Objectives

1. Define key terms introduced in this chapter.
2. Describe the anatomy of pregnancy, the menstrual cycle, and the prenatal period (slides 14-21).
3. Describe physiological changes in pregnancy, including changes to the following systems (slides 22-23):
   a. Reproductive
   b. Respiratory
   c. Cardiovascular
   d. Gastrointestinal
   e. Urinary
   f. Musculoskeletal

Objectives

4. Describe the pathophysiology, assessment, and emergency care of patients with antepartum emergencies, including (slides 24-41):
   a. Spontaneous abortion
   b. Placenta previa
   c. Abruptio placenta
   d. Ruptured uterus
   e. Ectopic pregnancy
   f. Preeclampsia/eclampsia
   g. Pregnancy-induced hypertension
   h. Supine hypotensive syndrome
Objectives

5. Describe the assessment-based approach to antepartum emergencies (slides 42-51).
6. Describe the stages of labor (slides 52-57).
7. Describe the assessment-based approach to a patient in active labor with normal delivery (slides 58-66).
8. Describe the steps of assisting with a normal prehospital obstetric delivery (slides 61-63).
9. Discuss reassessment of the postpartum patient for blood loss (slides 64-65).
10. Describe the assessment-based approach to a patient in active labor with abnormal delivery (slides 67-71).

Objectives

11. Take steps to manage abnormal prehospital obstetric deliveries, including (slides 72-93):
   a. Prolapsed umbilical cord
   b. Breech and limb presentations
   c. Multiple births
   d. Meconium staining
   e. Premature birth
   f. Post-term pregnancy
   g. Precipitous delivery
   h. Shoulder dystocia
   i. Preterm labor
   j. Premature rupture of membranes

Objectives

12. Take steps to manage postpartum complications, including (slides 94-97):
   a. Postpartum hemorrhage
   b. Embolism
13. Demonstrate the steps of assessing and managing the newborn, including (slides 98-102):
   a. Initial care, including drying, wrapping, suctioning, and positioning
   b. Apgar scoring and stimulation to breathe if necessary
   c. Apgar scoring
Objectives

14. Recognize signs that indicate the need for neonatal resuscitation (slide 103).
15. Apply the concepts of the neonatal resuscitation pyramid to the care of neonates in need of resuscitative measures (slides 104–105).

Multimedia Directory

- Slide 39 Information about Preeclampsia Video
- Slide 55 Information about the First Stage of Labor Video
- Slide 66 Information about Childbirth Video
- Slide 106 Information about Newborn Resuscitation Video
- Slide 107 Information about the Moro Reflex Video

Topics

- Anatomy and Physiology of the Obstetric Patient
- Antepartum (Pre-delivery) Emergencies
- Labor and Normal Delivery
- Abnormal Delivery
- Care of the Newborn
CASE STUDY

Dispatch

EMS Unit 118

Respond to Taggert’s Laundromat on West Martin Street for a 30-year-old female in labor.

Time out 1926

Upon Arrival

• Female patient sitting on the floor inside the laundromat
• Her anxious husband is holding her hand
• She says in a gasping breath, “I think the baby is coming”
How would you proceed to assess and care for this patient?

Anatomy and Physiology of the Obstetric Patient

Anatomy of Pregnancy
• Ovaries
• Fallopian tubes
• Uterus
• Cervix

Menstrual Cycle
• Estrogen
• Progesterone
• 24–35 days
• Menstruation
• Ovulation
• Implantation

Prenatal Period

• Preembryonic stage
• Embryonic stage
• Fetal stage
• Gestational age
• Full-term pregnancy
• Trimesters
Physiologic Changes in Pregnancy

- Reproductive
- Respiratory
- Cardiovascular
- Gastrointestinal
- Urinary
- Musculoskeletal

Antepartum (Predelivery) Emergencies
Antepartum Conditions Causing Hemorrhage

Spontaneous Abortion

• Definition
• Pathophysiology
• Assessment

Spontaneous Abortion

Antepartum Conditions Causing Hemorrhage

Placenta Previa
Placenta Previa

• Pathophysiology
• Predisposing factors
• Assessment
• Emergency medical care

Antepartum Conditions Causing Hemorrhage

Abruptio Placentae

• Pathophysiology
• Types
• Predisposing factors
• Assessment
• Emergency medical care
Antepartum Conditions Causing Hemorrhage

Ruptured Uterus

• Pathophysiology
• Assessment
• Emergency medical care

Ruptured Uterus

Antepartum Conditions Causing Hemorrhage

Ectopic Pregnancy
Ectopic Pregnancies

• Pathophysiology
• Predisposing factors
• Assessment
• Emergency medical care

Antepartum Seizures and Blood Pressure Disturbances

Seizures During Pregnancy

• Life threatening for mother and fetus
• Treat same as any seizure patient
• Protect from injury
• Transport on left side
• May be associated with eclampsia
Antepartum Seizures and Blood Pressure Disturbances

Preeclampsia/Eclampsia

Preeclampsia/Eclampsia

- Pathophysiology
- Assessment
- Pregnancy-induced hypertension (PIH)
- Emergency medical care

Preeclampsia

Click here to view a video with information about preeclampsia.
Antepartum Seizures and Blood Pressure Disturbances

Supine Hypotensive Syndrome

Supine Hypotensive Syndrome

- Pathophysiology
- Assessment
- Emergency medical care

Assessment-Based Approach: Antepartum (Predelivery) Emergency

Scene Size Up
• Obstetric emergency
• Any woman of childbearing age could be experiencing an obstetric emergency

Assessment-Based Approach: Antepartum (Predelivery) Emergency

Primary Assessment

• Scene safety
• Mental status
• ABCs
Assessment-Based Approach: Antepartum (Predelivery) Emergency

Secondary Assessment

- SAMPLE and OPQRST
- History
- Gravida
- Para
- Signs and symptoms

Emergency Medical Care
Emergency Medical Care

• Ensure ABCs
• Care for vaginal bleeding
• Treat for shock
• Provide emergency medical care based on signs and symptoms
• Transport patient on her left side

Assessment-Based Approach: Antepartum (Predelivery) Emergency

Reassessment

• Repeat primary assessment
• Repeat vital signs
• Check O₂
Labor And Normal Delivery

Labor

First Stage: Dilation

- Definition
- Duration
- Braxton Hicks contractions

First Stage

FIRST STAGE: First uterine contraction to dilation of cervix
The First Stage of Labor

Click here to view a video with information about the first stage of labor.

Return to Directory

Labor

Second Stage: Expulsion

- Definition
- Duration
- Signs and symptoms

SECOND STAGE: Birth of baby or expulsion
Assessment-Based Approach: Active Labor and Normal Delivery

Scene Size-Up, Primary Assessment, and Secondary Assessment

- Transport or deliver on scene
- Signs and symptoms
- Assist mother with delivery

Emergency Medical Care
Emergency Medical Care

- Position the patient
- Create a sterile field
- Monitor for vomiting
- Assess for crowning
- Apply gentle pressure to infant head as crowning
- Tear sac if not ruptured
- Watch for nuchal cord
- Suction fluid from infant’s airway

Emergency Medical Care

- Support newborn body as delivered
- Clean the newborn’s mouth and nose
- Dry, wrap, warm, and position the infant
- Assign your partner to monitor and care for infant
- Clamp, tie, and cut the umbilical cord
- Observe and transport delivery of the placenta
- Place pads over vaginal opening
- Record time of delivery
- Transport; keep mother and infant warm

Massaging the Uterus

- Position
- Massage technique
- Monitor
Assessment-Based Approach: Active Labor and Normal Delivery

Reassessment

- Monitor for signs of shock
- Transport
- Massage uterus en route

Childbirth

Click here to view a video with information about childbirth.

Return to Directory
Abnormal Delivery

Assessment-Based Approach: Active Labor with Abnormal Delivery

Scene Size-Up, Primary Assessment, and Secondary Assessment

Scene Size-up, Primary Assessment, and Secondary Assessment

• Assess the same as a normal delivery
• Signs and symptoms
  – Fetal presentation other than normal crowning
  – Abnormal color or smell of amniotic fluid
  – Labor before 38 weeks of pregnancy
  – Recurrence of contractions after first infant is born
Assessment-Based Approach: Active Labor with Abnormal Delivery

Emergency Medical Care and Reassessment

Emergency Medical Care

- Similar to that of normal delivery
- Emphasis on immediate transport, $O_2$, and vital signs

Intrapartum Emergencies

Prolapsed Cord

Back to Objectives
Prolapsed Cord

- Elevate hips, administer oxygen, and keep mother warm
- Keep baby's head away from cord
- Do not attempt to push cord back
- Wrap cord in sterile moist towel
- Transport mother to hospital, continuing pressure on baby's head

Intrapartum Emergencies

Breech Birth

- Definition
- Complication
- Position of mom
- Emergency medical care
Limb Presentation

- Do not attempt a field delivery
- Transport immediately
- Emergency medical care

Multiple Births
Multiple Births

• Signs of multiple birth
• Emergency medical care
• When to transport

Intrapartum Emergencies

Meconium

• Definition
• Complication
• Emergency medical care
Intrapartum Emergencies

Premature Birth

- Definition
- Appearance
- Emergency medical care

Post-Term Pregnancy
Post-Term Pregnancy

- Definition
- Complications in the uterus
- Complications to infant

Intrapartum Emergencies

Precipitous Delivery

- Definition
- Occurrence
- Complications
Intrapartum Emergencies

Shoulder Dystocia

- Definition
- "Turtle sign"
- Emergency medical care

Intrapartum Emergencies

Preterm Labor
Preterm Labor

- Definition
- Complications
- Emergency medical care

Intrapartum Emergencies

Premature Rupture of Membranes

- Rupture of amniotic sac prior to onset of labor and before the end of the 37th week
- Increased risk of infection and more difficult delivery
Postpartum Complications

Postpartum Hemorrhage

- Definition
- Causes
- Emergency medical care

Postpartum Complications

Emboli
• Protect from heat loss
• Repeat suctioning

Assessment-Based Approach: Care of the Newborn

Assessment

APGAR
• Appearance
• Pulse
• Grimace
• Activity
• Respirations
Signs and Symptoms

- Most require just the basics
- Signs of a severely depressed newborn

Assessment-Based Approach: Care of the Newborn

Emergency Medical Care

Dry, warm position, suction, tactile stimuli
Oxygen
Bag-valve-mask, establish effective ventilation
Endotracheal intubation
Chest compressions
Medications

Emergency Medical Care
Newborn Resuscitation

Click here to view a video with information about newborn resuscitation.

Return to Directory

The Moro Reflex

Click here to view a video with information about the Moro reflex.

Return to Directory

CASE STUDY

Follow-Up
CASE STUDY

Primary Assessment

• Patient’s name is Ruth Baker
• Alert and oriented; patent airway and breathing
• Pulse is strong and regular; skin warm and slightly sweaty

CASE STUDY

Assessment

• SpO₂: 98 percent
• Nasal cannula at 4 lpm
• Partner calls for backup unit
• Mrs. Baker’s third child; no complications for the other two
• Patient is not due for two weeks

CASE STUDY

Emergency Care

• Patient states she thinks the baby is coming; you observe crowning
• Baby boy is born
• You wrap the infant in warmed towel
**CASE STUDY**

**Emergency Care**
- Initial APGAR is seven; after brief stimulation, RR increases to 46 per minute
- Some central and distal cyanosis; provide blow-by $O_2$

**CASE STUDY**

**Treatment and Reassessment**
- Load both patients into ambulance; father rides up front
- Bring another EMT from the backup unit
- Mother continues to have minor vaginal bleeding; delivers placenta and partner places it in container
- EMT does uterine massage; bleeding soon stops

**CASE STUDY**

**Treatment and Reassessment**
- Mother doing well
- Baby APGAR now ten; RR: 48; HR: 146 and regular; actively moving
- Upon arrival, transfer care to ED staff
Critical Thinking Scenario
• 23-year-old pregnant female having contractions
• This is her first pregnancy, and she’s due in two weeks
• When she lies on her back, she feels very lightheaded

Critical Thinking Scenario
• S – Contractions began six hours ago; they’re more frequent now and worsening in intensity and duration
• A – None
• M – Beta 2 agonist MDI
• P – Asthma
• L – Two hours ago; toast and juice
• E – She’s been lying in bed because of the discomfort

Critical Thinking Scenario
Physical exam:
• She is alert but uncomfortable
• The vaginal walls and perineum are bulging
• The infant’s head is present at the vaginal opening
• The sheets are soaked in fluid; a light green tarry substance is in the fluid
Critical Thinking Scenario

Vital signs:
• BP: 108/62 mmHg
• HR: 128 bpm
• RR: 24 per minute
• Skin is warm and slightly moist
• SpO₂ is 98 percent on room air

Critical Thinking Questions

1. What signs would lead you to believe the labor is true labor and not Braxton Hicks?
2. Why is she experiencing lightheadedness?

Critical Thinking Questions

3. How would you proceed with the emergency care of the patient?
4. What signs are indicative of imminent delivery?
Critical Thinking Questions

5. What is the significance of the green substance in the fluid on the sheets?

Reinforce and Review

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