Chapter 16
Obstetric and Gynecologic Emergencies

Objectives

- Recall the physiologic changes in "normal" vital signs in pregnant patients
- Describe supine hypotensive syndrome
- Identify four signs of impending delivery
- List the three stages of labor

Objectives

- Describe the priorities for newborn care
- Identify and list management procedures for postdelivery bleeding
- Identify four high-risk or "priority" situations involving prehospital childbirth
Objectives

- List two causes of abdominal pain in pregnant patients
- Identify two causes of vaginal bleeding during the third trimester of pregnancy

The Female Reproductive System

The Female Reproductive System
Gynecologic and Obstetric History

- **Basic principles**
  - Scene size-up and initial assessment
  - Correct life-threatening conditions
  - Perform focused history and physical exam
  - Accurate history is essential to assessment

- **History of present illness**
  - Location of pain/problem
  - Onset
  - Severity

- **History of present illness**
  - Aggravation or alleviation of signs or symptoms
  - Vaginal bleeding/discharge
  - Fever, diarrhea, constipation, nausea or vomiting
Gynecologic and Obstetric History

- Past medical history
  - Last menstrual period
  - Previous/current medical problems/conditions
  - Prescription or over-the-counter medicines
  - Allergies
  - Past gynecologic problems

- Contraception and substance abuse history
  - Use of contraceptives
  - Other types of birth control
  - Cigarettes, alcohol, drugs

- Obstetric history
  - Previous pregnancies
  - Previous abortions/miscarriages
  - Pregnant now
  - Had prenatal care
Pregnancy

- Signs and symptoms of pregnancy
  - Missed/late period
  - Nausea/vomiting
  - Breast tenderness/enlargement
  - Frequent urination

Pregnancy

- Physiologic changes during pregnancy
  - Respiratory system
    - Increased respiratory rate and depth

Pregnancy

- Physiologic changes during pregnancy
  - Cardiovascular system
    - Increased total blood volume of 40% to 50%
    - Greater increase in amount of plasma than in red blood cells
    - Physiologic anemia
    - Increase in cardiac output
Pregnancy

Physiologic changes during pregnancy

- Vital signs
  - Heart rate > 10-20 BPM
  - Blood pressure < 10-15 mm Hg

- Gastrointestinal
  - Decreased motility
  - Increased risk of vomiting and aspiration

- Urinary
  - Bladder displaced anteriorly and superiorly
  - Vulnerable to penetrating or blunt trauma
  - Increased urine production
Pregnancy

- Pregnancy-associated illnesses
  - Supine hypotensive syndrome
  - Uterus compresses inferior vena cava
  - Hypotension
  - Restricted blood flow to placenta
  - Can be fatal to fetus if uncorrected

- Transport on left side
  - If on long board, tilt board left

- Pregnancy-associated illnesses
  - Appendicitis
  - Preeclampsia
  - Hypertension and fluid retention
  - Eclampsia
    - Seizures in addition to preeclampsia
    - Usually during third trimester
    - Life threatening to both mother and fetus
Trauma During Pregnancy

- General prehospital care
  - Assess airway, breathing, and circulation
  - Oxygen
  - IV line
  - Spinal immobilization
  - Priority transport

Pregnancy

- Placenta previa
  - Usually occurs in third trimester
  - Abnormal positioning of placenta
  - Life threatening
Pregnancy

- Abruptio placenta
  - Usually occurs in third trimester
  - Premature detachment of placenta
  - Life threatening

- Third-trimester bleeding and abdominal pain
  - Uterine rupture
  - After onset of labor
  - Severe abdominal pain
  - Contractions cease as uterus ruptures
  - High mortality rate for both mother and fetus
Normal Labor and Delivery

- Stages of labor
  - First stage
    - Beginning of regular contractions to complete dilation of cervix
  - Second stage
    - Complete cervical dilation to delivery of baby
  - Third stage
    - Delivery of baby to delivery of placenta

Normal Labor and Delivery

- Signs and symptoms
  - Contractions are stronger and closer together
  - Ruptured membranes
  - Bloody "show"
  - Transition
  - Urge to push
  - Crowning

Placenta separates from uterus

Fetus moves into birth canal

Cervix completes dilation

Uterus

Placenta separates from uterus
Normal Labor and Delivery

- Crowning
  - Beginning of final stage of labor

Normal Labor and Delivery

- Delivery is imminent
  - Woman’s first pregnancy
  - Has urge to move bowels
  - “Bag of waters” has broken
  - Crowning is present

Normal Labor and Delivery

- Apply gentle pressure
  - Baby’s head
  - Mother’s perineum
Normal Labor and Delivery

- Examine neck for umbilical cord

Normal Labor and Delivery

- Support baby's head

Normal Labor and Delivery

- Guide baby’s head downward to deliver shoulder
Normal Labor and Delivery

- Guide baby’s head upward to deliver second shoulder.

Normal Labor and Delivery

- Place patient in semireclining position.

Normal Labor and Delivery

- Create sterile field for delivery.
Normal Labor and Delivery

- Suction baby’s airway

Normal Labor and Delivery

- If cord cannot be removed from baby’s neck:
  - Clamp in two places
  - Cut between clamps

Normal Labor and Delivery

- Position baby’s head at lower level
- Permit fluids to drain for suctioning
Normal Labor and Delivery

- If necessary, stimulate baby by:
  - Flicking foot
  - Rubbing back

Normal Labor and Delivery

- Clamp cord 4 inches from baby
- Place another clamp and cut between clamps

Normal Labor and Delivery

- Placenta usually delivers within 20 min after delivery
Normal Labor and Delivery

- To reduce bleeding
  - Encourage mother to breastfeed baby
  - Massage mother’s lower abdomen
  - Apply maternity napkin
  - Apply cold pack

APGAR Scoring System

<table>
<thead>
<tr>
<th>SIGN</th>
<th>0</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance (skin color)</td>
<td>Blue, pale</td>
<td>Body pink, blue extremities</td>
<td>Completely pink</td>
</tr>
<tr>
<td>Pulse rate (heart rate)</td>
<td>Absent</td>
<td>&lt;100/min</td>
<td>&gt;100/min</td>
</tr>
<tr>
<td>Grimace (irritability)</td>
<td>No response</td>
<td>Grimace</td>
<td>Cough, sneeze, cry</td>
</tr>
<tr>
<td>Activity (muscle tone)</td>
<td>Limp</td>
<td>Some flexion</td>
<td>Active motion</td>
</tr>
<tr>
<td>Respirations (respiratory effort)</td>
<td>Absent</td>
<td>Slow, irregular</td>
<td>Good, crying</td>
</tr>
</tbody>
</table>

Abnormal Presentations

- Multiple births
- Breech presentation
- Prolapsed cord
- Limb presentation
Abnormal Presentations

- Multiple births
  - Smaller than single babies
  - Often premature
  - Follow normal delivery procedures for each baby

Abnormal Presentations

- Breech presentation
  - Do not try to push baby back
  - Encourage mother to push
  - Do not attempt to pull baby out

Abnormal Presentations

- Breech presentation
  - Allow legs and arms to deliver
  - Support trunk on your arm
  - Form a "V" with fingers either side of baby's nose
Abnormal Presentations

- Breech presentation
  - Guide baby’s head by lifting body interiorly
  - If head not delivered in 3 minutes transport
    - With mother’s buttocks elevated or knee-chest position
    - Maintain “V”
  - Oxygen
  - IV line
  - If delivery occurs, be prepared to resuscitate baby
  - Notify hospital

Abnormal Presentations

- Prolapsed cord
  - Emergency for infant; cord may be compressed
  - Elevate baby off cord
    - Insert gloved hand
    - Push up on baby’s head
  - Monitor for cord pulsations

Abnormal Presentations

- Prolapsed cord
  - Position mother
    - Knee-to-chest or
    - Head-and-torso-down or
    - Supine with hips elevated
  - Rapid transport
  - Do not push cord back
  - Cover cord
  - O₂ NRB 10-15 L/min
  - IV
Abnormal Presentations

- Limb presentation
  - Arm or leg is presenting part
  - Little EMT-I can do
  - Transport
  - Do not attempt delivery
  - Oxygen and IV line

Care of the Newborn in Distress

- Newborn resuscitation
  - Position baby on back, head slightly lower than body
  - Suction
    - Mouth first, then nose
  - Rub soles of feet or back
  - Dry thoroughly and keep warm
  - Clamp cord
    - After it stops pulsating
    - Inspect for blood loss

Care of the Newborn in Distress

- Resuscitation sometimes necessary if no response within 30 seconds
  - Sniffing position
  - Administer oxygen
  - Initiate CPR if pulse is absent or <60 BPM
  - Priority transport
**Newborn Resuscitative Measures**

- Position, suction, tactile stimulation
- Oxygen
- Bag-mask ventilation
- Chest compressions
- Intubation
- Medications

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**Nontraumatic Gynecologic Emergencies**

- Abdominal pain
- Vaginal bleeding
- Vaginal discharge

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**Nontraumatic Gynecologic Emergencies**

- Ectopic pregnancy
  - Implantation of a fertilized egg outside of uterus
  - Life threatening
Nontraumatic Gynecologic Emergencies

- Spontaneous abortion
  - Sudden and unexpected loss of pregnancy
  - Usually occurs in first 3 months
  - Distressing and emotional

Traumatic Vaginal Bleeding

- Causes
  - Sports/recreational injuries
  - Sexual assault or rape
  - Childbirth
  - Insertion of foreign body

Sexual Assault

- Identify and treat:
  - Head
  - Chest
  - Abdomen
  - Extremity trauma
Summary

- Major structures of female reproductive tract
  - Ovaries
  - Uterus
  - Fallopian tubes
  - Cervix
  - Vagina
  - Perineum

Summary

- Placenta provides oxygen and nourishment to fetus through umbilical cord
- Amniotic sac and fluid protect and cushion fetus
- Accurate history is essential in emergency

Summary

- Components of history include:
  - History of present illness
  - Past medical history
  - Contraception
  - Substance abuse history
  - Obstetric history
Summary

- Early symptoms of pregnancy include:
  - Missed menstrual periods
  - Nausea and vomiting
  - Breast tenderness
  - Frequent urination

Summary

- During pregnancy, mother's body undergoes physiologic changes resulting in:
  - Hyperventilation
  - Hypervolemia
  - Physiologic anemia

Summary

- Supine hypotensive syndrome
  - Results from compression of vena cava when mother supine
  - Decreases circulation to baby
  - Keep patient positioned on her left side

- Trauma during pregnancy poses risk to both mother and baby
Summary

- During pregnancy
  - Blood volume increases
  - Blood pressure decreases

- Do not wait for signs of hypovolemia to develop
  - Provide high-flow oxygen
  - IV line
  - Immediate transport

Summary

- Normal labor and delivery is natural event

- Labor occurs in three stages

- Signs of imminent delivery include:
  - Crowning
  - Urge to move bowels
  - Breaking of “bag of waters”

Summary

- Watch for umbilical cord wrapped around baby’s neck

- Reduce maternal bleeding
  - Encourage mother to breastfeed
  - Massage her lower abdomen
Summary

- If pulse rate is <60 BPM:
  - Call ALS
  - Initiate CPR

- Nontraumatic gynecologic emergencies include:
  - Abdominal pain
  - Vaginal bleeding
  - Vaginal discharge

Questions?