Objectives

1. Define key terms introduced in this chapter.
2. Describe the anatomy and physiology of the structures of the abdominal cavity, including (slides 14-17):
   a. Boundaries of the abdominal cavity
   b. Visceral and parietal peritoneum
   c. Intraperitoneal and retroperitoneal organs
   d. Relationship between the topographic anatomy of the four abdominal quadrants and nine abdominal regions to the location of the organs corresponding to them
3. Compare and contrast the general characteristics of hollow and solid organs and vascular structures found in the abdominal cavity (slides 18-19).
4. List the general mechanisms and types of abdominal pain (slides 20-23).

Objectives

5. Describe the pathophysiology and the signs and symptoms associated with common causes of acute abdomen, including (slides 24-47):
   a. Peritonitis
   b. Appendicitis
   c. Pancreatitis
   d. Cholecystitis
   e. Gastrointestinal bleeding
   f. Esophageal varices
   g. Gastroenteritis
   h. Ulcers
   i. Intestinal obstruction
   j. Hernia
   k. Abdominal aortic aneurysm
Objectives

6. Explain the assessment-based approach to acute abdomen, including assessment and appropriate medical care (slides 48-57).
7. Describe the basic anatomy and physiology of the female reproductive system (slides 59-60).

Objectives

8. Describe the pathophysiology and the signs and symptoms associated with common gynecologic conditions, including (slides 61-78):
   a. Sexual assault
   b. Nontraumatic vaginal bleeding
   c. Menstrual pain
   d. Ovarian cyst
   e. Endometritis
   f. Endometriosis
   g. Pelvic inflammatory disease
   h. Sexually transmitted diseases
9. Explain the assessment-based approach to acute gynecologic emergencies, including assessment and appropriate medical care (slides 79-86).

Objectives

10. Describe genitourinary/renal structures and functions (slides 88-89).
11. Describe the pathophysiology and the signs and symptoms associated with common genitourinary/renal conditions, including (slides 90-97):
    a. Urinary tract infection
    b. Kidney stones
    c. Kidney failure
12. Describe the purpose of dialysis, how dialysis works, and dialysis emergency management (slides 98-99).
13. Describe the purposes and types of urinary catheters and urinary catheter management (slides 100-101).
Multimedia Directory

Slide 67  Premenstrual Syndrome Video
Slide 78  Gonorrhea Video
Slide 94  Different Types of Kidney Stones Video
Slide 97  Renal Failure Video
Slide 107  Erectile Dysfunction Video

Topics
- Acute Abdomen
- Gynecological Emergencies
- Genitourinary/Renal Emergencies

CASE STUDY

Dispatch
Respond to 323 Leslie Place for a 16-year-old male complaining of “stomach” pain.

Time out 0945

Upon Arrival

- Greeted by a woman who states, “It’s my son, Parker”
- Has had a fever for the last couple of days
- Mom thought it was the flu or something
- Woke up this morning with a bad pain in his stomach

How would you proceed to assess and care for this patient?
Abdominal Structures and Functions

- Peritoneum
  - Visceral
  - Parietal
  - Intraperitoneal
  - Retroperitoneal
- Abdominal aorta
Abdominal Structures and Functions

Abdominal Quadrants or Regions

Abdominal Quadrants and Regions

Types of Abdominal Structures
Abdominal Pain

Pathophysiology of Abdominal Pain

- Hollow organs
- Solid organs
- Vascular structures

- Mechanical forces
- Inflammation
- Ischemia

Back to Objectives
Abdominal Pain

Types of Abdominal Pain

• Visceral
• Parietal
• Referred

Conditions That May Cause Acute Abdominal Pain

Peritonitis
Peritonitis

- Cause
- Signs and symptoms
- Palpation
- Markle test

Conditions That May Cause Acute Abdominal Pain

Appendicitis

- Cause
- Age group affected
- Signs and symptoms
Conditions That May Cause Acute Abdominal Pain

Pancreatitis

- Cause
- Complications
- Signs and symptoms

Pancreatitis

Conditions That May Cause Acute Abdominal Pain

Cholecystitis
Cholecystitis

• Cause
• Age group affected
• Complications
• Signs and symptoms

Conditions That May Cause Acute Abdominal Pain

Gastrointestinal Bleeding

• Causes based on location
• Age affected
• Signs and symptoms
Conditions That May Cause Acute Abdominal Pain

**Esophageal Varices**

- **Common group affected**
- **Cause**
- **Signs and symptoms**

**Gastroenteritis**
Gastroenteritis

Conditions That May Cause Acute Abdominal Pain

Ulcers
Conditions That May Cause Acute Abdominal Pain

Intestinal Obstruction

• Cause
• Complications
• Signs and symptoms

Hernia
Hernia

• Cause
• Complications
• Signs and symptoms

Conditions That May Cause Acute Abdominal Pain

Abdominal Aortic Aneurysm

• Cause
• Complications
• Signs and symptoms
Conditions That May Cause Acute Abdominal Pain

Vomiting/Diarrhea/Constipation

• Common with many conditions
• Should be assessed for dehydration

Assessment-Based Approach: Acute Abdomen

Scene Size-Up
Scene Size-Up

• Safety
• Mechanism of injury
• Look for scene clues

Assessment-Based Approach: Acute Abdomen

Primary Assessment

• Guarded position
• ABCs
• Signs of shock
• Priority criteria
Assessment-Based Approach: Acute Abdomen

Secondary Assessment

• History
• Physical Exam
  – Involuntary guarding
  – Rigidity
  – Voluntary guarding
• Signs and symptoms

Secondary Assessment

Assessment-Based Approach: Acute Abdomen

Emergency Medical Care
Emergency Medical Care

• ABCs
• Place patient in position of comfort
• Administer O₂
• Give nothing by mouth
• Calm and reassure
• Treat for shock
• Transport

Assessment-Based Approach: Acute Abdomen

Reassessment

• Document and record all vital signs
• Communicate findings
Gynecological Conditions

Sexual Assault

• Report to authorities
• Physical and psychological effects
• Guidelines

Gynecological Conditions

Vaginal Bleeding
Vaginal Bleeding (Nontraumatic)

- Possible causes
  - Spontaneous abortion
  - Signs and symptoms

Gynecological Conditions

Menstrual Pain

- Dysmenorrhea
- Mittelschmerz
Click here to view a video on the topic of premenstrual syndrome.

Gynecological Conditions

Ovarian Cyst

• Cause
• Signs and symptoms
Gynecological Conditions

Endometritis

- Cause
- Signs and symptoms

Endometriosis
Endometriosis

- Cause
- Signs and symptoms

Gynecological Conditions

Pelvic Inflammatory Disease

- Cause
- Risk factors
- Signs and symptoms
Gynecological Conditions

Sexually Transmitted Diseases

- An infectious disease transmitted through sexual contact
- Most caused by bacteria, viruses, parasites, or fungi
- Risk factors
- Signs and symptoms

Gonorrhea

Click here to view a video on the topic of gonorrhea.

Return to Directory
Assessment-Based Approach:
Gynecological Emergencies

Scene Size-Up and Primary Assessment

- Safety
- Standard Precautions
- Look for possible mechanism of injury
- Administer \( O_2 \) if needed
- Look for signs of shock

Secondary Assessment
Secondary Assessment

Assessment-Based Approach: Gynecological Emergencies

Emergency Medical Care

• Maintain spine stabilization
• ABCs
• Administer O₂ if necessary
• Control major bleeding if present
• Put patient in position of comfort
• Calm and reassure
• Transport
Assessment-Based Approach: Gynecological Emergencies

Reassessment

• Assess mental status
• ABCs
• Repeat as needed
• Communicate findings

Genitourinary/Renal Emergencies
Genitourinary/Renal Structures and Functions

Genitourinary/Renal Conditions

Urinary Tract Infection
Urinary Tract Infections

• Cause
• Signs and symptoms

Genitourinary/Renal Conditions

Kidney Stones

• Renal calculi
• Causes
• Complications
• Signs and symptoms
Different Types of Kidney Stones

Click here to view a video on the topic of kidney stones.

Return to Directory

Genitourinary/Renal Conditions

Kidney Failure

Kidney Failure

- Acute renal failure
  - Causes
  - Reversible if recognized early
- Chronic renal failure
  - Causes
  - Permanent, can be life threatening
  - Requires dialysis or kidney transplant
- Complications
- Signs and symptoms
Renal Failure

Click here to view a video on the topic of renal failure.

Return to Directory

Genitourinary/Renal Conditions

Dialysis

Back to Objectives

Dialysis

- Dialysate
- Types of dialysis
- Complications
- Emergency medical care
Genitourinary/Renal Conditions

Urinary Catheters

• Types
• Function
• Side effects
• Catheter management

Assessment-Based Approach: Genitourinary/Renal Emergencies

Scene Size-Up and Primary Assessment
Scene Size-Up and Primary Assessment
- Scene safety
- Look for possible mechanism of injury
- Form general impression
- ABCs
- Administer O₂
- Assess for shock
- Determine transport priority

Secondary Assessment
- History
- Signs and symptoms
- Physical exam
- Maintain manual spine stabilization if necessary
- ABCs
- Administer O₂ if necessary
- Control bleeding
- Place patient in position of comfort
- Calm and reassure
- Initiate transport

Emergency Medical Care
Reassessment

- Mental status
- ABCs
- Vital signs
- Communicate findings

Erectile Dysfunction

Click here to view a video on the topic of erectile dysfunction.

Return to Directory

CASE STUDY

Follow-Up
CASE STUDY

Primary Assessment
- Lying on left side, curled up, holding his stomach
- Appears ill
- Breathing slightly rapid; skin flushed; radial pulse strong and rapid
- Administer oxygen at 15 lpm via a nonrebreather mask

CASE STUDY

Secondary Assessment
- O – Began around 5:00 am
- P – Nothing makes it better; lying flat makes it worse
- Q – Dull cramping around navel
- R – To RLQ
- S – “The worst stomach pain”
- T – Constant since this morning
- BP: 108/60 mmHg; P: 130; RR: 28

CASE STUDY

Treatment and Reassessment
- Reassess for signs of shock, vitals, and LOC
- Successfully arrive at the hospital
- Give report to ED staff
- Later you find out patient had surgery to remove appendix
Critical Thinking Scenario

• 26-year-old male vomiting up blood with epigastric abdominal pain

Vital signs:
• BP: 86/68 mmHg
• Radial pulse is 132 bpm and very weak
• RR: 22 per minute with good tidal volume
• Skin is extremely pale, cool, and clammy

Critical Thinking Scenario

• S – Alert but sluggish answering questions; began to vomit blood today; has black, tarry stools
• A – Denies any allergies
• M – Takes no medications
• P – Alcoholic and has been drinking for a week or so
• L – Has not eaten for a few days
• E – Pain worsened over past several days

Critical Thinking Scenario

• O – Unclear; began vomiting blood today
• P – Nothing relieves the pain; it worsens after drinking alcohol
• Q – Sharp, stabbing, and constant
• R – Does not radiate
• S – 10/10
• T – Present for three to four weeks but has worsened over the last several days
Critical Thinking Questions

1. What emergency care would you provide during the primary assessment?
2. What assessment findings would lead you to suspect the patient is experiencing an acute abdomen?
3. What are the vital signs indicating?
4. Based on the assessment findings and history information, what might the patient be suffering from?
5. What is the significance of the bowel movement findings?

Reinforce and Review

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