Antepartum Complications

Prenatal Care
Nutrition
Adolescent Pregnancy
Pregestational Problems
Gestational Complications
Prenatal Care and Nutrition

Office Visits
Prenatal Labs
Prenatal Nutrition
Eating Disorders
Lactose Intolerant
Pica
Vegetarian Diet
Prenatal Care

• Prenatal visits – low risk
  • Every 4 weeks for the first 28 weeks’ gestation
  • Every 2 weeks until 36 weeks’ gestation
  • After week 36, every week until childbirth

• Prenatal visits – high risk
  • Referrals to Perinatologist, Internist, Medical Specialist
Labs

• Human chorionic gonadotropin
  • Detectable 8 – 11 days post conception
  • Peaks by 70 days
  • Reproductive assistance to determine viability

• Human placental lactogen
  • Detectable at 4 weeks gestation
  • Stimulates mother’s metabolic processes to nourish fetus
    • Protein, glucose, minerals
Weight Gain Recommendations

• Pattern of weight gain is important
  • Weight gain first trimester – 1.1 – 4.4 lbs
  • Weight gain 2\textsuperscript{nd} & 3\textsuperscript{rd} trimesters – 1 lb/week
  • Normal weight (18.5 – 24.9 BMI): 25 to 35 lb
  • Underweight < 18.5 BMI): 28 to 40 lb
  • Overweight (25 – 29.9 BMI): 15 to 25 lb
  • Obese (>30 BMI): 11 to 22 lb


• Dieting during pregnancy can result in maternal ketosis
Nutritional Requirements

- Calories in second and third trimester
  - Increase by 300 kcal/day - 2200-2300 kcal and 2000 ml fluid/day
  - During lactation: Increase by another 200 kcal/day and 3000 ml fluid/day
- Protein increases by 14 mg to 60 mg/day or 20% total intake
- Fat – 30% total intake
- CHO – 50% total intake
Nutritional Requirements

• Folic acid and Choline increase
  • Choline in egg yolks, soy, wheat germ, meats

• Iron with Vitamin C increase
  • 27-30 mg/day

• Caffeine < 300 ml/day
Factors Affecting Nutritional Intake

• Eating disorders
  • Anorexia nervosa
  • Bulimia nervosa

• Pica (eating non-nutritive substances) may result in iron deficiency anemia.

• Lactose deficiency or intolerance may cause abdominal distention, diarrhea or bloating after dietary intake.

• Smoking – decreases ability to absorb Vitamin C
Vegetarian Diets During Pregnancy

• There are different types of vegetarian diets
  • Lacto-ovovegetarians: Dairy and egg products
  • Lactovegetarians: Dairy products but no eggs
  • Vegans: No foods from animal sources
• Most vegans need additional supplementation - vitamins B12, D, and calcium
Vegetarian Diets During Pregnancy

- Vegetarians’ daily food requirements are:
  - 6 to 11 servings of whole grains, cereal, pasta, and rice
  - 2 to 4 servings of fruit
  - 3 to 5 servings of vegetables
  - 2 to 3 servings of legumes, nuts, seeds, and meat alternatives
  - 2 to 3 servings of milk products (unless vegan)
Adolescent Pregnancy

Developmental Stages
Nutrition
Risks
Fathers
Prenatal Care
Prevention
Scope of the Problem

• United States: Each year about 900,000 teenage girls become pregnant
• Adolescent pregnancy rate
  • 43 per 1,000 females
  • Rate declined, now increasing
  • Still has the highest rate among industrialized nations
Scope of the Problem

• One-third of teen pregnancies are terminated
• About 14% end in miscarriage
• Higher adolescent birth rates
  • African-American teens
  • The rate for black teens ages 15 to 17 has declined by 50%
• Hispanic teens
Stages of Development

- Early adolescence (age 14 and under) - conformity to peer group
- Middle adolescence (ages 15 to 17 years)
  - Seeks independence
  - Turns increasingly to peer groups
- In late adolescence (ages 18 to 19 years) - understands and accepts consequences for behavior
Contributing Factors

- First sexual experience at an early age
- Lack of adult supervision
- Lack of information about contraception
- Inability to access contraceptives easily
- Repeat pregnancy risk is higher if the teen lives with sexual partner
- In some communities, less stigma
Contributing Factors

• Psychosocial factors
  • Poverty
  • Early school failure
  • Early childhood sexual abuse
• Religious factors
• Inconsistent contraceptive use
• High-risk behaviors: Premarital sexual activity; multiple partners
Physical Risks

- Preterm labor
- Low birth weight infant
- Cephalopelvic disproportion
- Iron deficiency anemia
- Preeclampsia - PIH
- Sexually transmitted infections (STIs)
- Infant with Failure-to-thrive
Psychosocial Risks

- Interruption of the developmental tasks of adolescence
- More likely to drop out of school
- Need for public assistance
- Low-paying employment
- Single parenthood
- Increased domestic violence
Psychosocial Risks

- Lack of stable relationships
- Failure to establish a stable family
- Lack of economic and social stability
- Majority of adolescent marriages end in divorce
- Lack of maturity in dealing with an intimate relationship
Characteristics of Fathers

• 50% of the fathers are not teens
• They are usually 20 years of age or older
• Generally from similar backgrounds
• Often a victim of early school failure
• Usually unemployed
• Not more likely to support the mother
Characteristics of Fathers

- Adult paternity common in some other cultures
- Adolescent fathers tend to be less educated than older fathers
- Often marry at a younger age than older fathers
- Often have more children
- Male partners may be very involved in the pregnancy
- May be present for the birth
Reactions to Pregnancy

- Anger
- Shock
- Sorrow
- Teens may use abortion - unless prohibited by culture or religion
- Less likely to seek early prenatal care
Reactions to Pregnancy

• May receive more support from family and friends - where teen pregnancy is socially acceptable
• The mother of the pregnant adolescent usually provides the most support
• Adolescent fathers may view pregnancy as a sign of adult status
  • Sign of increased sexual power
Nursing Care

• Obtain consent for care
• Develop a trusting relationship
• Promote self-esteem and problem-solving skills
• Promote the physical health of the adolescent
• Promoting family adaptation
• Facilitate prenatal education
Nursing Care

• Provide information about the following:
  • Regular prenatal visits
  • Signs of complications
  • Sexually transmitted infections
  • Substance abuse
Factors to Assess

• Factors to assess in pregnant adolescents
  • Low prepregnant weight and anemia
  • Low weight gain during pregnancy and eating disorders
  • Young age at menarche
  • Unhealthy lifestyle: Smoking, alcohol, and illicit drug use
  • Excessive prepregnant weight
  • Chronic disease
The nurse gives this young mother an opportunity to listen to her baby’s heartbeat.
Weight Gain and Nutrient Intake

• Weight gain: Recommended weight gain of the adult pregnancy plus the expected gain of the adolescent

• Nutrient needs - adolescent needs more iron, calcium, folic acid, choline than adult pregnant woman

• Caloric needs
  • Vary widely
  • Figures as high as 50 kcal/kg have been suggested
  • Satisfactory weight gain usually confirms an adequate caloric intake
Nutritional Counseling

• Basic factors to consider
  • Number of years since adolescent reached menarche

• Whether growth has been completed
  • Most adolescents have irregular eating patterns
  • Adolescent may not be the one who regularly prepares meals
  • Individual who prepares meals should be included in nutritional counseling

• Teens are present, not future, oriented, which impacts nutritional counseling
Nutritional Counseling

- May be helpful to involve the expectant father
  - Clinics and schools often offer classes
  - Provides focused activities designed to address this topic
- Pregnant teenager will soon become a parent - her understanding of nutrition may influence her well-being but also that of her child
  - Counseling may be individualized
  - May involve other teens
  - May provide a combination of both approaches
Goals for Prenatal Classes

• Provide anticipatory guidance about pregnancy
• Prepare participants for labor and birth
• Help participants identify the problems
• Help them to identify conflicts associated with teenage pregnancy
• Assist them to recognize and deal with parenting conflicts
Goals for Prenatal Classes

- Promoting increased self-esteem
- Helping participants develop adaptive coping skills
- Providing information about available community resources
Care of Adolescent During Labor

• Admission
  • Ask teen who will be her primary support person
  • Find out who she wants involved in labor and birth

• During labor
  • Be readily available to answer questions
  • Offer support
  • Help adolescent’s support people to understand their roles
  • Encourage partner at his own level of comfort
Postpartum Care

- Predischarge teaching
  - Resumption of ovulation
  - Importance of contraception
  - Provide information about contraception to her sexual partner
- Give information about peer group postpartum classes
- Such classes address a variety of topics: Postpartum adaptation
- Infant and child development and parenting skills
Advanced Maternal Age (AMA)

- 1:5 women has first child after 35 years
- Decrease in fertility starting early 30’s
- Ovulation less frequent > 35 years
- Chances of having twins increases with age
- More likely to undergo fertility treatment
Advanced Maternal Age (AMA)

- Age 35 = 1:400 chance of birth defect
- Age 40 = 1:100 chance of birth defect
- Age 45 = 1:30 chance of birth defect
- Age 49 = 1:10 chance of birth defect

- Down syndrome is most common chromosome birth defect
Advanced Maternal Age (AMA)

• Miscarriage risk = 20% ages 35 to 39
• Miscarriage risk = 50% ages 40 to 44
• Complications
  • Gestational diabetes
  • PIH
  • Placental problems – previa
  • Premature delivery
  • Stillbirth
• Increased c/s rate
Pregestational Problems

Substance Abuse
Diabetes Mellitus
Anemia
Heart Disease
HIV/AIDS
Impact on Mother and Pregnancy

• All women with chronic medical conditions need increased vigilance during pregnancy
• Chronic maternal medical conditions
  • May increase risks to the newborn
  • Premature birth
  • Low birth weight
  • Growth restriction
Substance Use and Abuse

Tobacco
Caffeine
Alcohol
Marijuana
Cocaine
Ecstacy
Heroin
Methadone
Substance Use and Abuse

• Tobacco/smoking
  • O2 deprivation
  • Causes: Low birth weight, preterm births, perinatal death
  • Increased risk: spontaneous abortion, preterm labor, placenta previa, abruptio placenta, premature rupture of membranes, cleft lip and palate, RDS, SIDS, developmental delays

• Caffeine
  • CNS stimulant that crosses placenta
  • Fetus unable to metabolize effectively
  • Diuretic effect on mother
Effects of Alcohol Use

• Central nervous system (CNS) depressant
• Potent teratogen
• Maternal effects
  • Malnutrition
  • Bone marrow suppression
  • Increased incidence of infections
  • Liver disease
  • Withdrawal seizures
• Excessive alcohol consumption
  • May intoxicate the infant
  • May inhibit the maternal letdown
Effects of Alcohol Use (cont’d)

- Physical abnormalities
  - Microcephaly, small eyes, flat nasal bridge, thin upper lip
- Mental abnormalities
  - ADHD, behavior disorders
- Newborn may suffer from withdrawal syndrome
  - Listless, poor reflexes, poor feeding, high-pitched cry, jittery, inconsolable
- Leading cause of mental retardation in US
Effects of Drug Use: Marijuana

• Associated with impaired coordination, memory, and critical thinking ability
• No strong evidence that marijuana is teratogenic
• Risks are dose related
• Increased risk of intrauterine growth restriction
• Sudden infant death syndrome (SIDS) in infants born to heavy users
• Impact of heavy marijuana use on pregnancy is difficult to evaluate
• Variety of social factors may influence the results
Effects of Drug Use: Cocaine and Crack

• Adverse maternal effects
  • Seizures and hallucinations
  • Pulmonary edema and cerebral hemorrhage
  • Respiratory failure and heart problems
  • Increased incidence of spontaneous abortion
  • Abruptio placentae, preterm birth, and stillbirth
Effects of Drug Use: Cocaine and Crack (cont’d)

• Newborns exposed to cocaine in utero
  • Increased risk of sudden infant death syndrome (SIDS)
  • Cocaine crosses into breast milk
  • May cause symptoms in the breastfeeding infant
  • Extreme irritability and vomiting
  • Diarrhea, dilated pupils, and apnea
• Cocaine use after childbirth: Prohibits breastfeeding
Effects of Drug Use: Cocaine and Crack (cont’d)

- Fetal neonatal effects
  - Increased risk of intrauterine growth restriction (IUGR)
  - Small head circumference
  - Cerebral infarctions
  - Altered brain development
  - Shorter body length
Effects of Drug Use: Cocaine and Crack (cont’d)

• Fetal neonatal effects
  • Malformations of the genitourinary tract
  • Lower Apgar scores
  • May have neurobehavioral disturbances
  • Marked irritability
  • An exaggerated startle reflex
  • Labile emotions
Effects of Drug Use: Ecstasy

- MDMA (methylenedioxymethamphetamine)
- It produces euphoria and feelings of empathy for others
- Deaths have occurred among users
- Little is yet known about the effects of MDMA on pregnancy
- Ecstasy use may be critical issue during fetal brain development
Effects of Drug Use: Heroin

- CNS depressant narcotic
- Alters perception and produces euphoria
- An addictive drug, generally IV-administered
- Associated with malnutrition
- Fetus of heroin-addicted woman - increased risk for IUGR and meconium aspiration
Effects of Drug Use: Heroin

• Hypoxia
• Restlessness and shrill, high-pitched cry
• Irritability and fist sucking
• Vomiting and seizures
• Signs of withdrawal usually appear within 72 hours
• May last for several days.
Effects of Drug Use: Methadone

- Most commonly used for women dependent on opioids
- Blocks withdrawal symptoms
- Reduces or eliminates the craving for narcotics
- Crosses the placenta
- Associated with pregnancy complications and abnormal fetal presentation
- Prenatal exposure: Reduced head circumference and lower birth weight
- Newborn may experience withdrawal symptoms
Nursing Management In Drug Use

- Identify drug use early in pregnancy
- Encourage to decrease drug use
- Join support group
- Refer for rehabilitation
- Be aware of laws
  - Child referral to child protective services
Diabetes Mellitus

• DM: Endocrine disorder
  • Inadequate production or use of insulin
  • Glucose metabolism is impaired
  • Cells break down stores of fats and protein for energy
  • Result: Negative nitrogen balance and ketosis

• Cardinal signs and symptoms of DM:
  • Polyuria
  • Polydipsia
  • Polyphagia
  • Weight loss
  • Glycosuria
DM

• Type 1 diabetes: Absolute insulin deficiency
• Type 2 diabetes
  • Insulin secretory defect
  • Insulin resistance
• White’s classification: Describes the extent of DM
• Gestational diabetes mellitus
  • Glucose intolerance
  • Resistance to insulin
  • First diagnosed during pregnancy
Influence of Diabetes on Pregnancy

- Insulin requirements vary during pregnancy, difficult to control
- Hydramnios, PROM, preterm labor
- Hypertension, preeclampsia may occur
- Risk of ketoacidosis
- Nephropathy may result from renal impairment
- Progression of vascular disorders
- Retinopathy may develop
- Infections
Influence of Diabetes on Pregnancy Outcome

- Fetal-Neonatal Risks
  - Congenital anomalies – cardiac, CNS
  - Macrosomia – 9 lb or >
  - Intrauterine growth restriction (IUGR)
  - Respiratory Distress Syndrome
  - Polycythemia
  - Hyperbilirubinemia
  - Neonatal hypoglycemia

If too much glucose from the mother crosses the placenta, the result can be dangerous. Insulin does not cross placenta.
Clinical Therapy

• Goal: Scrupulous maternal plasma glucose control
  • Screening: 1-hour GTT (24 to 28 weeks) 140mg/dl or less
  • Diagnosis: 3-hour oral GTT
  • Blood glucose monitoring (65-95 mg/dl)
  • Assessment of long-term glucose control: HbA1c (normal 4-7%, diabetic 8-10%)
  • Treatment: Diet, insulin, exercise, glucose monitoring
  • Fetal assessments

• Insulin dependent diabetic mother requires less insulin if breastfeeding.
Anemia

• Definition: Hemoglobin (Hb) less than 10 - 11 mg/dL, HCT < 32- 35%

• Signs:
  • Fatigue
  • Paleness
  • Susceptible to infections
  • ↑ risk PP hemorrhage, heart failure

• Implications for the infant:
  • Low birth weight
  • Prematurity
  • Stillbirth
Types of Anemia

- Iron deficiency - most common
- Folic acid deficiency
- Sickle cell anemia
- Thalassemia
Anemia

- Needs 1000 mg more iron intake during pregnancy
- Start w/ 30 mg/day supplements @ 12 weeks gestation
  - Can increase to 120 mg/day
- Eat iron-rich foods
- Give stool softener
- Increase fluids, fiber
- Increase Vitamin C for absorption
- Milk, coffee, tea inhibit absorption
Human Immunodeficiency Virus (HIV) Infection

- 18% of cases in the United States are women
- HIV-1 virus affects specific T cells
- Suppresses body’s immune responses
- Affected person susceptible to opportunistic infections
- The individual develops detectable antibodies
- Diagnosis
  - Enzyme-linked immunosorbent assay (ELISA)
  - Confirmed with the Western blot test
Maternal Fetal Neonatal Risks

- Maternal development of AIDS and opportunistic infections
- Fetal neonatal risk
  - HIV/AIDS disease in the newborn
  - Antiretroviral therapy has decreased infection rates
- Following birth: Positive antibody titer
  - Reflects the passive transfer of maternal antibodies
  - Does not indicate HIV infection
Clinical Therapy

• Three-part ZDV prophylaxis regimen
  • Oral ZDV daily
    • May delay until 12 weeks gestation due to teratogenic effect
  • Intravenous ZDV during labor and until birth
• Infant therapy
  • Oral ZDV for the infant
    • Start 8 to 12 hours after birth
    • Continue for 6 weeks
  • HBIG within 12 hours of birth
  • HBV
Nursing Management

- Education
  - Nutrition and ZDV prophylaxis
  - Teaching for self-care
- Monitor for signs and symptoms of complications
- Review laboratory findings
  - May indicate complications or disease progression (CD4+ 200/mm³ or lower)
- Adhere to universal precautions
- Provide family support and referral to social services
Heart Disease

• Complicates about 1% of pregnancies
• Pregnancy increased
  • Cardiac output
  • Heart rate
  • Blood volume
• Heart disease
  • Decreased cardiac reserve
  • Diminished capacity to handle pregnancy workload
Heart Disorders

• Congenital heart defects
  • Atrial septal and ventricular septal defects
  • Patent ductus arteriosus
  • Coarctation of the aorta and Tetralogy of Fallot

• Rheumatic heart disease - mitral stenosis

• Mitral valve prolapse

• Peripartum cardiomyopathy
  • Dysfunction of left ventricle
Clinical Therapy

• Diagnosis
  • Echocardiogram and chest x-ray
  • Auscultation of heart sounds
  • Sometimes cardiac catheterization

• Classification of functional capacity
  • Class 1 through 4

• Drug therapy
  • Anticoagulants, diuretics
  • Digitalis, antiarrhythmics
  • Antibiotics
  • Iron, vitamins
Nursing Management

• Assess the stress of pregnancy on the heart’s functioning
• Limitation of activity
• Evaluate maternal vital signs
• Monitor for signs of impending cardiac failure
• Semi-Fowler’s or side-lying, head & shoulders elevated, O2
• Fetal assessment
• Vaginal birth - Push with short, open-glottis pushing
• Family support, calm atmosphere
Gestational Onset Complications

- Abruptio Placenta/Placenta Previa
- Abortion
- Ectopic Pregnancy
- Gestational Trophoblastic Disease
- Incompetent Cervix
- Premature Rupture of Membranes
- Premature Labor
- Pregnancy Induced Hypertension
- Disseminated Intravascular Coagulation
- RH and ABO Incompatibility
- Surgery/ Trauma
- Battered Pregnancy/Domestic Violence
- Infection/Chorioamnionitis
Causes of Bleeding During Pregnancy

• Placenta Previa
  • Low-lying placenta
  • Painless bleeding after 7th month
    • Bright red blood
• Diagnosis
  • U/S
  • NST
• Treatment
  • Bedrest if indicated
  • C/S birth
Nursing Plan for Placenta Previa

• No vaginal exams!
• Objectively and subjectively assess blood loss, pain, uterine contractility
• Continuous external monitoring of FHR and uterine activity - NO internal monitoring
• Monitor maternal vital signs and Intake & Output - Every 5-15 minutes with active hemorrhage
• Obtain/evaluate labs
Nursing Plan for Placenta Previa (cont’d)

• Maintain large bore IV access - Available whole blood setup
• Verify family’s ability to cope with anxiety of unknown outcome
• Provide information and emotional support
• Promote neonatal physiologic adaptation
  • Resuscitation as needed
  • Evaluate hemoglobin, cell count, erythrocyte count
  • Administer oxygen & blood as needed
Causes of Bleeding During Pregnancy

• Abruptio Placenta
  • Premature separation of placenta
  • Bleeding may or may not be present
    • Dark red blood
  • Rigid, boardlike abdomen
  • Abdomen increases in size
  • Intense abdominal pain and uterine contractions

• Causes
  • Trauma, Drug abuse (smoking, cocaine)
  • PIH, hypertension
  • Previous abruption, PROM, Multiples
<table>
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<tr>
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<th>Placenta Previa</th>
<th>Abruptio Placentae</th>
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<tr>
<td>Onset</td>
<td>Quiet</td>
<td>Sudden</td>
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<tr>
<td>Bleeding</td>
<td>External</td>
<td>External or concealed</td>
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<td>Color of blood</td>
<td>Bright red</td>
<td>Dark venous</td>
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<td>Anemia</td>
<td>= Blood loss</td>
<td>&gt; Apparent blood loss</td>
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<tr>
<td>Shock</td>
<td>= Blood loss</td>
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<td>Pain</td>
<td>Only during labor</td>
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<td>Uterine tenderness</td>
<td>Absent</td>
<td>Present</td>
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<tr>
<td>Uterine tone</td>
<td>Soft and relaxed</td>
<td>Firm to stony hard</td>
</tr>
<tr>
<td>Uterine contour</td>
<td>Normal</td>
<td>May enlarge and change shape</td>
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<td>Fetal heart tones</td>
<td>Usually present</td>
<td>Present or absent</td>
</tr>
<tr>
<td>Engagement</td>
<td>Absent</td>
<td>May be present</td>
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<tr>
<td>Presentation</td>
<td>May be abnormal</td>
<td>No relationship</td>
</tr>
</tbody>
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Nursing Plan for Abruptio Placentae

• Maintain two large bore IV sites - Fluids and blood products as ordered
• Monitor fetus and uterine activity electronically
  • Assess resting tone every 15 minutes
  • Assess fetal status every 15 minutes
• Monitor for signs of DIC
• Monitor Intake & Output and urine specific gravity
• Measure abdominal girth hourly, as ordered
Nursing Plan for Abruptio Placentae (cont’d)

- Assess maternal cardiovascular status frequently
  - Vital signs every 5-15 minutes
  - Skin color and pulse quality hourly
  - Measure CVP hourly, as ordered
- Review and evaluate diagnostic tests
- Prepare for cesarean, as needed
- Neonatal resuscitation, as needed
- Provide information and emotional support
Causes of Bleeding During Pregnancy

• Abortion: Expulsion of the fetus before 20 weeks’ gestation
  • Expulsion of fetus less than 500g
  • Spontaneous: Occur naturally
  • Induced: Caused by medical or surgical means

• Medical therapy: Bed rest and abstinence from sex
  • Persistent bleeding: Hospitalization
  • IV therapy or blood transfusions
  • Dilatation and curettage (D&C) or suction evacuation
FIGURE 15–1  Types of spontaneous abortion. A, Threatened. The cervix is not dilated, and the placenta is still attached to the uterine wall, but some bleeding occurs.
FIGURE 15–1 (continued) Types of spontaneous abortion. B, Imminent. The placenta has separated from the uterine wall, the cervix has dilated, and the amount of bleeding has increased..
FIGURE 15–1 (continued)  Types of spontaneous abortion. C. Incomplete. The embryo or fetus has passed out of the uterus, but the placenta remains. D. Missed abortion – fetus dies but is not expelled for 4 – 6 weeks
Causes of Bleeding During Pregnancy

• Ectopic pregnancy
  • Implantation of fertilized ovum in site other than uterus
  • Mortality rates declined almost 90%
  • Initially symptoms of pregnancy
  • Positive hCG present in blood and urine
  • Chorionic villi grow into tube wall or implantation site
  • Rupture and bleeding into the abdominal cavity occurs
PATHOPHYSIOLOGY ILLUSTRATED: ECTOPIC PREGNANCY
Various implantation sites in ectopic pregnancy. The most common site is within the fallopian tube, hence the name “tubal pregnancy”.
Causes of Bleeding During Pregnancy

- Ectopic pregnancy
  - Result is sharp unilateral pain and syncope
  - Referred shoulder pain
  - Lower abdominal pain
  - Vaginal bleeding
- Medical therapy: Intramuscular methotrexate if future pregnancy desired
- Surgical therapy: Salpingostomy or salpingectomy
Causes of Bleeding During Pregnancy

- Gestational trophoblastic disease
  - Pathologic proliferation of trophoblastic cells
  - Includes hydatidiform mole
  - Invasive mole (chorioadenoma destruens)
  - Choriocarcinoma, a form of cancer
  - Initially, clinical picture similar to pregnancy
  - Classic signs: Uterine enlargement greater than gestational age, vaginal bleeding
FIGURE 15–2  Hydatidiform mole. A common sign is vaginal bleeding, often brownish (the characteristic “prune juice” appearance) but sometimes bright red. In this figure, some of the hydropic vessels are being passed. This occurrence is diagnostic for hydatidiform mole.
Causes of Bleeding During Pregnancy

• Classic signs of GTD
  • Present in about 50% of cases
  • May pass hydropic vesicles
  • Hyperemesis gravidarum
  • Higher serum hCG levels

• Therapy: Suction evacuation of the mole
  • Uterine curettage for removal of placental fragments
  • Hysterectomy for excessive bleeding
Nursing Interventions for Bleeding

- **Nursing Interventions:**
  - Initial and ongoing assessment of bleeding
  - No vaginal examinations
  - Monitor blood pressure and pulse frequently, abdominal pain
  - Observe for signs of shock
  - Collect blood for Labs: H & H, Rh factor
  - Collect urine for urinalysis, monitor output
  - Assess FHR and activity, bedrest
  - Prepare for intravenous (IV) therapy
  - Have 2 units crossmatched blood available
Incompetent Cervix

• Associated with repeated second trimester abortions

• Possible causes
  • Cervical trauma
  • Infection
  • Congenital cervical or uterine anomalies
  • Increased uterine volume (as with a multiple gestation)

• Diagnosis: Positive history of repeated second trimester abortions
Treatment: Surgical Procedures

- Shirodkar procedure (cerclage)
- McDonald procedure
- Reinforces the weakened cervix
- Purse-string suture is placed in cervix
- Done in first trimester or early in second trimester
- Cesarean birth may be planned
- Suture may be cut at term and vaginal birth permitted
FIGURE 15–3  A cerclage or purse-string suture is inserted in the cervix to prevent preterm cervical dilatation and pregnancy loss. After placement the string is tightened and secured anteriorly.
Premature Rupture of Membranes

- Spontaneous rupture of membranes before labor
- Preterm PROM (PPROM): Rupture of membranes before term
- Maternal risk of infection increases 12–18hrs
- Risk of abruptio placenta
- Fetal-newborn: Risk of respiratory distress syndrome
- Fetal sepsis, malpresentation and prolapse of umbilical cord
- Increased perinatal morbidity and mortality
Premature Rupture of Membranes (cont’d)

- Prevention of infection
  - Use sterile speculum to detect amniotic fluid
  - Limit digital vaginal examinations
  - Nitrazine paper – blue (alkaline)
- If maternal signs of infection evident, antibiotic therapy started immediately
- Upon admission to nursery: Infant assessed for sepsis, placed on antibiotic
- Record time, color, odor, amount, FHR
Premature Rupture of Membranes (cont’d)

- Absence of infection and gestation age less than 37 weeks
- Hospitalization and bed rest
- Regular laboratory evaluations
  - Complete blood cell count (CBC)
  - C-reactive protein (normal 86-10, 406mcg/l)
  - Urinalysis
- Continuous or intermittent fetal monitoring
- Regular nonstress tests (NSTs) or biophysical profiles
- Maternal vital signs assessed every 4 hours
Premature Rupture of Membranes (cont’d)

• Absence of infection /gestation age less than 37 weeks
  • Fetal lung maturity studies
  • Maternal corticosteroid administration

• If sent home: Discharge instructions
  • Bed rest with bathroom privileges
  • Monitor temperature and pulse every 4 hours
  • Keep fetal movement chart and have weekly NST
  • Call healthcare provider for signs of complications
Preterm Labor

- Labor that occurs between 20 and 37 weeks gestation
- Documented uterine contractions
  - (4 in 20 minutes or 8 in 60 minutes)
- Documented cervical change
  - Cervical dilatation of greater than 1 cm
  - Cervical effacement of 80% or more
- Cramping, backache, pelvic pressure, PROM, increase or change in vaginal discharge
<table>
<thead>
<tr>
<th>TABLE 15–1</th>
<th><strong>Risk Factors for Spontaneous Preterm Labor</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple gestation</td>
<td>Cervical shortening &lt;1 cm</td>
</tr>
<tr>
<td>DES exposure</td>
<td>Uterine irritability</td>
</tr>
<tr>
<td>Known cervical incompetence</td>
<td>Age (&lt;18 or &gt;35)</td>
</tr>
<tr>
<td>Polyhydramnios</td>
<td>Low socioeconomic status</td>
</tr>
<tr>
<td>Uterine anomaly</td>
<td>Cigarettes—more than 10/day</td>
</tr>
<tr>
<td>Cervix dilated &gt; 1 cm at 32 weeks</td>
<td>Substance abuse</td>
</tr>
<tr>
<td>Second-trimester abortion</td>
<td>Low maternal weight</td>
</tr>
<tr>
<td>Fetal abnormality</td>
<td>Poor weight gain</td>
</tr>
<tr>
<td>Febrile illness</td>
<td>More than 2 first-trimester abortions</td>
</tr>
<tr>
<td>Bleeding after 12 weeks</td>
<td>Non-white race</td>
</tr>
<tr>
<td>History of pyelonephritis or other maternal infection</td>
<td>Cervical cerclage in situ</td>
</tr>
<tr>
<td>Maternal medical disease</td>
<td>In vitro fertilization (singleton or multiple gestation)</td>
</tr>
<tr>
<td>Previous preterm birth</td>
<td>STD (trichomoniasis, chlamydia)</td>
</tr>
<tr>
<td>Previous preterm labor with term birth</td>
<td>Anemia</td>
</tr>
<tr>
<td>Abdominal surgery during second or third trimester</td>
<td>Abdominal trauma</td>
</tr>
<tr>
<td>History of cone biopsy</td>
<td>Foreign body (IUD)</td>
</tr>
<tr>
<td>Uteroplacental ischemia</td>
<td>Bacterial vaginosis, <em>E. coli</em> (ascending intrauterine infection)</td>
</tr>
<tr>
<td>Stress</td>
<td>Periodontal disease</td>
</tr>
<tr>
<td>Inadequate prenatal care</td>
<td></td>
</tr>
</tbody>
</table>
Preterm Labor (cont’d)

• **Management**
  • Assess for cervicovaginal fibronectin
    • Fetal fibronectin
      • Glycoprotein present between 20 – 34 weeks gestation
      • Predictor of preterm delivery
  • Assess cervical length via ultrasound
  • Obtain history of previous preterm birth
  • Assess for early signs and symptoms
  • Assess for the presence of infections
  • Obtain maternal laboratory studies
  • Educate patient about preterm labor
Preterm Labor (cont’d)

• Management
  • IV infusion: Promotes maternal hydration
  • Tocolysis: Medications used to stop labor

• Antenatal Steroids
  • Betamethasone

• Tocolytics
  • Procardia (nifedipine)
    • Calcium channel blocker
Uterine Relaxants (Tocolytics)

I. Indomethacin (NSAID)

N. Nifedipine (CA Channel Blocker)

M. Magnesium Sulfate

T. Terbutaune (Adrenergic Agonist)

It’s Not My Time!

30 Weeks
Preterm Labor (cont’d)

• Nursing interventions
  • Identify woman at risk
  • Assess the progress of labor
  • Administration of medications and teach side effects
  • Assess impact of labor on mother and fetus
  • Teach how to recognize onset of labor
  • Provide information about community resources
<table>
<thead>
<tr>
<th>Table 15-2</th>
<th>Self-Care Measures to Prevent Preterm Labor</th>
</tr>
</thead>
</table>

| Rest two or three times a day lying on your left side. |
| Drink 2 to 3 quarts of water or fruit juice each day. Avoid caffeine drinks. Filling a quart container and drinking from it will eliminate the need to keep track of numerous glasses of fluid. |
| Empty your bladder at least every 2 hours during waking hours. |
| Avoid lifting heavy objects. If small children are in the home, work out alternatives for picking them up, such as sitting on a chair and having them climb onto your lap. |
| Contact your healthcare provider if you experience menstrual-like cramping, unusual low back pain, unusual vaginal discharge, increased pelvic pressure, or more than 5 uterine contractions in 1 hour (whether painful or not). |
| Pace necessary activities to avoid overexertion. |
| Sexual activity may need to be modified or avoided. |
| Try to focus on 1 day or 1 week at a time rather than on longer periods of time. |
| If on bed rest, get dressed each day and rest on a couch rather than becoming isolated in the bedroom. |
| Find pleasurable ways to help compensate for limitations of activities and boost the spirits. |

Prepared in consultation with Susan Bennett, RN, ACCE, Coordinator of the Prematurity Prevention Program, University of Washington Medical Center.
Hypertension in Pregnancy

• Classification
  • Gestational (or transient) hypertension
  • Preeclampsia-eclampsia
    • 2nd leading cause of maternal death
  • Chronic hypertension
  • Chronic hypertension with superimposed
  • preeclampsia or eclampsia
Pathophysiology of Preeclampsia

• Decreased levels of vasodilators
• Loss of normal vasodilation capability
• Increased levels of vasoconstrictors (partially produced by placenta)
• Concurrent vasospasm
• BP begins to rise after 20 weeks’ gestation
A, In a normal pregnancy, the passive quality of the spiral arteries permits increased blood flow to the placenta.

B, In preclampsia vasoconstriction of the myometrial segment of the spiral arteries occurs.
Clinical Manifestations and Diagnosis

- Mild preeclampsia
  - BP 140/90 mm Hg or higher
  - 1+ proteinuria may occur
  - Liver enzymes may be elevated minimally
  - Edema may be present
  - Weight gain
Clinical Manifestations and Diagnosis

• Severe preeclampsia
  • BP 160/110 mm Hg or higher
    • measurements, 6 hours apart
  • Proteinuria 4-5 g/L in a 24-hour urine collection
  • Dipstick urine protein 3+ to 4+ on 2 random samples – decreased output
    • Samples must be obtained at least 4 hours apart
  • Visual or cerebral disturbances, headache
  • Edema, Wt gain > 2 lb/wk
  • N/V, epigastric pain, hyperreflexia
Clinical Manifestations and Diagnosis

• Eclampsia
  • Grand mal convulsion
  • Coma
  • May occur antepartum, intrapartum, or postpartum
Medical Management

• Home care of mild preeclampsia
  • Client monitors her blood pressure
  • Measures weight and tests urine protein daily
  • Remote NSTs performed daily or bi-weekly
  • Advised to report signs of worsening preeclampsia

• Hospital care of mild preeclampsia
  • Bed rest (left side) and moderate to high protein diet
  • Fetal evaluation
Medical Management (cont’d)

- Severe preeclampsia
  - Bed rest
  - Diet: High-protein, moderate-sodium
  - Anticonvulsants: Magnesium sulfate
    - Antidote -
  - Fluid and electrolyte replacement
  - Corticosteroids and antihypertensive drugs
Medical Management (cont’d)

- Eclampsia
  - Anticonvulsants: Bolus of magnesium sulfate
  - Sedation and other anticonvulsants: Dilantin
  - Diuretics to treat pulmonary edema
  - Furosemide (Lasix)
  - Digitalis: For circulatory failure
  - Strict monitoring of intake and output
Nursing Interventions

- Monitor vital signs and auscultate lungs
- Evaluate fetal heart rate patterns
- Monitor urinary output and urine protein hourly – foley cath
- Check specific gravity of the urine hourly
- Weigh the woman daily at the same time
- Assess deep tendon reflexes and clonus
- Assess edema 1+ to 4+
- Decrease stimuli
# TABLE 15-3  *Deep Tendon Reflex Rating Scale*

<table>
<thead>
<tr>
<th>Rating</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>4+</td>
<td>Hyperactive; very brisk, jerky, or clonic response; abnormal</td>
</tr>
<tr>
<td>3+</td>
<td>Brisker than average; may not be abnormal</td>
</tr>
<tr>
<td>2+</td>
<td>Average response; normal</td>
</tr>
<tr>
<td>1+</td>
<td>Diminished response; low normal</td>
</tr>
<tr>
<td>0</td>
<td>No response; abnormal</td>
</tr>
</tbody>
</table>
To elicit clonus, with the knee flexed and the leg supported, sharply dorsiflex the foot, hold it momentarily, and then release it. Normally the foot returns to its usual position of plantar flexion. Clonus is present if the foot “jerks” or taps against the examiner’s hand. If so, the number of taps or beats of clonus is recorded.
Nursing Interventions

- Monitor women for premature labor
- Monitor for premature rupture of membranes
- Teach client
  - Signs of premature labor
  - Signs of premature rupture of membranes
- Tell client to contact healthcare provider if membranes rupture or labor begins
- Seizure precautions
Maternal Complications of Preeclampsia

- Hyperreflexia and headache
- Pulmonary edema, pulmonary embolism, heart failure
- Seizures, cerebral hemorrhage
- Renal failure
- Abruptio placenta
- Ruptured liver
HELPP Syndrome
(Preeclampsia with Liver Involvement)

Hemolysis
Elevated Liver Function Tests
Low Platelet Count
Disseminated Intravascular Coagulation

• Overactivation of normal clotting process
  • Imbalance between coagulation and fibrolytic systems
  • Depletes clotting factors
  • Hemorrhage and shock
  • Thrombocytopenia (<150,000/mm3), low fibrinogen levels (<250 mg/dl), elevated fibrin split products (> 10 mcg/ml)

Treat cause
  • Preeclampsia, abruptio, fetal demise, amniotic fluid embolism, uterine atony
Fetal-Neonatal Risks of Preeclampsia

- Small for gestational age (SGA)
- Premature
- Hypermagnesemia (Magnesium sulfate administration to mother)
- Increased morbidity and mortality
Hemorrhagic Disorders

- Ectopic Pregnancy
  - Surgical TX
  - 7th Month Painless Bleeding
- Placenta Previa
- Abortion
  - Threatened
  - Inevitable
  - Incomplete
  - Complete
  - Missed AB
  - Recurrent
- Abruptio Placenta
- Tender Abdomen
  - Vaginal Bleeding or Concealed Hemorrhage

Gestational Trophoblastic Disease
- Has Presumptive Signs Of Pregnancy
- Associated With Increased Risk Of Cancer
- Vaginal Bleeding
- Enlarged Uterus
- Negative for Positive Signs of Pregnancy

Complications With Pregnancy

- Hypertensive Disorders
  - Edema
  - BP
  - Triad Of Symptoms
  - Proteinuria
- Preventative Measures:
  - Watch Salt Intake
  - I & O
  - Elevate Extremities
- Hydramnios
  - "Too Much Amniotic Fluid"
  - > 2000 ml
  - Dyspnea
  - ↑Birth Defects
  - Supine Hypotension

Hyperemesis Gravidarum
- Assist Medical Management
- Detect & Treat Complications
Rh Alloimmunization: Causes

• Rh-negative woman carries an Rh-positive fetus
• Fetal red blood cells cross into maternal circulation
• Response: Production of Rh antibodies
• Transfer of RBCs usually occurs at birth
• The first child is not affected
• Subsequent pregnancy
  • Rh antibodies enter the fetal circulation
  • Result: Hemolysis of fetal red blood cells and fetal anemia
FIGURE 15–5  Rh alloimmunization sequence. A, Rh-positive father and Rh-negative mother.
Rh alloimmunization sequence.  

B, Pregnancy with Rh-positive fetus. Some Rh-positive blood enters the mother’s bloodstream.  

C, As the placenta separates, the mother is further exposed to the Rh-positive blood.  

D, Anti-Rh-positive antibodies (triangles) are formed.  

E, In subsequent pregnancies with an Rh-positive fetus, Rh-positive red blood cells are attacked by the anti-Rh-positive maternal antibodies, causing hemolysis of the red blood cells in the fetus.
Rh Alloimmunization: Fetal and Neonatal Risks

- Anemia
- Hemolytic syndrome
- Erythroblastosis fetalis
  - Marked fetal edema, called hydrops fetalis
  - Congestive heart failure
  - Marked jaundice
Rh Alloimmunization: Prevention

• Screen for Rh incompatibility and sensitization
  • Take a history
  • Identify Rh-negative woman
  • Antibody screen (indirect Coombs’ test)
    • Identifies if woman is sensitized
  • Give intramuscular injection of 300 mcg Rh immune globulin
Rh Alloimmunization: Prevention (cont’d)

- Give Rh immune globulin in the following cases:
  - Pregnant Rh-women who have no antibody titer
  - At 28 weeks’ gestational age
  - Mother whose baby’s father is Rh positive or unknown
  - After each abortion and within 72 hours postpartum
  - Amniocentesis and placenta previa
  - Invasive procedures that may cause bleeding
### TABLE 15-4  Rh Alloimmunization

When trying to work through Rh problems, remember the following:
- A potential problem exists when an Rh-negative mother and an Rh-positive father conceive a child who is Rh positive.
- In this situation, the mother may become sensitized or produce antibodies to her fetus’s Rh-positive blood.

The following tests are used to detect sensitization:
- Indirect Coombs’ test—done on the mother’s blood to measure the number of Rh-positive antibodies.
- Direct Coombs’ test—done on the infant’s blood to detect antibody-coated Rh-positive red blood cells.

Based on the results of these tests, the following may be done:
- If the mother’s indirect Coombs’ test is negative and the infant’s direct Coombs’ test is negative, the mother is given Rh immune globulin within 72 hours of birth.
- If the mother’s indirect Coombs’ test is positive and her Rh-positive infant has a positive direct Coombs’ test, Rh immune globulin is not given; in this case the infant is carefully monitored for hemolytic disease.
- It is recommended that Rh immune globulin be given at 28 weeks antenatally to decrease possible transplacental bleeding concerns.

Rh immune globulin is also administered after each abortion (spontaneous or therapeutic), ectopic pregnancy, or amniocentesis.
ABO Incompatibility

- **Cause:** Mother has type O blood and infant has A, B, or AB
  - Anti-A and anti-B antibodies occur naturally
  - During pregnancy maternal antibodies cross placenta
  - Cause hemolysis of the fetal red blood cells
  - Unlike Rh incompatibility, first infant is often involved, no evidence of repeated sensitization, no antepartal treatment
ABO Incompatibility (cont’d)

• Assess for potential for ABO incompatibility - type O mother and type A or B father

• Following birth
  • Newborn assessed carefully
  • Asses for development of hyperbilirubinemia
  • Hyperbilirubinemia is treated with phototherapy

• Unlike Rh incompatibility, it cannot be prevented
Effects of Surgical Procedures

• First trimester surgery: Increase incidence of abortion
• Second/Third trimester:
  • Increased incidence of fetal mortality
  • Low-birth-weight (less than 2500 g) infants
  • Increased incidence of preterm labor
  • Increased incidence of intrauterine growth restriction
• Inability to perform some diagnostic procedures (x-ray) - may hinder diagnosis of disease during pregnancy
Special Considerations for Surgery

• Surgery during early second trimester decreases risk of complication
• During surgery, wedge placed under mother’s hip prevents uterine compression of major blood vessels
• Insertion of nasogastric tube to decrease vomiting
• An indwelling catheter
  • Prevents bladder distension
  • Facilitates monitoring of output
Surgery Special Considerations (cont’d)

• Fetal heart rate must be monitored electronically during and after surgery

• Postoperatively
  • Encourage to turn, breathe deeply, and cough
  • Encourage use of ventilation therapy
  • Early ambulation to prevent complications

• Discharge teaching is very important
Impact of Trauma During Pregnancy

- **Impact**
  - Maternal shock
  - Premature labor or spontaneous abortion
- **Maternal mortality:** From head trauma or hemorrhage
  - Uterine rupture is rare
  - Placental abruption
- **Traumatic separation of the placenta**
  - High rate of fetal mortality
  - Premature birth
- **Early rupture of membranes**
Trauma Treatment (cont’d)

- Fetus near term and uterus damaged: Cesarean section
- Fetus immature
  - Uterus can be repaired
  - Pregnancy continue to term
- Evaluation of fetal heart rate and movement
Trauma Treatment (cont’d)

• Minor injuries
  • Fetal monitoring for minimum of 4 hours
  • Monitoring for 24 hours is recommended
  • Signs of obstetric complications such as uterine bleeding
Trauma Treatment

• Major injuries
  • Life-saving measures for woman
  • Establishing an airway
  • Control external bleeding
  • Administer IV fluid to alleviate shock
  • Kept on her left side to prevent further hypotension
  • Oxygen is administered at 100%
  • Exploratory surgery may be necessary
Nursing Interventions

- Assess fetal heart tones
- Prepare equipment for examination
- Have oxygen available
- Collect and organize all data
- Notify other members of health care team
- Obtain an order to type and cross match for blood
- Assess coping mechanisms of woman in crisis
- Assess the family’s response to situation
Physical Abuse During Pregnancy

- Incidence: 4% to 8%
- May result in loss of pregnancy
- Preterm labor, low-birth-weight infants, and fetal death
- Abused women have higher rates of complications
  - Anemia, infection, and low weight gain
  - First- and second-trimester bleeding
- Be alert for non-specific signs
Physical Abuse During Pregnancy (cont’d)

• Management: Early detection
• Ask about abuse at several prenatal visits
• Client may only disclose abuse after knowing her caregivers
• Assess old scars on parts of the body
• Be alert for signs of bruising: Target areas of violence during pregnancy
  • Client’s breasts
  • Abdomen or genitalia
Abuse Treatment

• Create an accepting, nonjudgmental environment
• Allow patient to express her concerns and provide reassurance no one deserves to be mistreated
• Document – pt statements, photographs with permission
• Explain mandatory reporting laws where applicable
• Patient needs to be aware of community resources
  • Emergency shelters
  • Police, legal, and social services
  • Counseling
• Patient has to make decision to seek assistance
Prenatal Infections

• All TORCH infection can cross placenta
• Toxoplasmosis: Protozoan toxoplasma gondii
• Transmission
  • Eating raw or undercooked meat
  • Contact with the feces of infected cats
Prenatal Infections (cont’d)

- Fetal-neonatal risks
  - Fetal infection
  - Severe fetal disease or death
- Severe neonatal disorders
  - Hydrocephalus, blind, deaf, mental retardation
- Treatment
  - Sulfadiazine and pyrimethamine
  - Given after the first trimester
Prenatal Infections (cont’d)

- Rubella: Virus
- Transmission: Across placenta to fetus
  - Fetal neonatal infection
  - Infant should be isolated
  - Rubella syndrome
    - Cataracts, CHD, deaf, IUGR, extremity malformation
- Treatment: Prevention
  - Vaccination of all children
  - Vaccination of women of reproductive age after delivery – avoid pregnancy for 3 months
  - Rubella titer – 1:10 or ≥ immunity
Prenatal Infections (cont’d)

• Chlamydia
  • Asymptomatic in mother or may have purulent vaginal drainage
  • Can cause PROM or premature labor
  • Neonate:
    • Conjunctivitis, pneumonia
    • Chronic otitis media
    • Low birth weight
Prenatal Infections (cont’d)

• Cytomegalovirus: Virus
  • Transmission
    • Across placenta to fetus
    • Cervical route during birth
• Fetal infection
• Fetal death
• Neonatal disorders
  • Mental retardation, deaf, hydrocephalus
• Treatment: Gancyclovir for symptoms, no tx exists for maternal CMV or for congenital disease in the newborn
Prenatal Infections (cont’d)

- Herpes simplex virus: HSV-1 or HSV-2
- Transmission: Ascending infection during birth
  - After membranes rupture
  - Transplacental: Rare
- Neonatal infection
  - Skin lesions, jaundice, seizures
  - Organ infections – liver, CNS
- Treatment: Antiviral therapy (acyclovir)
- Active herpes lesion: Cesarean section
- No evidence of genital infection exists, vaginal birth is preferred
Prenatal Infections (cont’d)

• Group B streptococcal infection (GBS) - bacterial infection

• Transmission:
  • Vertical from mother during birth
  • From colonized nursing personnel
  • From colonized infants

• Neonatal infection treated with antibiotics

• Prevention
  • Early identification – culture at 35-37 weeks
  • Antibiotic prophylaxis during labor
Other Infections
- Urinary tract infections
- Vaginal infections
- Sexually transmitted infections

Maternal infections may cause spontaneous abortions.

Some evidence links infection and prematurity

Risk of maternal and fetal morbidity and mortality

Early diagnosis and treatment is necessary
NCLEX Question

The eclamptic patient develops disseminated intravascular coagulation during the postoperative period. Which laboratory studies need to be reported to the physician?

A. Elevated WBC, decreased fibrin split products
B. Decreased platelets, decreased fibrinogen
C. Elevated fibrin split products, elevated platelets
D. Decreased clotting time, elevated fibrinogen
NCLEX Question

The 28-week gestation client has a routine glucose test. Which lab results determine further follow-up with a 3 hour GTT? Select all that apply.

A. 110 mg/dl
B. 140 mg/dl
C. 200 mg/dl
D. 250 mg/dl
NCLEX Question

When will the newborn of an HIV positive mother be tested to see if the newborn has HIV?

A. 6 months
B. 12 months
C. 18 months
D. 24 months
NCLEX Question

According to Nagele’s rule, when is the estimated due date for the pregnant woman who has a LMP of April 17, 2009?

A. February 1, 2010
B. July 10, 2009
C. December 20, 2009
D. January 24, 2010
Questions???