Abdomen and Genitalia Injuries

Chapter 28
Hollow Organs in the Abdominal Cavity

- Gallbladder
- Bile duct
- Ureter
- Fallopian tubes
- Appendix
- Urinary bladder
- Stomach
- Large intestine
- Small intestine
- Rectum
- Uterus
Signs of Peritonitis

- Abdominal pain
- Tenderness
- Muscle spasm
- Diminished bowel sounds
- Nausea/vomiting
- Distention
Solid Organs in the Abdominal Cavity

Liver
Adrenal gland
Kidney
Spleen
Adrenal gland
Pancreas
Kidney
Ovaries
Abdominal Quadrants

- Right upper quadrant
- Umbilicus
- Iliac crest
- Right lower quadrant
- Costal arch
- Left upper quadrant
- Anterior superior iliac spine
- Left lower quadrant
- Pubic symphysis
- Inguinal ligament
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
ABCs of Abdominal Injury

- 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
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
- 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
Anatomy of the Genitourinary System
Injuries of the Kidney

- 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
Injury of the Urinary Bladder

- 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.

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

FRONT VIEW

SIDE VIEW

- Uterine (fallopian) tube
- Uterus
- Endometrium
- Cervical canal
- Cervix
- Vagina
- Ovary
- Bladder
- Urethra
- Pubic bone
- Clitoris
- Labia
Care for Injuries of the Female Genitalia

- 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.

- 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
Abdominal injuries are categorized as either open (penetrating trauma) or closed (blunt force trauma).

Either injury can result in injury to the hollow or solid organs of the abdomen.
• Blunt force trauma that causes closed injuries results from an object striking the body without breaking the skin.

• Penetrating trauma is often a result of a gunshot wound or stab wound and breaks the skin.
• Injury to the solid internal organs often causes significant unseen bleeding that can be life threatening.

• Injury to the hollow organs of the abdomen may cause irritation and inflammation to the peritoneum as caustic digestive juices leak into the peritoneum.
• Always maintain a high index of suspicion for serious intra-abdominal injury in the trauma patient, particularly in the patient who exhibits signs of shock.
• Assess the abdomen for signs of bruising, rigidity, penetrating injuries, and complaints of pain.

• Never remove an impaled object from the abdominal region.
• Be prepared to treat the patient for shock.

• Never replace an organ that protrudes from an open injury to the abdomen (evisceration).
• Injuries to the kidneys may be difficult to detect because of their location. Be alert to bruising or a hematoma in the flank region.

• Injury to the external genitalia of male and female patients is very painful but not usually life threatening.
• In the case of sexual assault or rape, treat for shock if necessary, and record all the facts in detail.

• Follow any crime scene policy established by your system to protect the scene and any potential evidence.
• Advise the patient not to wash, douche, or void until after a physician has examined him or her.