects of orthostatic hypotension.
Odansetron (Zofran)	Blocks serotonin peripherally, centrally, and in the small intestine Prevents nausea and vomiting	Monitor for possible side effects such as diarrhea, constipation, abdominal pain, headache, dizziness, drowsiness, and fatigue. Monitor liver function studies as ordered.

15. What is the difference between chronic and gestational hypertension?

• Gestational hypertension: blood pressure elevation (140/90 mm Hg) identified after mid-pregnancy without proteinuria

• Chronic hypertension: hypertension prior to the pregnancy or diagnosed before week 20 of gestation

16. Please fill in the table below:

	Mild Preeclampsia	**Severe Preeclampsia**	**Eclampsia**
Blood pressure	>140/90 mmHg after 20 weeks' gestation	>160/110 mmHg	Same as preeclampsia
proteinuria	300 mg/24h or greater than 1+ on a random dipstick urine sample	>500 greater than 3+	Marked proteinuria
Seizures/coma	No	No	Yes
hyperreflexia	No	Yes	Yes
Other signs or symptoms	Mild facial or hand edema weight gain	Headache Oliguria Blurred vision, scotomata (blind spots) Pulmonary edema Thrombocytopenia (platelet count <100,000 platelets/mm3) Cerebral disturbances Epigastric or RUQ pain HELLP	Severe headache Generalized edema RUQ or epigastric pain Visual disturbances Cerebral hemorrhage Renal failure HELLP
Treatment/management	close monitoring of blood pressure and ongoing assessment for evidence of disease progression. Throughout the client's pregnancy, fetal surveillance is key	close monitoring of blood pressure and ongoing assessment for evidence of disease progression. Throughout the client's pregnancy, fetal surveillance is key	close monitoring of blood pressure and ongoing assessment for evidence of disease progression. Throughout the client's pregnancy, fetal surveillance is key

17. We will discuss in class the protein/creatinine (P/C) ratio. This is not in your text. Here is a

Urine protein tests detect and/or measure protein being released into the urine. Normal urine protein elimination is less than 150 mg/day and less than 30 mg of albumin/day. Elevated levels may be seen temporarily with conditions such as infections, stress, pregnancy, diet, cold exposure, or heavy exercise. Persistent protein in the urine suggests possible kidney damage or some other condition that requires additional testing to determine the cause.

18. Medications used with preeclampsia and eclampsia

Medication	Indications (why is this needed for THIS patient?)	Nursing Implications (what are you watching for?)	Dose
Magnesium Sulfate	Blockage of neuromuscular transmission, vasodilation Prevention, and treatment of eclamptic seizures	Administer IV loading dose of 4–6 g over 30 minutes, continue maintenance infusion of 2–4 g/hour as ordered. Monitor serum magnesium levels closely. Assess DTRs and check for ankle clonus. Have calcium gluconate readily available in case of toxicity. Monitor for signs and symptoms of toxicity, such as flushing, sweating, hypotension, and cardiac an	Administer IV loading dose of 4–6 g over 30 minutes, continue main
Hydralazine hydrochloride (Apresoline)	Vascular smooth muscle relaxant, thus improving perfusion to renal, uterine, and cerebral areas Reduction in blood pressure	Use parenteral form immediately after opening the ampule. Withdraw drug slowly to prevent possible rebound hypertension. Monitor for adverse effects such as palpitations, headache, tachycardia, anorexia, nausea, vomiting, and diarrhea	Administer 5–10 mg by slow IV bolus every 20 minutes.

Labetalol hydrochloride (Normodyne)	**Alpha 1 and beta blocker Reduction in blood pressure**	**Be aware that drug lowers blood pressure without decreasing maternal heart rate or cardiac output. Monitor for possible adverse effects such as gastric pain, flatulence, constipation, dizziness, vertigo, and fatigue.**	**Administer IV bolus dose of 10–20 mg and then administer IV infusion of 2 mg/minute until desired blood pressure value achieved.**
Nifedipine (Procardia)	**Calcium channel blocker/dilation of coronary arteries, arterioles, and peripheral arterioles Reduction in blood pressure, stoppage of preterm labor**	**Monitor for possible adverse effects such as dizziness, peripheral edema, angina, diarrhea, nasal congestions, cough. Administer via continuous IV inf**	**Administer 10 mg orally for three doses and then every 4–8 hours.**

19. What are the signs of Magnesium toxicity? What is the therapeutic level for magnesium sulfate? What drug should always be at the bedside of a patient who has Magnesium sulfate infusing?

flushing, sweating, hypotension, and cardiac and central nervous system depression. Calcium gluconate at bedside. Serum magnesium levels ranging from 4 to 7 mEq/L are considered therapeutic, whereas levels more than 8 mEq/dL are generally considered toxic.

20. When grading a deep tendon reflex, does the grading scale of 0-4 state no movement is graded as a 0 or a 4?

Reflex absent, no response detected 0

Hypoactive response, diminished 1

Reflex in lower half of normal range 2

Reflex in upper half of normal range 3

Hyperactive, brisk, clonus present 4

21. What does clonus evaluate and what does a positive clonus look like?

Clonus is the presence of rhythmic involuntary contractions, most often at the foot or ankle and confirms central nervous system involvements. Used in mag toxicity.

22. What does HELLP stand for?

H – hemolysis, resulting in anemia or jaundice

- EL – elevated liver enzymes, resulting in elevated ALT or AST, epigastric pain, nausea and vomiting
- LP – low platelets, resulting in thrombocytopenia, abnormal bleeding, clotting time, bleeding gums, petechiae, & possible disseminated intravascular coagulopathy

imagine a high pressure garden hose, the blood is making holes in the vessel from elevated pressure, blood is running and clotting off

23. Describe the following for HELLP syndrome

Pathophysiology	- The hemolysis that occurs is termed microangiopathic hemolytic anemia. It is thought to happen when red blood cells become fragmented as they pass through small, damaged blood vessels. Elevated liver enzymes are the result of reduced blood flow to the liver secondary to obstruction from fibrin deposits. Hyperbilirubinemia and jaundice result from liver impairment. Low platelets result from vascular damage, the result of vasospasm, and platelets aggregate at sites of damage, resulting in thrombocytopenia in multiple sites
Nursing Assessment	- Assess level of consciousness - Obtain pulse ox - Monitor urine output, obtain clean catch sample to assess of proteinuria - Obtain daily weights - Monitor vital signs - Encourage lateral positioning to perform NST and daily kick counts - Monitor I&O
Testing	- Elevated liver enzymes (LDH, AST) - Increased creatinine
Management	Antihypertensive medications: - Methyldopa - Nifedipine - Hydralazine - Labetalol Anticonvulsant medications: pg. 61 know the uses for preterm labor and for HTN - Magnesium sulfate · Hypertension:

	§ Medication of choice for prophylaxis or treatment to depress the CNS and prevent seizures in the client who has eclampsia and severe preeclampsia · Preterm labor § Relaxes smooth muscle of the uterus and inhibits uterine activity by suppressing contractions § Contraindications: · Vaginal bleeding, dilation of cervix greater than 6 cm, chorioamnionitis, greater than 34 weeks, acute fetal distress · Monitor clinet closely- discontinue if pt presents with signs of pulmonary edema (chest pain, shortness of breath, etc.) pg. 66
Patient education needs	▪ Avoid caffeine and alcohol and tobacco and sodium intake · Maintain patent airway in the event of a seizure · Administer antihypertensive medications as prescribed

20. What is Rh factor incompatibility? When is RhoGAM administered? Who is at risk if it is not given?

- Rh incompatibility is a condition that develops when a woman with Rh-negative blood type is exposed to 578 UNIT SEVEN CHILDBEARING AT RISK Rh-positive blood cells and subsequently develops circulating titers of Rh antibodies. Individuals with Rh-positive blood type have the D antigen present on their red cells, whereas individuals with an Rh-negative blood type do not. The presence or absence of the Rh antigen on the red blood cell membrane is genetically controlled.
- RhoGam is adminster when a Coombs test is negative. The current recommendation is that every Rh-negative nonimmunized woman receives RhoGAM at 28 weeks' gestation and again within 72 hours after giving birth. Other indications for RhoGAM include:
  - Ectopic pregnancy
  - Chorionic villus sampling
  - Amniocentesis
  - Prenatal hemorrhage
  - Molar pregnancy
  - Maternal trauma

- Percutaneous umbilical sampling
- Therapeutic or spontaneous abortion
- Fetal death
- Fetal surgery

- Rh incompatibility most commonly arises with exposure of an Rh-negative mother to Rh-positive fetal blood during pregnancy or birth, during which time erythrocytes from the fetal circulation leak into the maternal circulation. After a significant exposure, alloimmunization or sensitization occurs. As a result, maternal antibodies are produced against the foreign Rh antigen

24. What fetal risks are associated with polyhydramnios and oligohydramnios?

- **Oligohydramnios:** Reduction in amniotic fluid reduces the ability of the fetus to move freely without risk of cord compression, which increases the risk for fetal death and intrapartal hypoxia
- Polyhydramnios:

25. Define multiple gestations and explain why it may be concerning for the mother/fetus.

- Multiple gestation is defined as more than one fetus being born to a pregnant woman. This includes twins, triplets, and higher-order multiples such as quadruplets on up.
- The increasing number of multiple gestations is a concern because women who are expecting more than one infant are at high risk for preterm labor, hydramnios, hyperemesis gravidarum, anemia, preeclamp10995-19_UT7-CH19.qxd 6/27/08 1:59 PM Page 580 sia, and antepartum hemorrhage. Fetal/newborn risks or complications include prematurity, respiratory distress syndrome, birth asphyxia/perinatal depression, congenital anomalies (central nervous system, cardiovascular, and GI defects), twin-to-twin transfusion syndrome (transfusion of blood from one twin [i.e., donor] to the other twin [i.e., recipient]), intrauterine growth restriction, and becoming conjoined twins

26. What do monozygotic and dizygotic mean?

- Monozygotic: Monozygotic twins develop when a single, fertilized ovum splits during the first 2 weeks after conception. Monozygotic twins also are called identical twins
- Dizygotic: Two sperm fertilizing two ova produce dizygotic twins, which are called fraternal twins. Separate amnions, chorions, and placentas are formed in dizygotic twins

27. Describe the following for Premature rupture of membranes:

Pathophysiology	rupture of membranes prior to the onset of labor in a woman who is less than 37 weeks of gestation. Perinatal risks associated with PPROM may stem from immaturity, including respiratory distress syndrome, intraventricular hemorrhage, patent ductus arteriosus, and necrotizing enterocolitis. The exact cause of PROM is not known. In many cases, PROM occurs spontaneously
Nursing Assessment	obtaining a complete health history and performing a physical examination to determine maternal and fetal status. An accurate assessment of the gestational age and knowledge of the maternal, fetal, and neonatal risks are essential to appropriate evaluation, counseling, and management of women with PROM

Testing	**t**he Nitrazine test, fern test, or ultrasound. Urinalysis and urine culture for UTI or asymptomatic bacteriuria, Cervical test or culture for chlamydia or gonorrhea, Vaginal culture for bacterial vaginosis and trichomoniasis, Vaginal introital/rectal culture for group B streptococcus
Management	Preventing risks, monitor maternal vital signs closely. Be alert for a temperature elevation or an increase in pulse, which could indicate infection. Also monitor the fetal heart rate continuously, reporting any fetal tachycardia (which could indicate a maternal infection) or variable decelerations (suggesting cord compression). If variable decelerations are present, anticipate amnioinfusion based on agency policy. Evaluate the results of laboratory tests such as a CBC. An elevation in white blood cells would suggest infection. Administer antibiotics if ordered.
Patient education needs	• Monitor your baby's activity by performing fetal kick counts daily. • Check your temperature daily and report any temperature increases to your health care provider. • Watch for signs related to the beginning of labor. Report any tightening of the abdomen or contractions. • Avoid any touching or manipulating of your breasts, which could stimulate labor. • Do not insert anything into your vagina or vaginal area. • Maintain any specific activity restrictions as recommended. • Wash your hands thoroughly after using the bathroom and make sure to wipe from front to back each time. • Keep your perineal area clean and dry. • Take your antibiotics as directed if your health care provider has prescribed them. • Call your health care provider with changes in your condition, including fever, uterine tenderness, feeling like your heart is racing, and foul-smelling vaginal discharge.

RKC Ch 20; ATI Ch 9

1. **Discuss each of the following for Gestational Diabetes:**

Pathophysiology	With diabetes, there is a deficiency of or resistance to insulin. This alteration interferes with the body's ability to obtain essential nutrients for fuel and storage. If a pregnant woman has pregestational diabetes or develops gestational diabetes, the profound metabolic alterations that occur during pregnancy and that are necessary to support the growth and development of fetus can be affected.
Nursing Assessment	Nursing assessment begins at the first prenatal visit. A thorough history and physical examination in conjunction with specific laboratory and diagnostic testing aids in developing an individualized plan of care
Testing	Urine check for protein (may indicate the need for further evaluation for preeclampsia) and for nitrates and leukocyte esterase (may indicate a

	urinary tract infection) • Urine check for ketones (may indicate the need for evaluation of eating habits) • Kidney function evaluation every trimester for creatinine clearance and protein levels • Eye examination in the first trimester to evaluate the retina for vascular changes • HbA1c every 4 to 6 weeks to monitor glucose trends
Management	maintaining a fasting blood glucose level below 95 mg/dL, with postprandial levels below 140 mg/dL and 2-hour postprandial levels below 120 mg/dL. Nutritional management focuses on maintaining balanced glucose levels and providing enough energy and nutrients for the pregnant woman, while avoiding ketosis, and minimizing the risk of hypoglycemia in women treated with insulin
Patient education needs	strict glucose monitoring, diet and exercise, and signs and symptoms of complications. Encourage the client and her family to make any lifestyle changes. Counsel the client about the possibility of cesarean birth for an LGA infant, or inform the woman who will be giving birth vaginally about the possible need for augmentation with oxytocin

2. What effects can uncontrolled gestational diabetes have on the fetus/newborn?

• Cord prolapse secondary to polyhydramnios and abnormal fetal presentation
• Congenital anomaly due to hyperglycemia in the first trimester (cardiac problems, neural tube defects, skeletal deformities, and genitourinary problems)
• Macrosomia resulting from hyperinsulinemia stimulated by fetal hyperglycemia
• Birth trauma due to increased size of fetus, which complicates the birthing process (shoulder dystocia)
• Preterm birth secondary to hydramnios and an aging placenta, which places the fetus in jeopardy if the pregnancy continues
• Fetal asphyxia secondary to fetal hyperglycemia and hyperinsulinemia
• Intrauterine growth restriction (IUGR) secondary to maternal vascular impairment and decreased placental perfusion, which restricts growth
• Perinatal death due to poor placental perfusion and hypoxia
• Respiratory distress syndrome (RDS) resulting from poor surfactant production secondary to hyperinsulinemia inhibiting the production of phospholipids, which make up surfactant
• Polycythemia due to excessive red blood cell (RBC) production in response to hypoxia
• Hyperbilirubinemia due to excessive RBC breakdown from hypoxia and an immature liver unable to break down bilirubin
• Neonatal hypoglycemia resulting from ongoing hyperinsulinemia after the placenta is removed • Subsequent childhood obesity and carbohydrate intolerance

3. What cardiovascular changes are noted during pregnancy?

COMPARISON CHART 20.1 **Cardiovascular Changes: Prepregnancy vs Pregnancy**

Measurement	Prepregnancy	Pregnancy
Heart rate	72 (±10 bpm)	+10–20%
Cardiac output	4.3 (±0.9 L/min)	+30% to 50%
Blood volume	5 L	+20% to 50%
Stroke volume	73.3 (±9 mL)	+30%
Systemic vascular resistance	1,530 (±520 dyne/cm/sec)	–20%
Oxygen consumption	250 mL/minute	+20–30%

4. Discuss each of the following for iron deficiency anemia.

Pathophysiology	**I**ron deficiency anemia affects one in four pregnancies and is usually related to an inadequate dietary intake of iron
Nursing Assessment	Review the mother's history for factors that may contribute to the development of iron deficiency anemia, including poor nutrition, hemolysis, pica (consuming non-food substances), multiple gestation, limited intervals between pregnancies, and blood loss. Assess the woman's dietary intake as well as the quantity and timing of ingestion of substances that interfere with iron absorption, such as tea, coffee, chocolate, and high-fiber foods. Ask the woman if she has fatigue, weakness, malaise, anorexia, or increased susceptibility to infection, such as frequent colds. Inspect the skin and mucous membranes, noting any pallor. Obtain vital signs and report any tachycardia
Testing	Laboratory tests usually reveal low Hgb (<11 g/dL), low Hct (<35%), low serum iron (<30 ug/dL), microcytic and hypochromic cells, and low serum ferritin (<100 mg/dL).
Management	encouraging compliance with drug therapy and providing dietary instruction about the intake of foods high in iron
Patient education needs	Stress the importance of taking the prenatal vitamin and iron supplement consistently. Encourage the woman to take the iron supplement with vitamin C-containing fluids such as orange juice, which will promote absorption, rather than milk, which can inhibit iron absorption. Taking iron on an empty stomach improves its absorption, but many women cannot tolerate the gastrointestinal discomfort it causes. Recommend foods high in iron, such as dried fruits, whole grains, green leafy vegetables, meats, peanut butter, and iron-fortified cereals

5. After reading about adolescence and pregnancy, discuss how you as the nurse would care for this patient. What would you do differently?

- Assist the adolescent in identifying family and friends who want to be involved and provide support throughout the pregnancy
- Help the adolescent identify the options for this pregnancy, such as abortion, self-parenting of the child, temporary foster care for the baby or herself, or placement of

the child for adoption.

- Explore with the adolescent why she became pregnant. Becoming aware of why she decided to have a child is necessary to help with the development of the adolescent and her ability to parent. Identify barriers to seeking prenatal care, such as lack of transportation, too many problems at home, financial concerns, the long wait for an appointment, and lack of sensitivity on the part of the health care system.
- Encourage the girl to set goals and work toward them.
- Assist her in returning to school and furthering her education. As appropriate, initiate a referral for career or job counseling.
- Stress that the girl's physical well-being is important for both her and her developing fetus, which depends on her for its own health-related needs.
- Assist with arrangements for care, including stress management and self-care.

6. What changes would you incorporate in the nursing care of the advanced maternal age (AMA) woman?

- Encourage her to get early and regular prenatal care.
- Advise her to eat a variety of nutritious foods, especially fortified cereals, enriched grain products, and fresh fruits and vegetables, and drink at least six to eight glasses of water daily and to take the prescribed vitamin containing 400 micrograms of folic acid daily.
- Also stress the need for her to avoid alcohol intake during pregnancy, avoid exposure to second-hand smoke, and take no drugs unless they are prescribed.
- Provide continued surveillance of the mother and fetus throughout the pregnancy.

7. Define teratogen.

- A teratogen is any environmental substance that can cause physical defects in the developing embryo and fetus.

8. Fill in the following table.

Substance	**Effects on pregnancy and fetus/newborn**
Alcohol	Spontaneous abortion, inadequate weight gain, IUGR, fetal alcohol spectrum disorder, the leading cause of mental retardation
caffeine	Vasoconstriction and mild diuresis in mother; fetal stimulation, but teratogenic effects not documented via research
nicotine	Vasoconstriction, reduced uteroplacental blood flow, decreased birthweight, abortion, prematurity, abruptio placentae, fetal demise
cocaine	Vasoconstriction, gestational hypertension, abruptio placentae, abortion, "snow baby syndrome," CNS defects, IUGR

marijuana	Anemia, inadequate weight gain, “amotivational syndrome,” hyperactive startle reflex, newborn tremors, prematurity, IUGR
Opiates/narcotics	Maternal and fetal withdrawal, abruptio placentae, preterm labor, premature rupture of membranes, perinatal asphyxia, newborn sepsis and death, intellectual impairment, malnutrition
methamphetamines	CNS depression, newborn withdrawal, maternal seizures in labor, newborn abstinence syndrome, delayed lung maturity

9. List five possible characteristics of Fetal Alcohol Spectrum Disorder.

- Attention-deficit/hyperactivity disorder (ADHD) • Inability to foresee consequences
- • Inability to learn from previous experience
- • Lack of organization
- • Learning difficulties
- • Poor abstract thinking
- • Poor impulse control
- • Speech and language problems
- • Poor judgment

RKC Chapter 21

1. Why is the term “failure to progress” often used?

This term includes lack of progressive cervical dilation, lack of descent of the fetal head, or both

2. What factors are associated with an increased risk for dystocia?

- epidural analgesia,
- excessive analgesia,
- multiple gestation,
- hydramnios,
- maternal exhaustion,
- ineffective maternal pushing technique,
- occiput posterior position,
- longer first stage of labor,
- nulliparity,
- short maternal stature (less than 5 feet tall),
- fetal birth weight (more than 8.8 lb),
- shoulder dystocia,
- abnormal fetal presentation or position (breech),
- fetal anomalies (hydrocephalus),
- maternal age older than 35 years,
- gestational age more than 41 weeks,
- chorioamnionitis, ineffective uterine contractions,
- high fetal station at complete cervical dilation

3. Familiarize yourself with the common Diagnosis and management of common problems associated with dystocia, their therapeutic management and nursing management i.e.what does this mean for the care delivered by the nurse (p799-804)

4. Define the following:

Hypertonic uterine dysfunction: occurs when the uterus never fully relaxes between contractions. Contractions are erratic and poorly coordinated because more than one uterine pacemaker is sending signals for contraction. Placental perfusion becomes compromised, thereby reducing oxygen to the fetus.

Hypotonic uterine dysfunction: occurs during active labor (dilation more than 4 cm) when contractions become poor in quality and lack sufficient intensity to dilate and efface the cervix. The major risk with this complication is hemorrhage after giving birth because the uterus cannot contract effectively to compress blood vessels.

Precipitate labor: is one that is completed in less than 3 hours. Women experiencing precipitous labor typically have soft perineal tissues that stretch readily, permitting the fetus to pass through the pelvis quickly and easily. Maternal complications are rare if the maternal pelvis is adequate and the soft tissues yield to a fast fetal descent. Potential fetal complications may include head trauma, such as intracranial hemorrhage or nerve damage, and hypoxia due to the rapid progression of labor

5. Why is occiput posterior positioning of the fetus an issue during labor and delivery?

It is not in the ideal position for vaginal birth and turning the fetus can cause cord prolapse

6. What risks increase with a persistent breech presentation?

prematurity, uterine malformations or fibroids, polyhydramnios, placenta previa, fetal abnormalities, and multiple gestations

7. What is a shoulder dystocia? What maneuvers are used to attempt a vaginal delivery when a shoulder dystocia is noted? Describe each.

Shoulder dystocia is defined as the obstruction of fetal descent and birth by the axis of the fetal shoulders after the fetal head has been delivered.

(A) McRobert's maneuver. The mother's thighs are flexed and abducted as much as possible to straighten the pelvic curve.

(B) Suprapubic pressure. Pressure is applied just above the pubic bone, pushing the fetal anterior shoulder downward to displace it from above the mother's symphysis pubis. The newborn's head is depressed toward the mother's anus while suprapubic pressure is applied

8. Macrosomia is defined as a newborn who weighs _4000___ **to** _4500__ **grams.**

9. Why is it important to monitor the bowel and bladder status during labor?

To prevent distention

10. What are 3 ways you can empower, inform and advocate for your patient?

- Educate the client and family about dysfunctional labor and its causes and therapies.
- Explain therapeutic interventions that may be needed to assist with the labor process.
- Encourage the client and her partner to participate in decision making about interventions.
- Assist the woman and partner in expressing their fears and anxieties. Provide encouragement to help them to maintain control.
- Support the client and her partner in their coping efforts.
- Keep the woman and her partner informed of progress and advocate for them

11. Define preterm labor and list 3 risks that are associated with the infant due to preterm labor/birth.

Preterm babies are born around 33 weeks. Infants born prematurely also are at risk for serious sequelae such as respiratory distress syndrome, infections, congenital heart defects, thermoregulation problems that can lead to acidosis and weight loss, intraventricular hemorrhage, feeding difficulties resulting from

diminished stomach capacity and an underdeveloped suck reflex, and neurologic disorders related to hypoxia and trauma at birth

12. What factors influence the decision to intervene when a woman present with preterm labor?

- the probability of progressive labor, gestational age, and the risks of treatment
- There are no clear first-line tocolytic drugs (drugs that promote uterine relaxation by interfering with uterine contractions) to manage preterm labor. Clinical circumstances and the health care provider's preference should dictate treatment.
- • Antibiotics do not appear to prolong gestation and should be reserved for group B streptococcal prophylaxis in women in whom birth is imminent.
- • Tocolytic drugs may prolong pregnancy for 2 to 7 days; during this time, steroids can be given to improve fetal lung maturity and the woman can be transported to a tertiary care center.

13. When are tocolytics used?

- Most likely ordered before the 34th week of gestation in attempt to delay birth and thereby to reduce the severity of respiratory distress syndrome and other complications associated with prematurity

14. Name 5 subtle symptoms of preterm labor.

• Change or increase in vaginal discharge

• Pelvic pressure (pushing-down sensation)

• Low, dull backache

• Menstrual-like cramps

• Heaviness or aching in the thighs

• Uterine contractions, with or without pain • Intestinal cramping, with or without diarrhea

15. What does a fetal fibronectin test determine?

It is present in cervicovaginal fluid prior to delivery, regardless of gestational age. It is not found in vaginal secretions unless there has been a disruption between the chorion and decidua. The test is a useful marker for impending membrane rupture within 7 to 14 days if the level increases to greater than 0.05 ug/mL

16. Define prolonged pregnancy.

Pregannncy beyond 42 weeks, associated with complications.

17. What is the difference between labor induction and labor augmentation?

- Labor induction - stimulation of uterine before labor beigins on its own
- Labor augmentation - stimulating the uterus to increase the fequeny, duration, and intesntiy of contractions after the onset of spontaneous labor

18. What is the most common adverse effect of oxytocin?

oxytocin has an antidiuretic effect, resulting in decreased urine flow that may lead to water intoxication. Symptoms to watch for include headache and vomiting

19. When administering oxytocin what are the primary assessments that need to be made?

Administer as an IV infusion via pump, increasing dose based on protocol until adequate labor progress is achieved. Assess baseline vital signs and FHR and then frequently after initiating oxytocin infusion. Determine frequency, duration, and strength of contractions frequently. Notify health care provider of any

uterine hypertonicity or abnormal FHR patterns. Maintain careful I & O, being alert for water intoxication. Keep client informed of labor progress. Monitor for possible adverse effects such as hyperstimulation of the uterus, impaired uterine blood flow leading to fetal hypoxia, rapid labor leading to cervical lacerations or uterine rupture, water intoxication (if oxytocin is given in electrolyte-free solution or at a rate exceeding 20 mU/min), and hypotension.

20. What does VBAC stand for? Vaginal birth after cesarean

21. What would you do if you encounter an umbilical cord prolapse?

Continuously assess the client and fetus to detect changes and to evaluate the effectiveness of any interventions performed. Changing the woman's position to a modified Sims, Trendelenburg, or knee–chest position also helps relieve cord pressure. Monitor fetal heart rate, maintain bedrest, and administer oxygen if ordered. Provide emotional support and explanations as to what is going on to allay the woman's fears and anxiety

22. What is a typical sign of uterine rupture?

Sudden fetal distress. Other signs may include acute and continuous abdominal pain with or without an epidural, vaginal bleeding, hematuria, irregular abdominal wall contour, loss of station in the fetal presenting part, and hypovolemic shock in the woman, fetus, or both

23. Why might an amnioinfusion be done?

This procedure is commonly indicated for severe variable decelerations due to cord compression, oligohydramnios due to placental insufficiency, postmaturity or rupture of membranes, preterm labor with premature rupture of membranes, and thick meconium fluid.

24. What are the indications for use of forceps or vacuum extractor?

used to apply traction to the fetal head or to provide a method of rotating the fetal head during birth. The indications for the use of either method are similar and include a prolonged second stage of labor, a nonreassuring FHR pattern, failure of the presenting part to fully rotate and descend in the pelvis, limited sensation and inability to push effectively due to the effects of regional anesthesia, presumed fetal jeopardy or fetal distress, maternal heart disease, acute pulmonary edema, intrapartum infection, maternal fatigue, or infection.

25. What are the leading indications for cesarean birth?

Any condition that prevents the safe passage of the fetus through the birth canal or that seriously compromises maternal or fetal well-being may be an indication for a cesarean birth. Examples include active genital herpes, fetal macrosomia, fetopelvic disproportion, prolapsed umbilical cord, placental abnormality (placenta previa or abruptio placentae), previous classic uterine incision or scar, gestational hypertension, diabetes, positive HIV status, and dystocia. Fetal indications include malpresentation (nonvertex presentation), congenital anomalies (fetal neural tube defects, hydrocephalus, abdominal wall defects), and fetal distress