

Emergency

Care and Transportation of the Sick and Injured



Section 5: Trauma

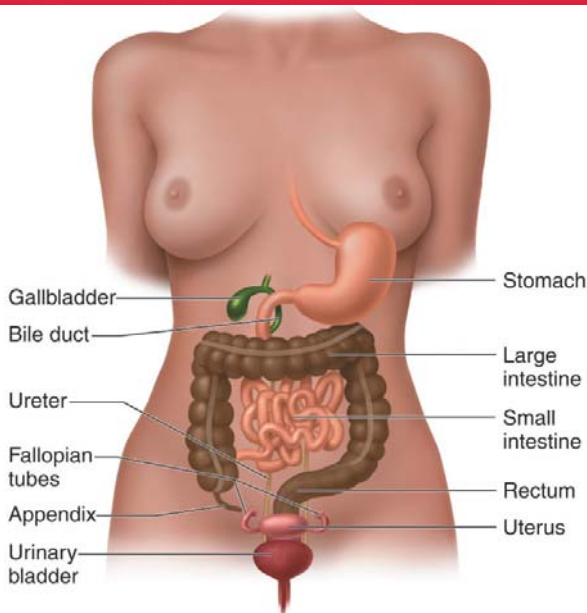
28: Abdomen and Genitalia Injuries

Cognitive Objectives

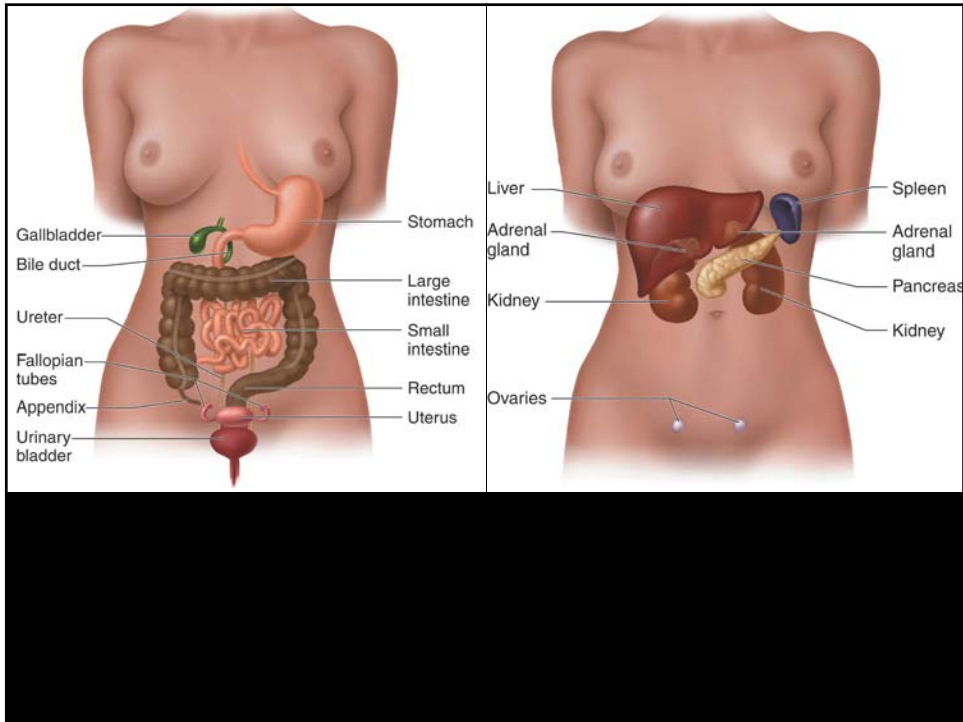
1. State the steps in the emergency medical care of a patient with a blunt or penetrating abdominal injury.
2. Describe how solid and hollow organs can be injured.
3. State the steps in the emergency medical care of a patient with an object impaled in the abdomen.
4. State the steps in the emergency medical care of a patient with an abdominal evisceration wound.
5. State the steps in the emergency medical care of a patient with a genitourinary injury.

Psychomotor Objectives

6. Demonstrate proper treatment of a patient who has an object impaled in the abdomen.
 7. Demonstrate how to apply a dressing to an abdominal evisceration wound.
- There are no affective objectives for this chapter.
 - All of the objectives in this chapter are noncurriculum objectives.



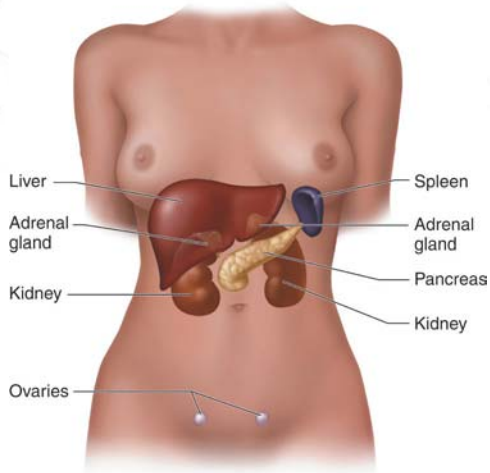
Hollow Organs in the Abdominal Cavity



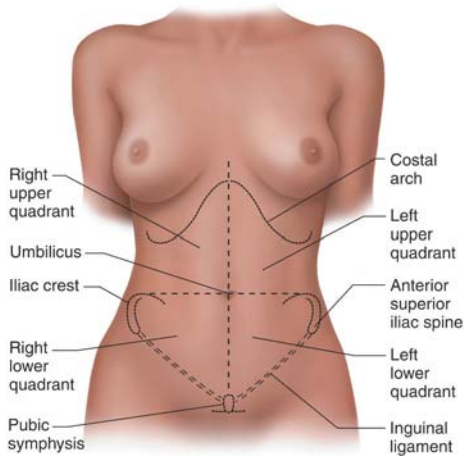
Signs of Peritonitis

- Abdominal pain
- Tenderness
- Muscle spasm
- Diminished bowel sounds
- Nausea/vomiting
- Distention

Solid Organs in the Abdominal Cavity



Abdominal Quadrants



The abdominal cavity is divided into four quadrants.

Injuries of the Abdomen

- Closed injury
 - Severe blows that damage abdomen without breaking skin
- Open injury
 - Foreign body enters abdomen and opens peritoneal cavity to outside



Signs and Symptoms of Abdominal Injury

- Pain
- Tachycardia
- Decreased blood pressure
- Pale, cool, moist skin
- Firm abdomen on palpation
- Bruising

Blunt Abdominal Wounds

- Severe bruises of the abdominal wall
- Laceration of the liver and spleen
- Rupture of the intestine
- Tears in the mesentery
- Rupture or tearing of the kidneys
- Rupture of the bladder
- Severe intra-abdominal hemorrhage
- Peritoneal irritation and inflammation

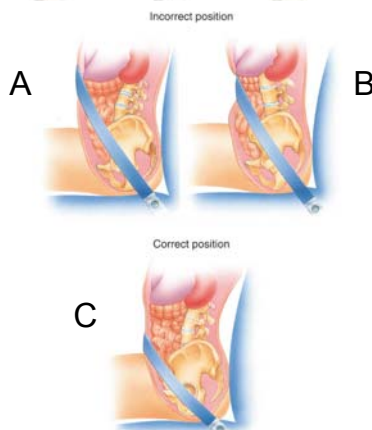
Care of Blunt Abdominal Wounds

- Place patient on backboard.
- Protect airway.
- Monitor vital signs.
- Administer oxygen.
- Treat for shock.
- Provide prompt transport.

Seat Belts and Airbags

- If used inappropriately, seat belts may cause injuries.
- Frontal airbags provide protection only during head-on collisions.

Seat Belt Positions



The proper position of a seat belt is below the anterior superior iliac spines and against the hip joints (C). A and B show incorrect positions.

Care for Penetrating Injuries

- Inspect patient's back and sides for exit wounds.
- Apply a dry, sterile dressing to all open wounds.
- If the penetrating object is still in place, apply a stabilizing bandage around it to control bleeding and minimize movement.

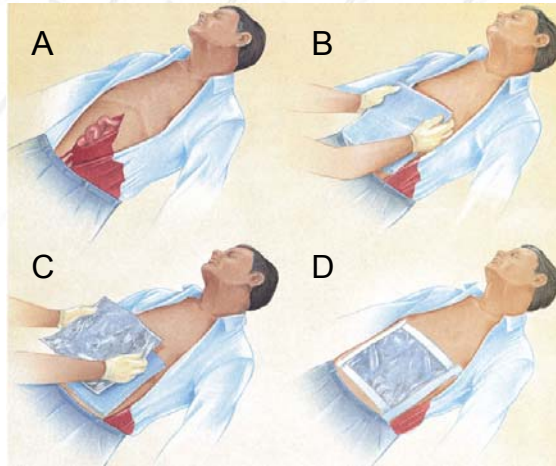


Abdominal Evisceration

- Internal organs or fat protrude through the open wound.
- Never try to replace organs.
- Cover the organs with a moist gauze, then secure with a dressing.
- Organs must be kept warm and moist.
- Transport promptly.



Treatment for Evisceration



You are the Provider

- You and your EMT-B partner are dispatched for a person hit in the abdomen by a flying piece of broken glass.
- You arrive and quickly determine that the scene is safe and no additional resources are required.



You are the Provider

(continued)

- What is the mechanism of injury? Is this significant?
- What are your safety considerations?

Scene Size-up

- Observe for hazards and threats to your safety.
- If dispatch indicates a possible assault, domestic dispute, or drive-by shooting, be sure that law enforcement has controlled the scene.
- Determine if additional resources are needed.

You are the Provider

(continued)

- You find a 28-year-old man who is alert and oriented.
- A large piece of glass broke and hit him in the abdomen.
- He is anxious, lying on the ground with his hands over his lower left quadrant.
- Patent airway with equal chest rise; good breath sounds bilaterally. Rapid pulse.
- You see obvious bleeding in his abdominal region.

You are the Provider

(continued)

- Describe the steps of initial assessment.
- Are there any life-threatening conditions that you will address?
- What care will you provide to treat breathing?

You are the Provider

(continued)

- You ensure that his airway is open. No noted abnormalities.
- DCAP-BTLS is unremarkable.
- You check for a distal pulse. It is rapid. Bleeding is noted and controlled.
- You start oxygen with a nonrebreathing mask due to patient's shock status.
- High-priority transport

Initial Assessment

- Evaluate and immediately care for ABCs.
- Most abdominal injuries will be subtle.
- Trauma may have occurred hours or days earlier and the pain just became bad enough to seek help.
- Ask about previous injuries associated with the chief complaint.
- Note patient position.

ABCs

- Consider spinal immobilization.
- Ensure patent airway; keep airway clear of vomitus.
- Consider use of a BVM device.
- Trauma to the kidneys, liver, and spleen can cause significant internal bleeding.
- Evaluate and treat for shock.
- Cover wounds and control bleeding.

Transport Decision

- Rapid on-scene time and quick transport are generally indicated.
- Specific injuries are difficult to identify in the prehospital environment.

You are the Provider

(continued)

- You perform a rapid physical exam.
- You remove the patient's shirt and find a 4.5" laceration with a moderately sized section of intestine protruding, which is visible.

You are the Provider

(continued)

- How would you treat this wound?
- If the shirt were stuck to the wound, what would you do?
- After the rapid physical exam, what is the next step?

Focused History and Physical Exam

- Expose injured regions.
- Provide privacy as needed.
- Allow patient to stay in position of comfort if there is no suspected spinal injury.
- Use DCAP-BTLS.
- Swelling may indicate significant abdominal injury.
- In pediatric patients, the liver and spleen are more easily injured.

Focused History and Physical Exam

- Inspect skin for wounds.
- Size of wound does not always correspond to extent of injury.
- If you find an entry wound, look for an exit wound.
- Stabilize an impaled object with supportive bandaging.
- Be professional to help reduce patient's anxiety.
- Obtain baseline vital signs.
- Obtain SAMPLE history.

Interventions

- Manage airway and breathing problems.
- Provide complete spinal stabilization if spinal injuries are suspected.
- Treat aggressively for shock.
- If an evisceration is discovered, place a moist, sterile dressing over the wound.
- Never push an evisceration back into the abdomen.
- Cover bleeding injuries to genitalia with moist, sterile dressing.
- Do not delay transport.

You are the Provider

(continued)

- The SAMPLE history indicates no allergies, no meds, and no prior medical history.
- Patient stated he felt a cutting sensation and saw bleeding.
- Stated he last ate 3 hours ago.
- Pulse 120 beats/min; respirations 22 breaths/min; BP 120/80 mm Hg
- You cover the evisceration with a saline-moistened dressing per your local protocol.
- Within a minute, the paramedics arrive and assume care.

You are the Provider

(continued)

- What is the significance of when the patient ate last in his current situation?
- What is the patient's shock status?
- If the medics were delayed, what would you do?

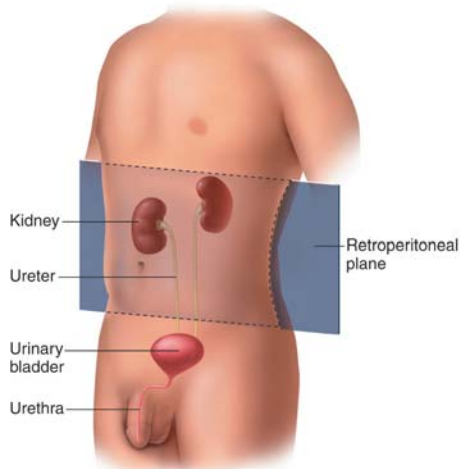
Detailed Physical Exam

- Conduct as time permits.

Ongoing Assessment

- Repeat initial assessment and reassess vital signs.
- Communication and documentation.
 - Communicate the MOI.
 - Radio report will depend on local protocols.
 - If assault is suspected, you may have a legal requirement to inform the hospital staff of your suspicion.

Anatomy of the Genitourinary System



Injuries of the Kidney (1 of 2)

- Suspect kidney damage if patient has a history or physical evidence of:
 - Abrasion, laceration, or contusion in the flank
 - A penetrating wound in the region of the lower rib cage or upper abdomen
 - Fractures on either side of the lower rib cage or of the lower thoracic or lumbar vertebrae
 - A hematoma in the flank region

Injuries of the Kidney (2 of 2)

Kidney injuries may result from a direct blow, such as in a tackle in football.

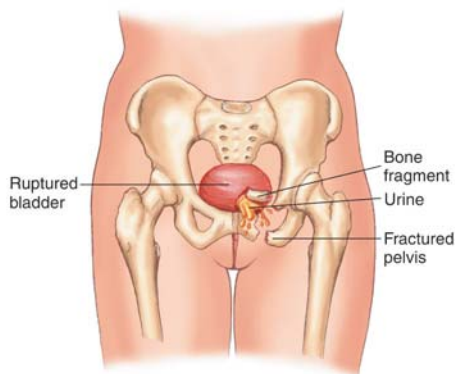


Injury of the Urinary Bladder (1 of 2)

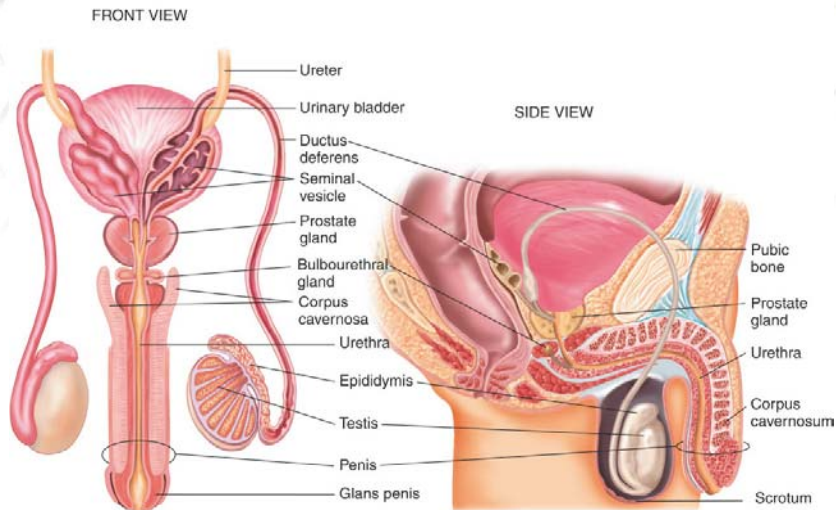
- Either a blunt or penetrating injury can rupture the bladder.
- Urine will spill into the surrounding tissues.
- Suspect if you see blood at the urethral opening or physical signs of trauma on the lower abdomen, pelvis, or perineum.
- Monitor vital signs.
- The presence of associated injuries or shock will dictate the urgency of transport.

Injury of the Urinary Bladder (2 of 2)

Fracture of the pelvis can result in a laceration of the bladder.



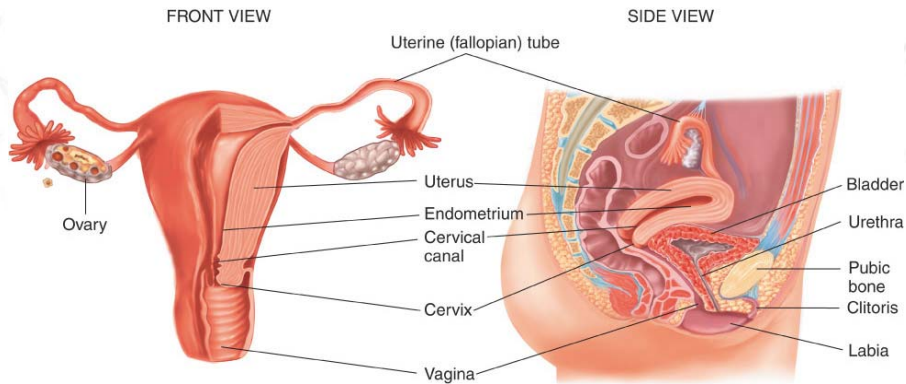
Male Reproductive System



Care for Injury to the External Male Genitalia

- These injuries are painful. Make the patient comfortable.
- Use sterile, moist compresses to cover areas stripped of skin.
- Apply direct pressure to control bleeding.
- Never manipulate any impaled objects.
- Identify and bring avulsed parts to the hospital.

Female Reproductive System



Care for Injuries of the Female Genitalia (1 of 2)

- Female internal genitalia is well protected and usually not injured.
- The exception is the pregnant uterus which is vulnerable to both blunt and penetrating injuries.
 - Keep in mind that the unborn child is also at risk.
 - Expect to see signs and symptoms of shock.
 - Provide all necessary support.
 - Transport promptly.

Care for Injuries of the Female Genitalia (2 of 2)

- Injuries to the external genitalia are very painful but not life threatening.
- Treat lacerations, abrasions, and avulsions with moist, sterile compresses.
- Use local pressure and a diaper-type bandage to hold the dressing in place.
- The urgency of transport will be determined by the associated injuries, amount of hemorrhage, and the presence of shock.

Rectal Bleeding

- Common complaint
- Blood may appear in undergarments or may be passed during a bowel movement.
- Can be caused by sexual assault, hemorrhoids, colitis, or ulcers of the digestive tract
- Acute bleeding should never be passed off as something minor.
- Pack the crease between the buttocks with compresses and consult with medical control.

Sexual Assault

- Do not examine genitalia unless there is obvious bleeding.
- The patient should not wash the area, defecate, eat, or drink until examined.
- Offer to call the local rape crisis center.
- Document carefully and preserve evidence.