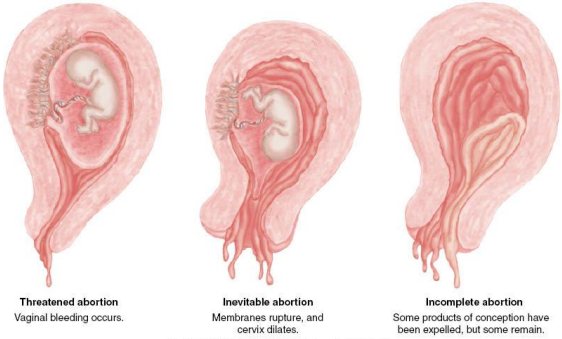
High Risk- Pregnancy Related Complications

R.Thomas

Bleeding Conditions of Early Pregnancy

- Abortion
  - Spontaneous
  - Threatened
  - Inevitable
  - Incomplete
  - Complete
  - Missed
  - Recurrent



Threatened abortion
Vaginal bleeding occurs.

Inevitable abortion
Membranes rupture, and cervix dilates.

Incomplete abortion
Some products of conception have been expelled, but some remain.

Spontaneous Abortion

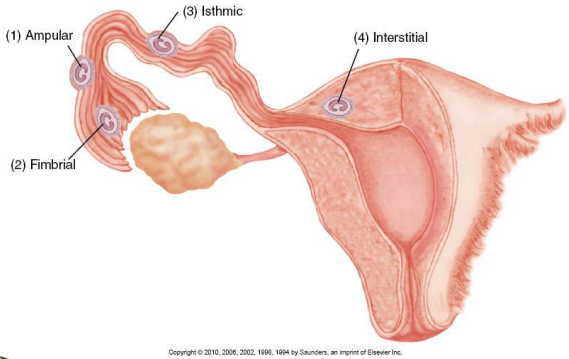
- Cause unknown and highly variable
  - First trimester commonly due to fetal genetic abnormalities
  - Second trimester more likely related to maternal conditions
- Nursing assessment
  - Vaginal bleeding
  - Cramping or contractions
  - Vital signs, pain level
  - Client's understanding

Spontaneous Abortion: Nursing Management

- Continued monitoring: vaginal bleeding, pad count, passage of products of conception, pain level, preparation for procedures, medications (see Drug Guide 19.1)
- Support: physical and emotional; stress that woman is not the cause of the loss; verbalization of feelings, grief support, referral to community support group

Ectopic Pregnancy

- Etiologies
- S/S
  - Hallmark sign: abdominal pain with spotting within 6 to 8 weeks after missed menses
  - Lab and Diagnotics– TV US, hcg, additional lab
- Management
  - Medical: drug therapy (methotrexate, prostaglandins, misoprostol, and actinomycin)
  - Salpingostomy
  - Salpingectomy
  - Grief counseling

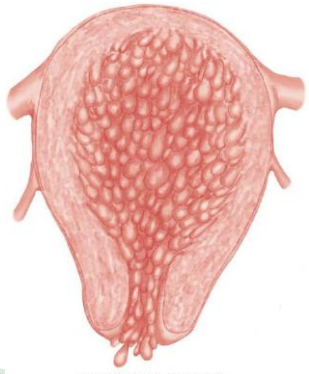


Ectopic Pregnancy

- Nursing management
  - Preparation for treatment
    - Analgesics for pain
    - Medications for medical treatment
    - Teaching about signs and symptoms of rupture
    - Surgery
  - Emotional support
  - Education

Gestational Trophoblastic Disease

- Pathophysiology
- Incidence
- Types
  - Benign Neoplasm
    - Hydatiform Mole
  - GT Neoplasm
    - Invasive Mole
    - Choriocarcinoma



Hydatiform Mole

- Most common form of GTD
- Risk factors
- Types
  - Partial
  - Complete
- Diagnosis
- S/S
- Management

Gestational Trophoblastic Neoplasm

- Invasive Mole
- Choriocarcinoma

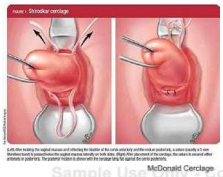
Impact & Implications for GTD

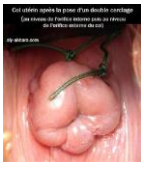
- Impact on Patient
- Implications for Nurses

Incompetent Cervix (Dysfunctional)

- Etiologies
- Dx
- Treatment
  - Cerclage
    - Shiroakar
    - McDonald's
- Management

Cerclage

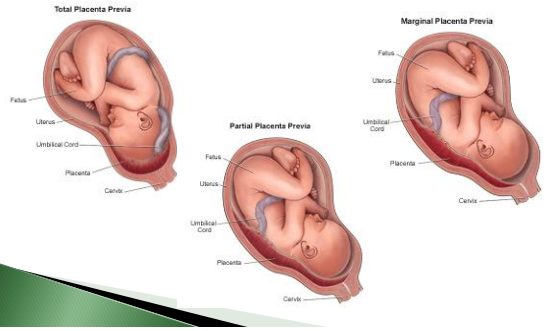




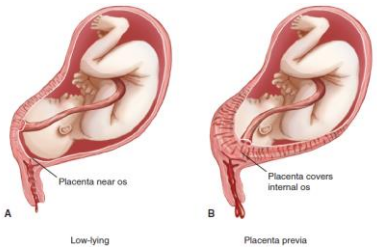
Placenta Previa

- Incidence
- Predisposing factors
  - Previous C/S
  - Induced abortions
  - Multiparity
  - Advanced maternal age
- Degrees
  - Complete
  - Parital
  - Marginal (Low Lying)
- S/S
- Dx
- Treatment/ Management

Placenta Previa



Placenta Previa #2

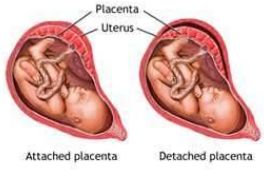


Placenta Previa #3

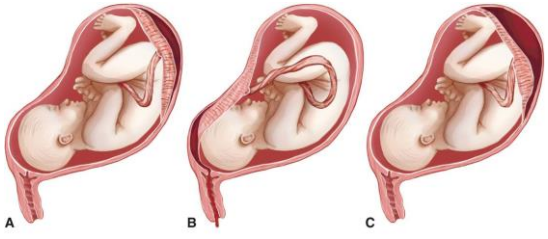
- Nursing management
  - Monitoring of maternal–fetal status
    - Vaginal bleeding; pad count
    - Avoidance of vaginal exams
    - FHR
  - Support and education: fetal movement counts, effects of prolonged bed rest (if necessary); signs and symptoms to report
  - Preparation for possible cesarean birth (see Nursing Care Plan 19.1)

Abruptio Placentae

- Incidence
- Complete abruptio
- Partial Abrutpio
- Associated factors
- S/S
- Dx
- Treatment/ Management



Placental Abruption #3



Partial abruption, concealed hemorrhage

Partial abruption, apparent hemorrhage

Complete abruption, concealed hemorrhage

Placental Abruption #2

- Nursing assessment (see Comparison Chart 19.1)
  - Risk factors
  - Bleeding (dark red)
  - Pain (knife-like), uterine tenderness, contractions
  - Fetal movement and activity (decreased)
  - Fetal heart rate
  - Laboratory and diagnostic testing: CBC, fibrinogen levels, PT/aPTT, type and cross-match, nonstress test, biophysical profile

Placental Abruption #4

- Nursing management
  - Tissue perfusion: left lateral position, strict bed rest, oxygen therapy, vital signs, fundal height, continuous fetal monitoring
  - Support and education: empathy, understanding, explanations, possible loss of fetus, reduction of recurrence

Placental Abnormalities

- Placenta accreta
- Placenta increta
- Placenta Precreta

Hyperemisis Gravidarium

- Etiology
  - ↑hCG
  - Emotional factors
  - Irregular eating habits
  - Metabolic theory
- Treatment/ Management
  - Initial Txt
  - Assessment/ Nursing Interventions

Hyperemesis Gravidarum

- Nursing assessment
  - Onset, duration, course of N/V; diet history; risk factors, weight, associated symptoms, perception of situation
  - Liver enzymes, CBC, BUN, electrolytes, urine specific gravity, ultrasound
- Nursing management
  - Comfort and nutrition (NPO, IV fluids, hygiene, oral care, I&O)
  - Support and education: reassurance; home care follow-up (see Teaching Guidelines 19.1)

Pharmacological Management

- Therapeutic management
  - Promethazine (Phenergan)
  - Diphenhydramine (Benadryl)
  - Histamine-receptor antagonists
  - Gastric acid inhibitors
  - Metoclopramide (Reglan)
  - Ondansetron (Zofran)

Pica

- Etiology
- S/S
  - Iron deficiency anemia
  - Zinc deficiency
  - Parasites
  - Toxins
  - Microorganisms
- Treatment/ Management
  - Nutritional counseling

Hypertensive Disorders of Pregnancy

- Chronic hypertension
- Gestational hypertension
- Preeclampsia
- Eclampsia
- Chronic hypertension with superimposed preeclampsia

Chronic Hypertension

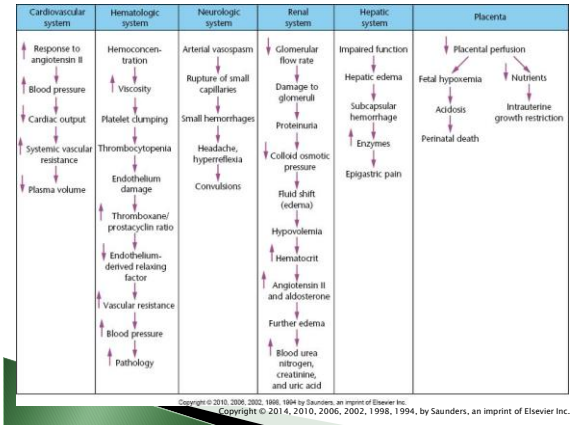
- Diagnosis
  - Evidence suggests that hypertension preceded the pregnancy
  - When a woman is hypertensive before 20 weeks of gestation
- Effects
- Therapeutic management

Gestational HTN

- Risk factors
  - Primapara
  - Pregestational DM
  - Multiple gestations
  - Family hx of preeclampsia
  - Maternal age >35
- Treatment/ Management
  - Prevent complications
  - Prevent seizures
  - Safe delivery

Preeclampsia

- Etiology & S/S
  - Vasospasms
  - Vasoconstriction
    - ↓renal perfusion→proteinuria
    - ↓circulation to liver→↑liver enzymes
    - ↓cerbral circulation→cerebral hemorrhage
    - ↓placental circulation→infarctions, abruptio, IUGR
- Characterized
  - Mild or severe
- Dx
- Treatment/ Management



Magnesium Sulfate

- Action
- Use
- Route/ Dosage
- Adverse Rxn
- Magnesium toxicity
- Nursing Interventions

Eclampsia

- Seizures
- Nursing Interventions/Management

HELLP Syndrome

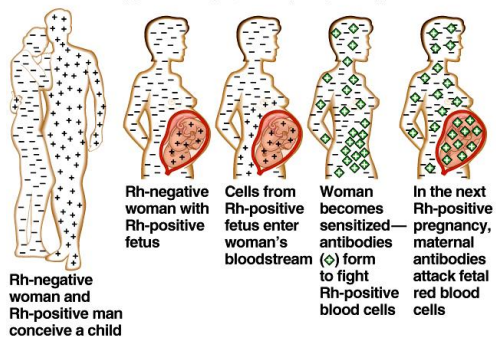
- H-hemolysis of RBC's
- E- elevated
- L- liver enzymes
- L- low
- P-platelets
- Incidence
- S/S
- Dx
  - CBC, liver enzymes (LFT's)
- Treatment/ Management

Disseminated Intravascular Coagulation (DIC)/ Consumption Coagulopathy

- Etiology
- Predisposing factors
- S/S
- Dx
- Treatment/ Management
  - Treat underlying cause
  - Replace clotting factors
    - Cryoprecipitate
  - FFP
  - PRBC'S
  - Whole blood
  - Observe
- Prognosis

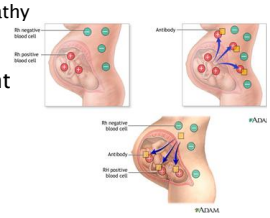
Blood Incompatibility

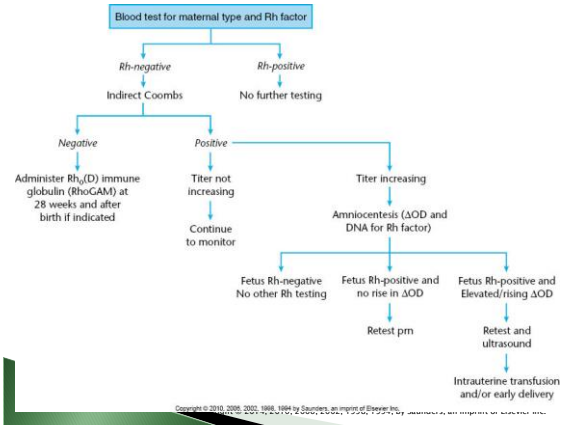
- ABO incompatibility: type O mothers and fetuses with type A or B blood (less severe than Rh incompatibility)
- Rh incompatibility: exposure of Rh-negative mother to Rh-positive fetal blood; sensitization; antibody production; risk increases with each subsequent pregnancy and fetus with Rh-positive blood
- Nursing assessment: maternal blood type and Rh status
- Nursing management: RhoGAM at 28 weeks



Rh Incompatibility

- Pathophysiology
- Fetal/Neonatal Implications
  - Kernicterus→ encephalopathy
  - Erythroblastosis fetalis
  - Hydrops fetalis
- Treatment/ Management
  - RhoGAM
    - (Rh D immune globulin)
  - Prenatal care
    - Rh factor
    - Indirect Coombs' test
    - Amniocentesis
    - Ultrasound
    - Intrauterine blood transfusion





ABO Incompatibility

- Mother- blood type O
- Fetus- blood types A, B, AB

- Neonatal implications
  - Direct Coombs' test
  - Hyperbilirubinemia
    - Jaundice

Hydramnios

- Amniotic fluid >2,000 mL
- Therapeutic management: close monitoring; removal of fluid, indomethacin (decreases fluid by decreasing fetal urinary output)
- Nursing assessment: risk factors, fundal height, abdominal discomfort, difficulty palpating fetal parts, or obtaining FHR
- Nursing management: ongoing assessment and monitoring; assisting with therapeutic amniocentesis

Oligohydramnios

- Amniotic fluid <500 mL
- Therapeutic management: serial monitoring; amnioinfusion and birth for fetal compromise
- Nursing assessment: risk factors, fluid leaking from vagina
- Nursing management: continuous fetal surveillance; assistance with amnioinfusion, comfort measures, position changes

Multiple Gestation

- Therapeutic management: serial ultrasounds, close monitoring during labor, operative delivery (common)
- Nursing assessment: uterus larger than expected for EDB; ultrasound confirmation
- Nursing management: education and support antepartally; labor management with perinatal team on standby; postpartum assessment for possible hemorrhage

Risk of Multiple Pregnancy

- Maternal Risks
  - ↑ workload
  - Anemia
  - Hydramnios
  - Hyperemisis
  - Abnormal fetal positions
  - Uterine atony
- Fetal Risks
  - Congenital anomilies
  - SGA
  - Preterm birth
  - Abruptio

Care of Multiple Gestation

- Antepartum
- Intrapartum
- Postpartum

Premature Rupture of Membranes

- PROM—women beyond 37 weeks' gestation
- PPROM—women less than 37 weeks' gestation
- Treatment: dependent on gestational age; no unsterile digital cervical exams until woman is in active labor; expectant management if fetal lungs immature
- Nursing assessment: risk factors, signs and symptoms of labor, electronic FHR monitoring, amniotic fluid characteristics (see Box 19.3); nitrazine test, fern test, ultrasound

Premature Rupture of Membranes

- Nursing management
  - Infection prevention
  - Identification of uterine contractions
  - Education and support
  - Discharge home (PPROM) if no labor within 48 hours (see Teaching Guidelines 19.3)

Diabetes Mellitus: Classifications

- Typical classification
  - Type 1
  - Type 2
  - Impaired fasting glucose and impaired glucose tolerance
  - Gestational diabetes
- Classification during pregnancy
  - Pregestational diabetes
  - Gestational (see Table 20.1)

Diabetes Mellitus: Pathophysiology and Pregnancy

- Fetal demands
- Role of placental hormones
- Changes in insulin resistance
- Effects on mother
- Effects on fetus (see Table 20.2)

Effects of Preexisting Diabetes Mellitus on Pregnancy

- Hydramnios
- Gestational HTN
- Ketoacidosis
- Preterm labor
- Cord Prolapse
- Stillbirths
- Hypoglycemia
- UTI
- Chronic Monilia
- Dystocia
- Cesarean Deliveries
- Postpartum Hemorrhage
- Spontaneous abortions
- preeclampsia
- ↑ risk for pp hemorrhage

Fetal–Neonatal Risks of Maternal Diabetes Mellitus

- Congenital Anomalies
- Macrosomia
- Birth trauma
- Preterm birth
- Perinatal death
- Fetal asphyxia
- Respiratory Distress Syndrome (RDS)
- Polycythemia
- IUGR
- Hyperbilirubinemia
- Hypoglycemia
- Hypocalcemia

Diabetes Mellitus: Therapeutic Management

- Preconception counseling
- Blood glucose level control (HbA1c <7%)
- Glycemic control
- Nutritional management
- Hypoglycemic agents
- Close maternal and fetal surveillance
- Management during labor and birth

Diabetes Mellitus: Assessment

- Health history; physical examination; risk factors
- Screening at first prenatal visit; additional screening at 24 to 28 weeks for women considered at risk
- Maternal surveillance: urine for protein, ketones, nitrates, and leukocyte esterase; evaluation of renal function/trimester; eye exam in first trimester; HbA1c q4–6 weeks
- Fetal surveillance: ultrasound; alpha-fetoprotein levels; biophysical profile; nonstress testing; amniocentesis

Gestational Diabetes Mellitus

- Risk Factors
- Screening/ Dx
  - 24-28 weeks
  - 1 hr glucose challenge test- if >140 then
  - 3 hr oral glucose tolerance test (gold standard)
    - FBS> 95mg/dl
    - 1 hr> 180mg/dl
    - 2 hr> 155mg/dl
    - 3hr> 140mg/dl

Fetal Surveillance (DM mother)

- US
- AFP
- Fetal echocardiogram
- Kick counts
- BPP
- NST
- Amnio
  - L/S ratio (lecithin/sphingomyelin)
  - Phosphatidylglycerol (PG) and phosphatidylinositol (PI)

Antepartum

- Diet modification
  - ADA diet
  - 3 meals with 3 snacks
- Insulin therapy
  - Regular or regular & NPH BID
- Home glucose monitoring
- HgA1C
- Kidney function
- Eye exam
- EKG
- Teach S/S of hypoglycemia/ hyperglycemia

Intrapartum Management

- Glucose control
- Regluar insulin only
- Hourly I&O
- D50% available

Postpartum Management

- Monitor glucose levels
- Breastfeeding encouraged
- Weight control
- Exercise
- Monitor for hemorrhage

Congenital Heart Conditions Affecting Pregnancy

- Tetralogy of Fallot
- Atrial septal defect (ASD)
- Ventricular septal defect (VSD)
- Patent ductus arteriosus
- See Table 20.3

Acquired Heart Conditions Affecting Pregnancy

- Mitral valve prolapse
- Mitral valve stenosis
- Aortic stenosis
- Peripartum cardiomyopathy
- Myocardial infarction

Functional Classification System

- Class I: asymptomatic; no limitation of physical activity
- Class II: symptomatic (dyspnea, chest pain) with increased activity
- Class III: symptomatic (fatigue, palpitation) with normal activity
- Class IV: symptomatic at rest or with any physical activity

Cardiac Disease

- Classifications
  - I- no limitations
  - II- slight limitations
  - III- moderate limitations
  - IV- unable to perform activity without difficulty
- Treatment/ Management
  - Antepartum
  - Intrapartum
  - Postpartum

Cardiac Disease: Intrapartum Management

- 300 to 500 mL of blood is shifted from the uterus and placenta into the central circulation.
  - Extra fluid causes a sharp rise in cardiac workload.
- Vaginal delivery is recommended for a woman with heart disease unless there are specific indications for cesarean birth.
- Minimize maternal pushing and use of the valsalva maneuver.
- Limit prolonged labor.

Cardiac Disease: Postpartum Management

- Although no evidence of distress during pregnancy, labor, and childbirth, women may have cardiac decompensation during the postpartum period
  - Blood from the placenta and uterus increases the workload on the heart.
- Close observation for signs of infection, hemorrhage, and thromboembolism
  - Conditions can act together to precipitate postpartum heart failure.

Cardiac Disease: Postpartum Management (Cont.)

- Signs and symptoms of congestive heart failure include:
  - Cough (frequent, productive, hemoptysis)
  - Progressive dyspnea with exertion
  - Orthopnea
  - Pitting edema of legs and feet or generalized edema of face, hands, or sacral area
  - Heart palpitations
  - Progressive fatigue or syncope with exertion
  - Moist rales in lower lobes, indicating pulmonary edema

Autoimmune Disorders

- Systemic lupus erythematosus
- Multiple sclerosis
- Rheumatoid arthritis

Infections

- CMV
- Rubella
- Herpes Simplex Virus
- Hepatitis B
- Varicella-Zoster
- Parvovirus B19
- Group B Streptococcus
- Toxoplasmosis
- HIV/ AIDS

Women Who Are HIV-Positive

- Impact of pregnancy and HIV: threats to self, fetus, and newborn
- Therapeutic management: oral antiretroviral drugs twice daily from 14 weeks until birth; IV administration during labor; oral syrup for newborn in first 6 weeks of life; decision for birthing method
- Nursing assessment: history and physical examination; HIV antibody testing; testing for STIs

Women Who Are HIV-Positive: Nursing Management

- Pretest and posttest counseling
- Education
- Support
  - Preparation for labor, birth, and afterward
  - Elective cesarean birth
  - Compliance with antiretroviral therapy
  - Family planning methods

Vulnerable Populations

- Adolescents
- Pregnant women over age 35
- Obese pregnant women
- Women who are positive for HIV
- Women who abuse substances

Pregnant Adolescent: Nursing Assessment

- Vision of self in future
- Realistic role models; emotional support
- Level of child development education
- Financial and resource management; work and educational experience
- Anger and conflict resolution skills
- Knowledge of health and nutrition for self and child
- Challenges of parenting role
- Community resources

Pregnant Adolescent: Nursing Management

- Support
- Future planning (return to school; career or job counseling); options for pregnancy
- Frequent evaluation of physical and emotional well-being
- Stress management; self-care (see Box 20.3)
- Education (see Teaching Guidelines 20.6, Healthy People 2030 Box 20.2)

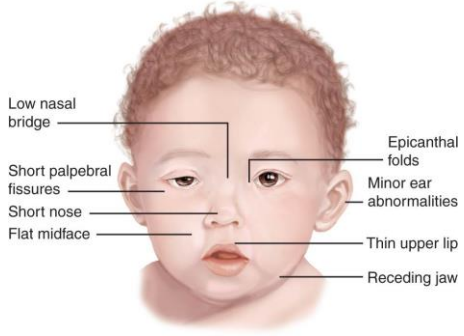
Woman Over Age 35

- Nursing assessment
  - Preconception counseling; lifestyle changes; beginning pregnancy in optimal state of health
  - Laboratory and diagnostic testing for baseline; amniocentesis; quadruple blood test screen
- Nursing management: promotion of healthy pregnancy; education; early and regular prenatal care; dietary teaching; continued surveillance

Pregnant Woman with Substance Abuse

- Impact of pregnancy: fetal vulnerability; teratogenic effect; addiction consequences
- Effect of common substances (see Table 20.6)
  - Alcohol: FAS; FASD (see Box 20.4; Figure 20.8)
  - Caffeine; nicotine
  - Cocaine
  - Marijuana
  - Opiates and narcotics: neonatal abstinence syndrome
  - Sedatives
  - Methamphetamines

Pregnant Woman with Substance Abuse



Pregnant Woman with Substance Abuse

- Nursing assessment: history and physical examination (see Box 20.5); urine toxicology
- Nursing management
  - Nonjudgmental approach
  - State protection agency investigation for positive newborn drug screen
  - Counseling
  - Education