Abdominal Pain

- Common complaint
- Cause is often difficult to identify; not necessary to determine cause
- Need to recognize life-threatening problems and act swiftly
Anatomy of the abdomen:

- The abdominal cavity contains solid and hollow organs that make up the following systems:
  - Gastrointestinal
  - Genital
  - Urinary
Physiology of the abdomen:

• Peritonitis
  – Irritation of the peritoneum

• Peritoneum
  – Thin membrane lining the entire abdomen

• Acute abdomen
  – Sudden onset of abdominal pain
  – Can be fatal
Abdominal Pain

- Pain usually interpreted as colic; a severe, intermittent cramping pain.
- Referred pain
  - Perceived pain at a distant point of the body caused by irritation of the visceral peritoneum
Peritoneum

- **Parietal peritoneum** - lines the abdominal cavity
- **Visceral peritoneum** - covers the organs themselves
- **Peritoneal fluid** - fluid that is found in the abdominal space
- **Peritonitis** - when any foreign material is in the space causing irritation
Causes of Acute Abdomen

- Nearly every kind of abdominal problem can cause an acute abdomen.
- Substances lying in or adjacent to the abdominal cavity
- Perforation of an ulcer
- Gallstones that lead to inflammation (cholecystitis)
- Inflammation of the pancreas (pancreatitis)
- Inflammation or infection of appendix
- Inflammation of pouches in large intestine (diverticulitis)
• **Colic** - severe intermittent cramping pain

• **Referred pain** - when irritation in one area of the body causes pain in another:
Urinary System

- Kidneys can be affected by stones that form from materials normally passed in the urine.
- Kidney infections can cause severe pain.
- Patients are often quite ill, with a high fever.
- Bladder infection (cystitis) more common, especially in women.
- Patients usually have lower abdominal pain.
Uterus and Ovaries

- Always consider a gynecologic problem with women having abdominal pain.

- Causes of pain
  - Menstrual cycle
  - Pelvic inflammatory disease
  - Ectopic pregnancy
• Aneurysm
  – Weakness in aorta
• Pneumonia
  – May cause ileus and abdominal pain
• Hernia
  – Protrusion through a hole in the body wall
Signs and Symptoms of Acute Abdomen

• Ileus
  – Paralysis of muscular contractions in the intestine
  – Causes abdominal distention
• Nothing can pass normally out of stomach or bowel.
• Stomach can only empty through vomiting.
• Almost always associated with nausea and vomiting
• Distention
• Anorexia
• Loss of body fluid into peritoneal cavity
• Fever may or may not be present.
• Tenseness of abdominal muscles over irritated area
• You and your EMT-I partner are assigned to a high-school football game.
• After a tackle, one player remains on the ground with his knees pulled to his chest.
• You await evaluation by the team’s trainers. After a few moments, the player gets up and walks to the bench with assistance.
• A few minutes later, the trainer motions you to come over.
• What sorts of injuries can occur to the abdomen during contact sports such as football?
Scene size up

- Ensure that the scene is safe.
- Acute abdomen can be result of violence.
- Consider ALS back-up.
- Observe the scene closely for clues.
• The patient explains that the wind was knocked out of him during the tackle when another player’s helmet “hit him in the gut.”
• He now feels pain in his stomach, nausea.
• Given his description of the events and trainer’s comments, you believe this is an isolated injury to the abdomen.
• What could be causing his pain and what other signs and symptoms could you expect the patient to have?
Initial assessment

• Ascertain chief complaint.
• Note patient’s LOC using AVPU scale.
• Check for adequate airway and treat appropriately.
• Administer oxygen.
• Assess for major bleeding.
• Pulse and skin condition may indicate shock.
• If evidence of shock exists, elevate patient’s legs 6” to 12” or to position of comfort.
Transport Decision

• Transport gently.
• Do not delay transport if patient has:
  – Life threat
  – Suspected internal bleeding
  – Poor general impression
• Do not delay transport of pediatric or geriatric patients.
• The patient has been involved in recent physical activity, so observing his skin is not useful.
• Pulse is regular, full, 130 beats/min.
• You carefully assist him to the cot and suggest that he lay down in a position of comfort.
• He tells you that his left shoulder is beginning to hurt.
• You begin transport immediately.
• What other conditions might have made his injury more likely to occur?
Focused History Physical Exam

- Local or diffuse abdominal pain/tenderness
- Patient position
- Rapid and shallow breathing
- Referred (distant) pain
- Anorexia, nausea, vomiting
- Tense, distended abdomen
- Constipation, bloody diarrhea
- Tachycardia
- Hypotension
- Fever
- Rebound tenderness
OPQRST

- Use OPQRST to ask the patient what makes the pain better or worse.
- Do not give the patient anything by mouth.
Focused Physical Exam

- Explain what you are about to do.
- If no trauma, place patient supine with legs drawn up and flexed at knees.
- Determine if motion causes pain and if distention is present.
- Palpate the four quadrants of the patient’s abdomen gently.
- Determine whether patient can relax abdomen on command.
- Determine whether abdomen is tender when palpated.
- Palpate gently—rough palpation could cause further damage.
Baseline Vital Signs

- Monitor for adequate ventilation.
- Beware that changes in vital signs may be as a result of septic or hypovolemic shock.
Interventions

• Based on assessment findings.
• Anticipate vomiting.
• Nausea is frequently lessened by low-flow oxygen.
• If the patient exhibits signs of shock, place in Trendelenburg position.
You ask the patient whether he has recently had mononucleosis. He seems surprised and confirms a recent history of “mono.”

He did not tell his coach because he was afraid he wouldn’t be allowed to play.

You apply high-flow oxygen and obtain a blood pressure while your partner initiates two large-bore IVs.
Detailed Exam

• You will not be able to make a diagnosis.
• This exam may help provide more information.
• Do not delay transport to perform this.
• Vital signs:
  – BP 96/64 mm Hg
  – Respirations 36 breaths/min
  – Pulse oximetry 95% receiving 15 L/min via nonrebreathing mask.
• He complains of feeling dizzy.
• You place him in the shock position and cover him with a blanket.
• He remains awake and alert during transport; complains of severe abdominal pain throughout the call.
Ongoing assessment

- Patient’s condition may rapidly change.
- Reassess ABCs.
- Anticipate development of shock; treat even if there are no obvious signs.
- Communication and documentation
  - Relay information as soon as possible so that appropriate resources are made available.
  - Include pertinent physical findings.
Emergency Medical Care

• Take steps to provide comfort and lessen effects of shock; reassure patient.
• Position patients who are vomiting to maintain airway.
• Be sure to use BSI.
• Clean ambulance and equipment once patient is delivered.