Lucent NCLEX Review

Maternal New Born

LUCENT NCLEX REVIEWS
Growth and Development, Maternal New-Born

MATERNITY NURSING PART I

First Trimester (Week 1 through Week 13)

1. **Presumptive Signs of Pregnancy**
   Amenorrhea – progesterone is the hormone that causes this.
   N/V
   Urinary frequency and urgency - can be one of the first sign
   Breast Tenderness - excess hormones
   Increased skin pigmentation

2. **Probable Signs of Pregnancy**
   A positive pregnancy test- since it is based on the presence of hCG levels (there are other conditions that can ↑ hCG levels). An hCG level of less than 5 mIU/mL is considered negative for pregnancy, and anything above 25 mIU/mL is considered positive for pregnancy. ***The full name of this hormone is human chorionic gonadotropin (hCG).***

   Goodell's sign (softening of CERVIX; second month)
   Chadwick's sign (bluish color of vaginal mucosa and cervix; week 4)
   Hegar's sign (softening of the lower uterine segment; 2nd/3rd month)
   Uterine enlargement
   Braxton Hicks Contractions (throughout pregnancy; move blood through the placenta)
   Pigmentation of skin --linea nigra --facial chloasma (mask of pregnancy)
   Abdominal striae

3. **Positive Signs of Pregnancy**
   Fetal heartbeat: Doppler → 10-12 weeks
   Fetoscope → 17-20 weeks
   Fetal movement -20 weeks
   Ultrasound – 8 weeks

Important Information to know

TPAL is one of the methods to provide a quick overview of a person's obstetric history

1. Gravidity: # of times someone has been pregnant
2. Parity: # of pregnancies in which the fetus reaches 20 weeks
3. Viability : 24 weeks = Infant has the ability to live outside the uterus (A 20 weeks baby is not considered viable

4. **GTPAL**: **G**ravida/**T**erm-**P**reterm-**A**bortion-**L**iving
   T= term
   P= preterm
   A= abortion- this includes spontaneous and elective abortions
   L= living children

***A multiple pregnancy (twins, triplets, etc count as 1 pregnancy and one birth para of 1**

Example: Para 1-0-0-2 (1 Term delivery, 0 Preterm, 0 Abortuses, 2 Living children (twins) ans: G1P 1002

Example: A 28 year-old female gives birth to twins at 38 weeks gestation. This is her first pregnancy. What is her gravidity and parity? (Gavida 1, para 1)

Example: A pregnant client tells you she had a miscarriage with her 1st pregnancy after 11 weeks. With her 2nd pregnancy, she delivered twin girls at 32 weeks gestation, but the babies died after birth. Describe this client using the TPAL system (G3P 0110)

5. **Nagele's Rule:**
   Find the first day of the (Last Menstrual Period) LMP
   Subtract: 3 months
   Add: 7 days
   Add: 1 year (2005, 2006)
   Example: LMP = Nov 21, 2014 ans: August 28, 2015
   Example: LMP = May 2, 2008 ans: February 9, 2009

Patient Teaching:

A. **Nutrition:**
   4 food groups
   Increase calories by 300 per day after the first trimester
   -adolescent ↑calories by 500 after the first trimester
   Increase protein to 60 grams per day
   Expect to gain 4 lbs first trimester
   Vitamin supplements: Folic acid prevents neural tube defects; Daily dose is 400 mcg/day
   Women do not like to take iron because it causes constipation

B. **Exercise Rules**: No high impact; walking and swimming are best; Do not start a heavy program unless already doing so.
   Exercise Rule: Don't let your heart rate get above 140

C. **Danger Signs**:
   Sudden gush of vaginal fluid
   Bleeding
   Persistent vomiting
   Severe headache
   Abdominal pain
   Increased temp
   Edema
   No fetal movement

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D. Common Discomforts:
N/V Breast Tenderness
Frequency Tender gums
Fatigue Heartburn
Increased vaginal secretions Nasal stuffiness
Varicose veins Ankle edema
Hemorrhoids Constipation
Backache Leg cramps

E. Medications:
What are you going to tell the pregnant person about taking medications? ***Don't unless you ask your physician. For Diabetics – no oral diabetic meds, only give insulin***

F. **Smoking**: Tell the patient to STOP

G. Physician Visits
How often should a pregnant patient visit the MD?
- First 28 weeks
- 28-36 weeks
- 36- delivery

H. **Ultrasound**
Before an ultrasound what will you ask the client to do? ***Drink water to distend bladder***
What about an ultrasound prior to a procedure? ***Void***

SECOND TRIMESTER (Week 14 through Week 26)

1. **Weight Gain:**
   Expected weight gain per week: 1 Ibs (12-15 Ibs total)
2. **Should the patient still be experiencing?**
   N/V _____ No
   Breast tenderness _____ Yes
   Frequency_____No
3. **Quickening:**
   What is quickening? ***Fetal Movement***
4. **Fetal Heart Rate**
   The fetal heartbeat during the second trimester should be **120-160 bpm**

   *120 to 160: normal
   *110 to 120: worried and watching
   *Less than 110 panic

5. **Kegal exercises**:
   Exercises to strengthen the pubococcygeal muscles; these muscle help stop urine flow, help prevent uterine prolapse.

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THIRD TRIMESTER (Week 27 through Week 40)

Pregnancy is considered term if it advances to 37 to 40 weeks

1. **Assessment**
   - Expected weight gain per week is no more than 1 Ib/week
   - Monitor BP and report any increase from the baseline (watch out for Pregnancy Induced Hypertension (PIH):
   - FHR: 120-160
   - Fetal position/presentation determined using the Leopold Maneuvers?
     - What should you have the patient do first? ***Void***
     - If the patient is having contractions, should these maneuvers be done during or between contractions? ***Between***

2. **Patient Teaching/Education:**
   - **Signs of labor**:

     Lightening:
     - usually occurs 2 weeks before term
     - when the presenting part of the fetus (usually the head) descends into the pelvis
     - The patient will feel less congested and breathe easier, but urinary frequency is a problem (again)

     Engagement:
     - The largest presenting part of the fetus is in the pelvic inlet
     - Again we hope is the head that is presenting first
     - So the presenting part is at the 0 Station.

     Fetal stations:
     - measured in cm, measures the relationship of the presenting part of the fetus to the ischial spines of the mother.
     - A pregnancy is considered at term if it advances to38 to 40 weeks.

     Sign of Labor:
     - Braxton Hicks Contractions: More frequent and stronger
     - Softening of the cervix (ripening)
     - Bloody show
     - Rupture of membranes
     - Sudden burst of energy, called nesting.
     - Diarrhea
     - When should the patient go to the hospital? When the contractions are 5 min. apart or when the membranes rupture.

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3. <u>Diagnostic Tests</u>

1. **Non-Stress Test**:
   - Want to see two or more accelerations of 15 beats/minute (or more) with fetal movement.
     - **Acceleration** is when the fetal heart rate has an abrupt increase from the baseline. This is visualized on the fetal heart monitor. The increase is ≥15 beats/min above the baseline and lasts at least 15 seconds but the heart rate should come back to baseline within 2 min. Each increase should last for 15 seconds and recorded for 20 min.
   - Do you want this test to be reactive or non-reactive? Reactive:

2. **Contraction Stress Test: Oxytocin Challenge Test**
   - This test is given after a nonreactive Non-Stress Test result, requires I.V.
   - Performed on high risk pregnancies: preeclampsia, maternal diabetes, and any condition in which placental insufficiency is suspected.
   - This determines if baby can handle the stress of **an uterine contraction.**
   - Uterine contractions decrease blood flow to the uterus and to the placenta.
   - If this decrease of blood flow is great enough to cause hypoxia in the fetus the fetal heart rate will decrease from the baseline HR (deceleration)
   - Administration of oxytocin in increasing doses every 15 to 20 minutes until three high-quality uterine contractions are obtained within 10 minutes
   - Do not want to see LATE decelerations. *This means uteroplacental insufficiency.
   - Do you want a positive or negative test? Negative:
   - No late decelerations, a minimum of 3 contractions lasting 40-60 sec in a 10 min time frame
   - This test is rarely performed before how many weeks? 28 weeks
   - **Results are good for one week**

3. **<u>The Routines</u>**
   - **coagulation studies,** in which a blood sample is used to analyze and measure prothrombin time (PT), partial thromboplastin time (PTT), and International Normalized Ratio (INR)
   - **genital cultures,** such as a gonorrhea smear and chlamydia test,to detect sexually transmitted disease (STD)
   - **triple screen** between 15 and 20 weeks' gestation to identify if the fetus is at increased risk for Down syndrome and neural tube defects
   - **alpha fetoprotein,** which involves using a blood sample to measure alpha fetoprotein levels (high maternal serum levels may suggest fetal neural tube defects, such as spina bifida and anencephaly).
   - **Amniocentesis** is usually performed after 14 weeks gestation when amniotic fluid is sufficient and the uterus has moved into the abdominal cavity. This

procedure involves transabdominal insertion of a spinal needle into the uterus to aspirate amniotic fluid. This procedure helps determine:

- Gestational age by way of analyzing lecithin- sphingomyelin ratio, two key components of surfactant
- Fetal lung maturity by analyzing lecithin-sphingomyelin ratio, two key components of surfactant
- creatinine levels

Before the procedure

- Explain the procedure to the client.
- Make sure informed, written consent is obtained.

After the procedure

- Monitor the fetal heart rate (FHR) and uterine activity with an external fetal or fetal uterine monitor for several hours.
- Monitor for maternal hemorrhage, infection, premature labor, fetal hemorrhage, and amnionitis.
- Administer RhO(D) immune globulin (RhoGAM) to Rh- negative mothers to prevent fetal isoimmunization.

4. Labor and Delivery & Stages of Labor

1. True Labor

- Contractions are Regular
- Contractions increase in frequency and duration
- Discomfort in back and radiates to abdomen.
- Pain level increases with a change in activity?

2. False labor

- Contractions are irregular
- Discomfort is in the abdomen
- Pain decreases with a change in activity?

3. First Stage

The first stage is measured from the onset of true labor to complete dilation of the cervix. This period lasts from 6 to 18 hours in a primiparous client and from 2 to 10 hours in a multiparous client. There are three phases of stage one

4. Second Stage

The second stage of labor extends from complete dilation to delivery. This stage lasts an average of 40 minutes

5. Third Stage

The third stage of labor extends from delivery of the neonate to expulsion of the placenta and lasts from 5 to 30 minutes.

6. Fourth Stage

The fourth stage of labor is the 1 to 4 hours after delivery, when the primary activity is the promotion of maternal-neonatal bonding.

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7. **Epidural Anesthesia**:
   - Position: Lie on left side, legs flexed, back not as arched as with lumbar puncture.
   - Given in stage l at 3-4 cm dilation.
   - Usually no headache
   - Major complication is hypotension
   - Monitor BP
   - IVF's Bolus with 1000cc of NS or LR to fight hypotension
   - Positioning: Put in semi-fowlers on side to prevent vena cava compression If the vena cava is compression it will decrease venous return, reduce cardiac output and blood pressure, and decrease placental perfusion
   - change position from side to side hourly

8. **The Patient Receiving Oxytocin (Pitocin®)**
   - **Nursing considerations**
     1. Need one-on-one care
     2. Be alert for: Hypertonic labor
        - Fetal distress
        - Uterine rupture
        - **Complete Uterine Rupture**: through the uterine wall into the peritoneal cavity - S/Sx: sudden, sharp, shooting pain ("something gave way"), if in labor the contractions may stop and the pain will be relieved, signs of hypovolemic shock due to hemorrhage, if the placenta separates, the fetal heart tones will be absent
        - **Incomplete Uterine Rupture**: through the uterine wall but stops in the peritoneum but not into the peritoneal cavity. S/Sx: internal bleeding, pain may not be present, fetus may or may not have late decals, pt may vomit, faint, have hypotonic uterine contractions and lack of progress, fetal heart tones may be lost
     3. Want a contraction rate of l every 2-3 minutes with each lasting 60 seconds
     4. Discontinue the Oxytocin (Pitocin) if :
        - the contractions are too often
        - the contractions last longer than 90 seconds
        - fetal distress
     5. Oxytocin is piggy backed into a main IV fluid, so when you discontinue Oxytocin make sure you do not turn off your main IV fluid
     6. What position should the patient receiving oxytocin be placed?
        - Any position is okay except flat or supine. ***Supine is contraindicated in all pregnant women***
        - Now, if the patient has any un-reassuring fetal heart tones (like fetal bradycardia) then we will put the patient on their left side to enhance uterine perfusion.

7. What should be done with the infusion if late decelerations occur?
    - VBAC (Vaginal Birth After C-Section) Moms are at highest risk of having uterine rupture because the scar from the c-section could rupture

9. Emergency Delivery

- Elevate HOB
- Wash hands
- Something clean under buttocks
- Decrease touching of vaginal area
- As head crowns tear amniotic sac
- Tell patient to pant/blow to decrease urge to push
- Place hand on fetal head and apply gentle pressure
- When head out feel for cord around neck
- Ease each shoulder out- do not pull on the baby
- The rest will deliver fast
- Keep baby's head down
- Dry baby**
- Keep baby at level of uterus
- Place on mother's abdomen
- Cover baby
- Wait for placenta to separate
- Can push to deliver placenta
- Inspect placenta for intactness
- Check firmness of uterus
- IF you do feel the cord around
- the baby's neck, try to slip the
- cord over the baby's neck with
- your fore finger.
- DO NOT CUT THE CORD!

10. Normal Post-Partal Period

1. Assessment

a. Vital signs:
    - T→ may increase to 100.4 degrees during 1st 4 hrs
    - BP→ stable
    - HR→50-70 common for 6-10 days

TACHYCARDIA + POSTPARTUM = THINK HEMORRAGE

b. Breasts: Soft for 2 to 3 days then engorgement
c. Abdomen: soft/loose; diastasis recti (abdominal muscles separate)
d. GI: Is hunger very common

e. Uterus:
- Immediately after birth the fundus is in midline 2 to 3 finger breadths below umbilicus
- A few hours after birth it rises to level of umbilicus or one FB above
- Want fundus to be firm
- What is the first thing you do if the fundus is boggy? **Massage** it until it is firm and then check for **bladder distention**
- Fundal height will descend one FB/day
- What is the proper term for when the fundus descends and the uterus returns to its pre-pregnancy size?
- After pains are common first 2-3 days especially with breast-feeding

11. Lochia:
- Rubra: 3-4 days after delivery, fleshy odor and bloody with small clots
- Serosa: 4-l0 days after delivery, pinkish or brown with a serosanguineous consistency
- Alba: l0-28 days (can be as long as 6 weeks), yellow to whitish discharge
- Clots are okay as long as they are no larger than a nickel.
- Meds used to firm the uterus and stop bleeding—Pitocin®, methergine,and hemabate

12. Fundal Assessment and Massage

<u>Why You Do It</u>
- Fundal assessment is done to evaluate the progress of the uterus after birth, including uterine size, firmness, and descent. Fundal massage helps to maintain or stimulate uterine contractions, which are essential in preventing postpartumhemorrhage.
- Assessment and massage should be performed every 15 minutes for the first hour after delivery, every 30 minutes for the next 2 hours, every hour for the next 4 hours, and then every 4 hours for the first postpartum day.

<u>HOW YOU DO IT</u>
- Explain the procedure to the client and answer any questions. Provide privacy
- Place the client in the supine position or with her head slightly elevated.
- Expose the abdomen and perineum.
- Gently compress the uterus between your hands to evaluate firmness and position in relation to the umbilicus (in finger breadths or centimeters).
- If the fundus seems soft and boggy, massage it gently in a circular motion until it's firm.
- Observe lochia flow during massage.
- Document the client's position, the firmness of the fundus, and the response to massage (if performed).

13. Urine output:

- Diuresis should begin 24 hours after delivery
- The legs be inspected closely for DVTs?
- Dehydration is possible

14. TREATMENT:

A. Perineal Care (Think REEDA – redness, edema, ecchymosis, discharge approximation)

- ice packs intermittently for first 6-l2 hours - decrease edema
- warm water rinses
- sitz baths 2-4 times per day
- These are indicated if the patient has had a anesthetic sprays episiotomy, laceration, or hemorrhoids
- change pads frequently
- teach to report foul smell
- report lochia changes

B. Breast Care:

- cleanse with warm water after each feeding; let air dry
- support bra
- ointments for soreness or express some colostrum and let it dry
- breast pads - absorb moisture
- initiate breast feeding ASAP after birth
- if breast feeding interrupted:
  increase caloric intake by 500 calories
- fluid/milk intake:
- Non-breast feeding mothers:
  ice packs, breast binders, chilled cabbage leaves
- Chilled cabbage leaves decrease inflammation and decrease engorgement
- No stimulation of the breast
- Peri Pad Rule: We do not want the pt. to saturate more than __ peripad/hr.

15. Complications

C. Postpartum infection:

- Infection within l0 days after birth; E. Coli/Beta hemolytic strep
- Teach proper hygiene (front to back cleansing) and handwashing
- Usually get cultures and antibiotics.

D. Postpartum hemorrhage:

Causes

- Administration of magnesium sulfate
- Cesarean birth
- Clotting disorders
- Disseminated intravascular coagulation
- Retained fragments
- Uterine atony

Assessment & Treatment

- early-when more than 500 cc blood lost in first 24 hrs
- late-after 24 hrs, up to 6 weeks postpartum
- Bimanual compression of the uterus and dilatation and curettage to remove clots
- I.V. replacement of fluids and blood
- Abdominal hysterectomy if other interventions fail to control blood loss
- Urinary catheterization to empty the bladder
- ***Drug therapy***
- Parenteral administration of methylergonovine (Methergine)
- Rapid I.V. infusion of dilute oxytocin (Pitocin)
-

E. Mastitis:

- Staphylococcus
- Usually occurs around 2-4 weeks
- Bed rest
- Support bra
- Binding (can cause more stagnation)
- Chilled cabbage leaves
- PCN (ok with breast-feeding)
- Antibiotics: cephalexin (Keflex) cefaclor (Raniclor)
- Pain med:Tylenol, Advil
- Apply moist heat to icrease circulation and reduce inflammation and edema
- Feed baby frequently
- Always offer the affected breast first
- Binding the breast and the use of cabbage leaves to relieve engorgement is only used if breast feeding is being discontinued permanently But if Mom is going to continue to breast feed,she needs initiate breastfeeding frequently or pump.

Patient Teaching Tip

- A breast-feeding mother, who does not have mastitis, should offer the opposite breast when initiating breast feeding.
- Example: at 8AM the mother may start breast feeding on the right breast, at the 10 AM feeding the mother should offer the left breast first.

16. Immediate Newborn Care:

- Suction
- Clamp and cut the cord (2 arteries one vein
- Maintain body temp
- Apgar: Done at 1 and 5 minutes

- Looks at HR, R, muscle tone, reflex irritability, color
- Want at least 8 - 10.
- Erythromycin (gtts or ointment) for eye prophylactics for Neisseria gonococcus
- Erythromycin will kill the most rapidly growing STD, which is? Chlamydia
- Aquamephyton (promotes formation of clotting factors)

17. Cord Care:

- Dries, and falls off in 10 to 14 days.
- Cleanse with each diaper change using alcohol.
- Fold diaper below cord
- No immersion till off; watch for infection.

18. Complications:

a. Hypoglycemia

- Why do babies sometime experience hypoglycemia after birth? ***Because they are not getting glucose from the mother.***
- Babies at greatest risk for hypoglycemia include those that are large for gestational age, small for gestational age, preterm, and babies of diabetic Moms.

b. Pathologic jaundice

- Is more serious
- When does pathologic jaundice occur? First 24 hours
- Usually means Rh/ABO incompatibility: Those who have type O blood

c. Physiologic Jaundice

- Is normal
- When does physiologic jaundice occur? After 24 hours
- Due to normal hemolysis of excess RBC's releasing bilirubin

d. Rh Sensitization or Rh factor

- Occurs when you have an Rh- mother with an Rh+ fetus
- Rh+ blood from baby comes in contact with mother's Rh- blood
- Mom’s blood is most likely to come in contact with the baby’s blood when the placenta separates at birth.
- It can also happen during a miscarriage, amniocentesis, or when there is trauma to Mom’s abdomen.
- Mother looks Rh+ blood as a foreign body, an antigen.
- Mother produces antibodies to the baby’s Rh+ blood
- The first offspring is not affected by the antibodies's
- An Rh- sensitized mom gets pregnant again: She's got these AB's waiting for the RH+ blood to come around so she can attack it
- The chances of an Rh- Mom having antibodies to Rh+ blood increases with each pregnancy and each exposure to Rh+ blood because once you have these antibodies they never go away.

- Mother's blood enters baby thru placenta→ Hemolysis
- Erythroblastosis fetalis (the increase of immature RBCs in the fetal circulation) will result in
    - Hyperbilirubinemia, anemia
    - CHF
    - Neurologic damage (kernicterus)
    - Hypoxia
    - Hydrops fetalis (severe form of erythroblastosis fetalis

e. DX/TX

- Indirect Coomb's: -done on mother; measures # of AB's in blood
- Direct's Coomb's: -done on baby; tells you if there are any AB's stuck to the RBC's
- What do you do if you have a Rh+ fetus and a sensitized mother?
    1. Frequent ultrasounds
    2. Early birth
- When is Rhogam given? Within 72 hours after birth
- How Rhogam Works
    1. Destroys fetal cells that got in mother's blood; has to do this before AB's can be formed;
    2. Rhogam is given with any bleeding episode

COMPLICATIONS OF PREGNANCY

1. Miscarriage

(Also called spontaneous abortion Spotting common during pregnancy but the combination of bleeding and cramping is more indicative of a miscarriage)

- **S/Sx**: bleeding, cramping, backache
- Measure hCG levels - we worry when levels drop
- **Tx:** Bed rest, Abstinence from sex, Sedation
- If miscarriage imminent→ IV, Blood, D & C (dilatation & curettage)

2. Hydatidiform mole (molar pregnancy)

- Benign neoplasm, can turn malignant
- Grape-like clusters of vesicles
- May/may not have a fetus involved
- How does this start?
- **S/Sx**: -uterus enlarges too fast
- absence of FHT's
- bleeding (sometimes will have vesicles)
- Confirmed with ultrasound
- Small mole→ D & C (have to empty the uterus)

- Do not get pregnant; follow-up very important
- If it becomes malignant it is called choriocarcinoma.
- Will do CXR to determine metastasis
- Will measure hCG's weekly until normal; rechecked q 2-4 weeks; then every 1-2 months for 6 months to a year.

3. Ectopic Pregnancy

- This is a gestation outside the uterus.
- Where does it usually occur? Fallopian Tubes
- Confirmed with an ultrasound.

S/Sx:

- First sign is pain
- Patient will exhibit the usual s/sx of pregnancy.... Then pain
- spotting or may be bleeding into the peritoneum
- If a patient has had l ectopic pregnancy she is at risk for another

Tx:

- Methotrexate® is given to Mom to stop the growth of the embryo to save the tube.
- If the Methotrexate® does not work, a laparoscopy may be done, a small incision will be made into the tube and the embryo will be removed.
- The entire tube may have to be removed.
- A laparotomy is done if the tube has ruptured or in an advanced ectopic pregnancy
- if the tube does rupture your patient could hemorrhage and may need a blood transfusion

4. Placenta Previa

- Most common cause of bleeding in the later months (usually the 7th)
- The placenta has implanted wrongly
- Multiple pregnancies
- Maternal age older than 35
- Uterine fibroid tumor
- Uterine scars from surgeries
- An ultrasound will be done to confirm placental location
- The placenta begins to prematurely separate when the cervix begins to dilate and efface→ baby doesn't get oxygen
- Normally, the placenta should be attached where in the uterus? Up high in uterus

-S/Sx:

- painless bright red vaginal bleeding in 2nd half of pregnancy or especially during the third trimester (maybe spotting or may be profuse)

-Tx:

- Complete previa usually requires hospitalization (from as early as 32 weeks until birth) to prevent blood loss and fetal hypoxia if she goes into labor If there's not much bleeding→ bed rest and watch
- Transfusion of packed RBCs if Hb level and HCT are low
- Rule out other sources of bleeding
- Pad counts, monitor fetus
- Monitor for contractions→ call MD (not going to be a normal delivery)
- Delivery method of choice? C-Section
- Do not perform pelvic exam
- Monitor for signs of infection; clients with placenta previa are at increased risk for infection.

5. Abruptio Placenta

- Abruptio placentae refers to premature separation of the placenta from the uterine wall after 20 to 24 weeks of gestation. It may occur as late as the first or second stage of labor.
- Is the placenta implanted normally? Yes
- Maybe partial or complete
- It separates prematurely→ Bleeding (external or concealed) - maybe bleeding into uterus
- Seen in last half of pregnancy
- Ultrasound to confirm the diagnosis

-Causes:

- MVA
- Cocaine or “crack” use
- Domestic violence
- Rapid decompression of the uterus (membranes rupture)
- Associated with PIH & smoking

-S/Sx:

- Abdominal Pain
- Shock
- Painful bleeding
- Hemorrhage with dark red vaginal bleeding
- Uteroplacental insufficiency
- Difficult to palpate fetus (uterus is full of blood)
- Board-like abdomen
- Diagnostic test show Evidence of DIC

Treatment:

- Method of delivery? C-Section
- Transfusion: packed red blood cells (RBCs), platelets, and fresh frozen plasma, if necessary
- Provide oxygen
- Provide emotional support
- Position the client in a left lateral recumbent position to help relieve pressure on the vena cava from an enlarged uterus, which could further compromise fetal circulation.
- RULE: Do not do vaginal exams in the presence of unexplained vaginal bleeding

6. Incompetent Cervix

- This is when the cervix dilates prematurely.
- Occurs in the 4th month. Of pregnancy
- This pt. will have a history of repeated, painless, 2nd trimester miscarriages.

-Tx:

- Purse-String suture (cerclage) at l4-l8 weeks - reinforces the cervix
- May have a c-section to preserve the suture - some doctors clip the suture so the patient can deliver vaginally
- 80-90% chance of carrying the baby to term

7. Hyperemesis Gravidarum

- Starts like regular morning sickness
- Excessive vomiting→ dehydration→ starvation→ death
- R/T high levels of estrogen & HCG
- What happens to the patient? Alkalosis due to vomiting
  BP decrease **H/H** increase **UO** decrease **K** decrease **Weight** decrease
- Why is there acetone (ketones) in the urine? ***Ketones breaking down***

-Tx:

- NPO X 48 hours
- IVF's-3000 cc's for lst 24 hours
- Phenergan® continuous IV - some doctors just give Reglan® IVPB
- Thiamine SQ (vitamin B-1 deficit)
- Quiet Environment
- Oral hygiene
- Is it okay to talk about food? No
- Why should the emesis basin be kept out of sight? Out of mind
- 6-8 small, dry feedings followed with clear liquids
- Foods/liquids should be ice cold or steaming hot
- Well-ventilated room

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8. Hypertensive Disorders of Pregnancy

- Hypertensive disorders of pregnancy include gestational hypertension, preeclampsia, chronic hypertension, and super-imposed hypertension.
- The client is at risk for:
  1. cerebral hemorrhage
  2. circulatory collapse
  3. heart failure
  4. hepatic rupture,
  5. renal failure.
  6. If delivery occurs before term, the fetal prognosis is poor because of hypoxia, acidosis, and immaturity.
  7. Maternal mortality from eclampsia is 10% to 15%, usually resulting from intracranial hemorrhage and heart failure.

9. Gestational Hypertension

- Onset of hypertension without associated proteinuria after 20 weeks' gestation
- Blood pressure returning to baseline by 12 weeks' postpartum

10. Preeclampsia

- Hypertension plus proteinuria
- Three categories of preeclampsia

  Mild:
  Blood pressure at least 140/90 mm Hg
  300 mg of proteinuria in 24 hours
  Mild edema in upper extremities or face

  Severe:
  Blood pressure 160/110 mm Hg
  5 gm of proteinuria in 24 hours
  Less than 500 ml of urine in 24 hours
  Vision disturbances
  Pulmonary edema
  Headaches, hyperreflexia, nausea
  Right upper quadrant tenderness
  Fetal growth restriction
  Thrombocytopenia (HELLP syndrome)
- Most commonly occurs in last 10 weeks during labor or in first 48 hours after child birth
- Increased BP, proteinuria, edema after 20th week
- if Mom's pre-pregnant baseline BP is not known then 140/90 is considered to be mild preeclampsia

  -S/Sx:
- sudden weight gain

- face and hands swollen (why? They are losing protein, fliud doesn't stay in vascular space , it leaks into the tissues)
- headache, blurred vision
- hyper-reflexia (increased DTR)
- clonus (seizures)
- When you see a patient that gains 2 or more pounds in a week watch closely.

Treatment

Mild:

- bed rest as much as possible, increase protein

Severe:

- Sedation to delay seizures
- Valium® is not the drug of choice here
- Mg Sulfate is the drug of choice. Mg Sulfate: sedates, anticonvulsant, vasodilates
- When MgSO4 is used, checks for magnesium toxicity should be done q1-2 hours.
  - ❖ These include: BP, respirations, DTRs, & LOC.
  - ❖ Urine output is monitored hourly & serum magnesium is checked periodically.
- If MgSO4 is used labor will stop unless augmented with Pitocin.
  - ○ If diastolic > l00→ Hydralazine ® (apresoline) in combination with magnesium sulphate. Also alpha -methyldopa (Aldomet), Labetalol, nifedipine (Procardia),
- Diuretics: Lasix, hydrochlorothiazide
  - ❖ Side effects: tachycardia
- Corticosteriods: betamethasone to accelerate fetal lung maturation
- Only cure? Is delivery of the baby
- After delivery, the patient is at risk for seizures for 48 hours?

Nursing Care

- Single room, Very quiet environment, Dim the lights
- Monitor daily weight to identify sodium and water retention
- Maintain a high-protein diet
- These will help decrease stimuli
- Keep calcium gluconate (antidote to magnesium sulfate) nearby *to administer at the first sign of magnesium sulfate toxicity* (elevated serum levels, decreased deep tendon reflexes, muscle flaccidity, CNS depression, and decreased respiratory rate and renal function).
- If necessary, prepare for amniocentesis *to assess fetal maturity.*

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11.Eclampsia

- What is the turning point from preeclampsia to eclampsia? ***When they have a seizure.***
- Monitor the FHT's
- Watch for labor
- Watch for heart failure
- Monitor for:
  - Heart failure, stroke, heart attack, renal failure, DIC, HELLP Syndrome, neurological damage, multisystem organ failure.
  - Hematology reveals thrombocytopenia. HELLP Syndrome sometimes associated with preeclampsia) Hemolysis, Elevated Liver Enzymes, Low Platelet Count

For all preeclampsia and Eclampsia patient

- Encourage bed rest in a left lateral recumbent position *to improve uterine and renal perfusion*.
- Monitor blood pressure to evaluate the effectiveness of
- *treatment.*
- Monitor the FHR continuously during labor to assess fetal well-being.
- Assess neurologic status to detect early signs of deterioration, which might suggest impending eclampsia

12. Premature Labor

- Labor that occurs between 20-37 weeks

-Tx:

- Stop the labor: Tocolytics:
  - Mg Sulfate
  - Brethine® (terbutaline)
    Side effects are increased pulse and hyperactivity
  - Betamethasone (Celestone®) a corticosteroid
    is given to Mom IM in order to get it to baby.
- The purpose is to stimulate maturation of the baby's lungs in case preterm birth occurs.
- Preterm labor can sometimes be stopped by hydrating Mom and by treating vaginal and urinary tract infections.

13. Prolapsed Cord

- When the umbilical cord falls down thru cervix
- Most likely to happen when presenting part is not engaged and membranes rupture.
- So always, always, always check FHTs when membranes rupture either spontaneously or artificially.

- If this occurs before complete dilation→ immediate c-section
- If cord is being compressed you would see variable decelerations in FHT.
- If cord ceases to pulsate→ fetal death; we want the cord to pulsate because this tells us baby is getting some oxygen
- Fetal bradycardia is an indicator of prolapse

-Tx:

- Lift head off cord until MD arrives if possible
- Keep manually pushing the head up to relieve pressure on the cord.
- Let someone else do all the preparations for an emergency C Section
- Trendelenburg or knee chest position
- Do this if you have fetal bradycardial but can't relieve pressure on cord manually
- O2 - want to make sure what little blood is getting to baby is hyperoxygenated
- Monitor fetal heart tones
- Saline dressings around cord if protruding from vagina
- Push it back in? No

14. Shoulder Dystocia

- Dystocia is long, difficult, or abnormal labor. It's estimated that approximately 10% of women experience dystocia during the first stage of labor when the fetus assumes the vertex position
- Fetal head is delivered and further delivery of the fetus is prevented by the impaction of the fetal shoulder with the manual pelvis
- Anterior shoulder of fetus becomes impacted by the symphis pubis

Risk to Fetus:

- Hypoxia leads to cerebral palsy and asphyxia
- Brachial plexus injury – leading to Erb's Palsy (drooping /paralysis of an arm caused by excessive traction and stretching of the brachial nerve at delivery)
- Broken Clavicle
- Bells Palsy is paralysis of face with drooping of one side of the face
- Caused from forceps
- Many resolve but can lead to permanent damage

Causes

- **Problems with the power:**
  hypertonic uterine patterns
  hypotonic uterine patterns
- **Problems with the passenger:**
  fetal weight of 4500 g or more
  malposition or malformation of the fetus
- **Problems with the passage**:
  inadequate pelvic inlet

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Assessment

- Arrested descent
- Hypertonic contractions
- Hypotonic contractions
- Prolonged active phase
- Prolonged deceleration phase
- Protracted latent phase
- Uncoordinated contractions

TREATMENT

- Active management of labor
- I.V. fluid administration
- Delivery of the fetus by cesarean birth if labor fails to progress and the mother or fetus shows signs of compromise
- ***Drug therapy***
- Uterotonic: oxytocin (Pitocin) if contractions are ineffective

Maternal Risk

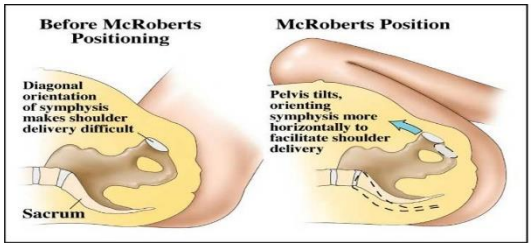
- Traumatic delivery leading to permanent damage
- Bruised bladder
- Extension of episiotomy
- Rectal tear

Who is at risk

- LGA or macrosomic infants >4000 grams
- Gestational diabetes
- Previous history of shoulder dystocia
- Post day delivery – Large fetus

Nursing care

- McRoberts Maneuvers (legs up and out)
- McRoberts' position is used during the second stage of labour to facilitate delivery of the fetal shoulders.



- Mazzanti techniques
  - (suprapubic pressure)
  - Never apply fundal pressure. The physician must do this or call another physician

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