Spokane County
EMS

Emergency Childbirth

Presented By:
Theresa Bowden CCRN, BSN, EMT-B
NW MedStar Critical Care Transport

Overview

• Review A & P
• Review Management of "Normal" Childbirth
• Review OB Emergencies

Overview

• Review A & P
• Review Management of "Normal" Childbirth
• Review OB Emergencies
Maternal Changes

- **Cardiovascular System**
  - Cardiac output increases
  - HR increases
- **Pulmonary System**
  - Respiratory rate increases
  - Oxygen consumption increases by 15%
  - Tidal volume decreases by 50%

Maternal Changes

- **Renal System**
  - Bladder - intra abdominal organ
  - Kidneys more susceptible to bleeding

Maternal Changes

- **Reproductive System**
  - Uterus intra abdominal organ
  - Uterus/placenta with abundant blood supply
  - At term blood flow = 500-700 ml/min
Supine Hypotension Syndrome

Maternal Transport Position

- If delivery is not imminent
  - Left side down is preferred
  - Right side down is acceptable
  - Trauma patients, tilt backboard

Stages of Labor

- First Stage: Dilation
- Second Stage: Expulsion
- Third Stage: Placental
First Stage: Dilation

- From first contraction to full dilation
- First and longest stage (can be many hours)
- Bloody show
- Rupture of amniotic sac

Cervical Dilation

“How far apart are the contractions? Well, she had one in the den and one in the kitchen, so I guess they’re about 15 feet apart.”
Second Stage: Expulsion

- Begins with full dilation, ends with birth
- Infant moves through birth canal
- Contractions q 2-3 minutes, last 45-90 seconds
- Bearing down increases
- Uncontrollable urge to push
- Crowning

Third Stage: Placental

- Begins once baby has been born
- Occurs within 30 minutes of delivery
- Placenta separates from uterine wall
- Placenta expelled from uterus

Important Questions:

- Number of deliveries?
- Are you having twins?
- When is your due date?
- What color was the fluid when your water broke?
- Are you feeling a strong urge to push?
Visually Check

- If crowning is visible, you’re not going anywhere....

REMINDERS:

- Self protect against infection:
  - gloves, mask, gown, eye protection
- Touch vaginal area only at time of delivery
- Do not allow patient to use the bathroom
- Do not hold mother's legs together to delay delivery
- Use sterile OB kit

Prepare for Delivery

Delivery To Do's:

- Start at least one IV (16-18G)
- Initiate IV therapy with volume expanding fluid
- O2 Therapy
- Check FHT with Doppler (reposition prn)
- Assess frequency/intensity of contractions
- Monitor blood loss
- Post-delivery Pitocin
Childbirth is Messy….

BSI

Do You Know What's in Your OB Kit?

Prepare for Delivery

- Position the patient
- Create a sterile field around the vagina
- Monitor the patient for vomiting
- Continually assess for crowning
- Place gloved fingers on infant’s skull
- Carefully puncture amniotic sac if not already broken
Prepare for Delivery

- Prepare an area for the baby
- Position the mother for vaginal delivery

Normal Vaginal Delivery

Video courtesy of King County EMS On-line

Handle With Care:
Slippery When Wet
• Handle cord gently
• Clamp cord 4 fingers width from baby
• Place two clamps firmly about 2"-6" apart
• Cut cord between clamps using sterile scissors

Apgar Score

<table>
<thead>
<tr>
<th>Sign</th>
<th>Score = 0</th>
<th>Score = 1</th>
<th>Score = 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart Rate</td>
<td>Absent</td>
<td>Below 100 per minute</td>
<td>Above 100 per minute</td>
</tr>
<tr>
<td>Respiratory Effort</td>
<td>Absent</td>
<td>Weak, irregular, or gasping</td>
<td>Good, crying</td>
</tr>
<tr>
<td>Muscle Tone</td>
<td>Flaccid</td>
<td>Some flexion of arms and legs</td>
<td>Well flexed, or active movements of extremities</td>
</tr>
<tr>
<td>Reflex/Behavior</td>
<td>No response</td>
<td>Grimace or weak cry</td>
<td>Good cry</td>
</tr>
<tr>
<td>Color</td>
<td>Blue all over, or pale</td>
<td>Body pink, hands and feet blue</td>
<td>Pink all over</td>
</tr>
</tbody>
</table>

Always needed by newborns
Keep baby warm
Position, clear airway, stimulate to breathe by drying, and give oxygen (as necessary)
Establish effective ventilation
• Bag and mask
• Endotracheal intubation
Provide chest compressions
Administer medications

NRP Video
Airway management and adequate ventilation are the most important and effective actions in newborn resuscitation!

Placenta Delivery

- Don’t pull on the cord to speed delivery
- May take up to 30 minutes after birth of baby

Maternal Care After Delivery

- Wrap the delivered placenta or place in Ziploc
- Place sanitary napkins over vaginal opening
- Record time of delivery and transport mother, infant, and placenta to the hospital
- Up to 500cc blood loss is normal
- Massage uterus to prevent excessive bleeding
Fundal Massage

Video courtesy of King County EMS On-line

What If Something Goes Wrong?

Risk Factors

- Past history: multiple births, fast labors
- Preterm
- Preexisting medical conditions
- History of drug abuse, poor prenatal care
- Age
Prematurity

- Delivery can happen very quickly
- It's still ABC's
- But keeping infant warm is critical throughout resuscitation
- Suction only if airway is obstructed
- Ventilate with proper size BVM if baby has inadequate respirations
- Chest compressions if HR<60
  - 3:1 compressions to ventilations

Prematurity

- What do you have to keep a premature infant warm during transport?
  - Crank up the vehicle heater
  - Baby hats
  - Chemical warmers (don't place directly on skin)
  - Warm IV bags
  - Skin to skin

Newborn CPR

Video courtesy of King County EMS On-line
Baby in a Bag

Shoulder Dystocia

Nuchal Cord

Video courtesy of King County EMS On-line
Breech Presentations

• Single Footling (Usually cannot deliver in the field)

• Double Footling or Buttocks
  - Both feet or buttocks are visible
  - Delivery is usually slow so transport to hospital
3rd Trimester Bleeding

<table>
<thead>
<tr>
<th>History</th>
<th>Bleeding</th>
<th>Abnormal Pain</th>
<th>Abdominal Exam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abruptio</td>
<td>Single episode of scant dark vaginal bleeding that cont until delivery (can be concealed)</td>
<td>Present</td>
<td>Local uterine tenderness Labor + (often) no FHT</td>
</tr>
<tr>
<td>Placentae</td>
<td>Repeated &quot;warning&quot; (bright red) hemorrhages over days/weeks</td>
<td>Usually absent</td>
<td>Lack of uterine tenderness Labor rare + FHT (could be decreased)</td>
</tr>
<tr>
<td>Placenta Previa</td>
<td>Possible bleeding with sudden nausea/vomiting</td>
<td>Diffuse tenderness Sudden cessation of labor +/- FHT</td>
<td></td>
</tr>
</tbody>
</table>

Post-partum Bleeding

- Bleeding >500 ml considered excessive
- Treat mother for shock
  - Oxygen
  - IV fluids
  - Trendelenburg position
- Place sterile pads over vagina (don’t pack)
  - Replace as necessary (save pads or any tissue that passes)
- Perform Fundal Massage

Questions?
Post Test

1. When positioning the maternal patient for transport, the left lateral position is the preferred choice.
   a. True
   b. False

2. The 2 most important and effective initial actions in newborn resuscitation are:
   a. Swaddling baby and applying a hat
   b. Airway management and adequate ventilation
   c. Assessing an Apgar score and checking a blood sugar

3. Your maternal patient is 35 weeks pregnant. She presents with abdominal pain, irregular mild contractions and one episode of dark vaginal bleeding. You suspect:
   a. Placenta previa
   b. Abruptio placenta
   c. Anxiety disorder

4. Your patient has delivered a healthy term baby who is stable. You note the mother seems to have excessive vaginal bleeding (>500ml) and the placenta has yet to be delivered. What intervention would NOT be indicated at this time:
   a. Apply O2 per NC or NRM
   b. Open up IV fluids wide and place in Trendelenburg position
   c. Pack the vaginal opening with sterile pads
   d. Massage the uterus

5. When the placenta has delivered, place in a biohazard bag and transport with the patient to the facility.
   a. True
   b. False

SECRET QUESTION
What is one of the 5 vital information questions you should ask a patient?
Special thanks to
Sheila Crow
Stitchin’ Dreams Embroidery
wcsocrow@yahoo.com

For providing our Secret Question prize

Questions?
Contact: Samantha Roberts
509-242-4264
1-866-630-4033
robertss@inhs.org
Fax: 509-232-8344

Updates Please
EMS Live@Nite presentation, all certificates will be
printed by participants or their agency. The
certificate template will be available through the
health training website at the same location as all
presentation downloads. It will be posted the day
after each monthly presentation.
Reminder: Please turn in your rosters to INHS to
receive credit for the course.