Abdominal and Genitourinary Injuries

Chapter 28
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

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

- Right upper quadrant
- Umbilicus
- Iliac crest
- Right lower quadrant
- Pubic symphysis
- Costal arch
- Left upper quadrant
- Anterior superior iliac spine
- Left lower quadrant
- 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.
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

- Kidney
- Ureter
- Urinary bladder
- Urethra
- Retroperitoneal plane
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

- Ovary
- Uterine (fallopian) tube
- Uterus
- Endometrium
- Cervical canal
- Cervix
- Vagina

SIDE VIEW

- 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