Labor & Delivery Complications- Maternal (OB) Nursing

Dystocia

Any difficult labor or birth

Ineffective Contractions

Hypotonic contractions

- Coordinated but weak
- Infrequent and brief
- Easily indented with fingertip at peak
- Uterine overdistention may be a factor
- Fetal hypoxia **uncommon**
- May need amniotomy or Pitocin infusion (augmentation)

Hypertonic contractions

- Uncoordinated and erratic
- Contractions are painful but ineffective
- Increased resting tone- reduces uterine blood flow, leads to decreased fetal oxygen supply
- Pain relief- epidural analgesia
- Amniotomy if in **active** labor
- Oxytocin should NOT be given as it can increase the uterine resting tone further
- Tocolytic drugs may be ordered- terbutaline
    - Monitor heart rate (maternal HR should be less than 120 and fetal HR should be less than 160)
- Light sedation may be ordered to help uterus relax
- Increase the rate of IV fluids for hydration

Hypotonic vs Hypertonic

	Hypotonic	Hypertonic
Contractions	Coordinated but weak Easily indented at peak Minimal discomfort	Uncoordinated, irregular Short and poor intensity Painful and cramplike

Uterine Resting Tone	Not elevated	Higher than normal
Phases of Labor	Active After 4 cm dilation	Latent Before 4 cm dilation
Treatment	Amniotomy Augmentation with oxytocin	Light sedation Hydration Tocolytics
Nursing Considerations	Encourage position changes Prepare patient for amniotomy and augmentation if indicated	Side-lying position Promote rest and relaxation Pain relief

Macrosomia

- Infant weighs more than 4000 g at birth
- May cause cephalopelvic disproportion or uterine overdistention

Shoulder Dystocia

- Delayed or difficult birth of the shoulders
- Can occur in a baby of any weight but macrosomia increases risk
- Requires urgent intervention due to compression of the umbilical cord and prevention of respirations in fetus
- Methods to deliver shoulders
    - McRoberts maneuver- patient flexes knees against abdomen to straighten the pelvic curve
    - Suprapubic pressure- pushes the fetal anterior shoulder downward
        - Fundal pressure should NOT be used

Abnormal presentation or position

Occiput posterior

- Might require vacuum assistance or the use of forceps
- Mother may feel intense back and leg pain
- Encourage the mother to change positions- hands & knee, side-lying, the lunge, squatting, leaning forward
- Encourage the use of a birthing ball

- Vacuum extractor or forceps may be used to help with rotation and descent of the head
- C-section may be needed if none of the mentioned interventions are successful

Breech

- Can cause a compressed umbilical cord
- Possible external cephalic version may be attempted
- Likely a c-section

Transverse

- C-section

Precipitate labor

- Rapid birth within 3 hours of labor onset
- Mothers experience abrupt onset of intense contractions
- Fetal injury may include hypoxia and nerve damage
- Maternal injury may include uterine rupture, cervical lacerations, hematoma of the vagina or vulva
- Primary goal is promotion of fetal oxygenation and maternal comfort
    - Mother should remain in side-lying position
    - Administer 02
    - Maintain blood volume via IV fluids
    - Stop oxytocin if previously infusing
    - Administer prescribed tocolytics

Premature Rupture of Membranes:

Rupture of amniotic sac before onset of true labor

Possible causes

- Infection
- Chorioamnionitis
- Incompetent cervix
- Overdistention of uterus

Increased risk of maternal and fetal infection

Treatment

- Depends on gestation and presence of infection

- Studies are done to determine fetal lung maturity
- pH test/fern test to verify rupture of membranes
- Induction of labor if at or near term
- Induction may be delayed 24 hours if cervix is unfavorable
- C-section may be needed
- Maternal antibiotics- ampicillin, erythromycin, amoxicillin, or azithromycin

Pre-term labor

From 20 weeks to the end of 37 weeks

Signs/symptoms:

- Contractions may not be felt
- Cramps
- Low backache
- Pelvic pressure
- Increased vaginal discharge
- Sense of "just feeling bad"

Goal is to stop uterine activity before cervical dilation of 3 cm

Identify and treat any existing issues such as infection or dehydration

Maternal corticosteroids are administered to help speed fetal lung maturity- **betamethasone** or **dexamethasone**

Tocolytics may be administered:

Magnesium sulfate

- Ensure urine output of 30 mL/hour
- DTR are present
- 12 resp./min
- Check heart and lung sounds with hourly vital signs
- Calcium gluconate at the bedside as an antidote

Nifedipine
(calcium antagonist)- Reduces muscular contraction

- May experience orthostatic hypotension
- Nurse should report a pulse greater than 120 bpm

Indomethacin
(prostaglandin synthesis inhibitor)

- Nurse should monitor for nausea, heartburn, vomiting, and rash
- Observe for abnormal bleeding
- Can reduce the amount of amniotic fluid

Terbutaline
(beta-adrenergic)

- Monitor maternal BP as it may decrease
- Check apical heart rate before every dose- tachycardia may develop
- Monitor for s/s
    - Wide pulse pressure
    - Dysrhythmias
    - Chest pain
    - Pulmonary edema
    - Headache, tremors, restlessness
- If pulse is greater than 120 bpm and lungs sound "wet" HCP should be notified as medication should likely be stopped

Nursing interventions

- Promote fetal oxygenation and maternal comfort
- Place woman in side-lying position
- Administer O2
- No oxytocin; tocolytic may be ordered (tocolytics will likely be successful if the mother is less than 5 cm dilated, less than 50% effaced, and is not experiencing vaginal bleeding)
- Assess history, perform fetal assessment
- Encourage mother to void every 1-2 hours
- Encourage adequate intake of fluids to ensure hydration

Post-term labor

- Extends past 42 weeks
- Placental maturity results in decreased fetal oxygenation
- Fetal risks include asphyxia, hypoglycemia, RDS
- Induction of labor may be used if the cervix is favorable

Prolapsed Umbilical Cord

Risk factors include

- Fetus at high station
- Breech presentation
- Very small fetus

- Transverse lie
- Hydramnios

Signs/symptoms:

- Umbilical cord may be visible at the vaginal opening
- Nurse or practitioner may be able to palpate the cord upon vaginal examination

Nursing interventions:

- Priority action is to relieve compression on the umbilical cord
    - Elevate the presenting part that is lying on the cord by applying finger pressure with a gloved hand
    - Place the client into extreme Trendelenburg's or modified Sims' position or a knee-chest position
- Administer oxygen, 8-10 L/minute via face mask
- Monitor fetal heart rate and assess the fetus for hypoxia
- Prepare to start IV fluids or increase the rate of administration of an existing solution
- Prepare for immediate birth- typically c-section
- Apply a warm, sterile, saline-soaked towel to the visible cord to prevent drying and to maintain blood flow

Uterine rupture

Risk factors include

- Previous classical c-section
- Uterine trauma
- High parity

Signs/symptoms:

- Patient reports "ripping", "tearing", or sharp pain
- Abdominal pain or tenderness
- Manifestations of hypovolemic shock- tachypnea, hypotension, pallor
- Signs of fetal compromise- late decelerations, reduced variability, absent fetal heart sounds
- Palpation of fetus outside of uterus

Nursing interventions

- Administer prescribed IV fluids
- Administer blood product if prescribed
- Prepare client for C-section and possible hysterectomy
- Monitor for signs of hemorrhage after birth that may indicate uterine rupture has occurred

Amniotic fluid embolism/Anaphylactoid Syndrome

Occurs when amniotic fluid is pulled into maternal circulation and carried to the lungs
Often a fatal complication; some survivors will experience neurological deficits

Signs/symptoms

- Sudden chest pain
- Respiratory distress
    - Restlessness
    - SOB
    - Dyspnea
    - Pulmonary edema
    - Cyanosis
- Circulatory collapse
    - Tachycardia
    - Hypotension
    - Shock
    - Cardiac arrest

Nursing interventions

- Administer oxygen via mask at 8-10 L/min
    - Patient may need mechanical ventilation
- Perform cardiopulmonary resuscitation if necessary
- Administer prescribed blood components
- Prepare patient for an emergency c-section