Chapter 30
Abdomen and Genitalia Injuries

Abdominal Injuries
- Abdomen is major body cavity extending from ________________ to pelvis.
- Contains organs that make up digestive, urinary, and genitourinary systems.
- Significant trauma to the abdomen can occur from blunt trauma, penetrating trauma, or both.
- Injuries to the abdomen that go unrecognized or are not repaired in surgery are a leading cause of traumatic death.

Abdominal Quadrants
- Right upper quadrant (RUQ)
  - Liver, __________________________, duodenum, pancreas
- Left upper quadrant (LUQ)
  - Stomach and spleen
- Left lower quadrant (LLQ)
  - Descending colon, left half of transverse colon
- Right lower quadrant (RLQ)
  - Large and small intestine, the __________________________

Hollow Organs in the Abdominal Cavity
- Structures through which materials pass
  - __________________________, intestines, ureters, bladder
- Most contain digested food, urine, or bile

Peritonitis
- Inflammation of the lining of the abdomen
  - Caused by __________________________ hollow organs spilling content into the peritoneal cavity
  - Can lead to a lethal infection
7 S/S of Peritonitis
   • Abdominal pain
   • Tenderness
   • Muscle spasm
   • Diminished bowel sounds
   • Nausea/vomiting
   • ______________________

8 Solid Organs in the Abdominal Cavity
   • Solid masses of tissue
   • Perform chemical work of the body: enzyme production, blood cleansing, energy production
   • Because of rich blood supply, ______________________ can be severe.

9 Liver
   • The liver is the ______________________ organ in abdomen.
   • Vascular, can lead to hypoperfusion
   • Often injured by fractured lower right rib or penetrating trauma
   • ______________________

10 Spleen and Pancreas
   • ______________________ and prone to heavy bleeding
   • Spleen is often injured.
     – Motor vehicle collisions
     – Steering wheel trauma
     – Falls from heights
     – Bicycle and motorcycle accidents involving handlebars
   • ______________________

11 Kidneys and Diaphragm
   1 Kidneys
   2 • Can cause significant blood loss
      • Common finding is blood in ______________________ (hematuria).
3 Diaphragm
4 • When penetrated or ruptured, loops of ________________ invade thoracic cavity.
   • May cause bowel sounds during auscultation of lungs
   • May have dyspnea

12 □ Injuries of the Abdomen
   • Closed injury
     – Severe blows that damage the abdomen without breaking the skin
   • Open injury
     – Foreign body enters the abdomen and opens the ________________ cavity to the outside

13 □ Signs and Symptoms of Abdominal Injury
   • Pain
   • ________________
   • Tachycardia
   • Decreased blood pressure
   • Pale, cool, moist skin
   • A firm abdomen on palpation
   • Bruising

14 □ Evaluating Abdominal Injuries
   • Determine the type of injury, extent of damage, and presence of shock.
   • Keep airway clear and watch for vomiting.
   • Place the patient supine with knees bent.
   • Obtain baseline vitals.
   • Follow ________________.
   • Inspect abdomen for wounds.
   • Immobilize any impaled objects.

15 □ Blunt Abdominal Wounds
   1 • Severe bruises of the abdominal wall
      • ________________ 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

16 Care of Blunt Abdominal Wounds
Place patient on backboard.
Protect airway.
Monitor vital signs.
Administer oxygen.
Treat for ___________________________.
Provide prompt transport.

17 Seat Belts and Airbags
Prevent many injuries and save lives
If used inappropriately, seat belts may cause injuries.
Frontal airbags provide protection only during head-on collisions.
Airbags must be used in __________________________ with seatbelts

18 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.

19 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 __________________________ bandage around it to control bleeding and minimize movement.

20 Open Abdominal Injuries (1 of 2)
Damage depends on velocity of object.
– Low-velocity injuries
  ● Knives, other edged weapons
– Medium-velocity injuries
  ● Smaller caliber __________________________ and shotguns
– High-velocity injuries
  ● High-powered rifles and handguns

21 Open Abdominal Injuries (2 of 2)
High- and medium-velocity injuries
- Have temporary wound channels
- Caused by ______________________________

Low-velocity injuries
- Internal injury may not be apparent.
- Injury at or below xiphoid process may affect thoracic and peritoneal cavities.

Abdominal Evisceration (1 of 2)
- Internal organs or fat protrude through the open wound.
- Never ________________________ organs.
- Cover the organs with a moist gauze, then secure with a dressing.
- Organs must be kept warm and moist.
- Transport promptly.

Abdominal Evisceration (2 of 2)
- Can be painful and visually shocking
- Do not ________________________ down on abdomen.
- Only perform visual assessment.
- Cut clothing close to wound.
- Never pull on clothing stuck to or in the wound channel.

Treatment for Evisceration

Genitourinary System
- Controls reproductive functions and waste discharge
- Generally considered together
- Male genitalia lie outside pelvic cavity.
  - Except ________________________ gland and seminal vesicles
- Female genitalia lie within pelvic cavity.
  - Except vulva, clitoris, labia

Anatomy of the Genitourinary System

Female Reproductive System

Male Reproductive System
Injuries to the Kidneys (1 of 2)
Suspect kidney damage if patient has a history or physical evidence of:
● Abrasion, laceration, or contusion in ______________________
● 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 to the Kidneys (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 ______________________ opening or physical signs of trauma on the lower abdomen, pelvis, or perineum.
● Monitor vitals 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.
●

Care for Injury to the External Male Genitalia (1 of 3)
● These injuries are very ______________________ but rarely are life threatening.
● Should never take priority over more severe injuries
● Make the patient comfortable.
● Use sterile moist compresses to cover areas stripped of skin.

Care for Injury to the External Male Genitalia (2 of 3)
● Apply direct pressure to control bleeding.
● Never manipulate any impaled objects or objects incarcerating the
Never manipulate any impaled objects or objects incarcerating the penis.
- Identify and bring __________________________ parts to the hospital.
- Be professional.

35 Care for Injury to the External Male Genitalia (3 of 3)

Zipper Trauma
- If only 1 or 2 teeth caught, cut zipper ends and pull apart
- If more than 2 teeth caught, cut out zipper and leave on the patient

Blunt Trauma
- Causes swelling; apply ice
- Can cause rupture of testicle and blood in scrotum

36 Care for Injuries of the Female Genitalia (2 of 3)

- Female internal genitalia is well protected and usually not injured.
- The exception is the pregnant __________________________ 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.

37 Care for Injuries of the Female Genitalia (3 of 3)

- 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 __________________________ bandage to hold the dressing in place.

38 Care for Injuries of the Female Genitalia (3 of 3)

- The urgency of transport will be determined by the associated injuries, amount of __________________________, and the presence of shock.
• Do not put dressings in the vagina.
• Comfort patient and transport
• Leave any foreign bodies in place after stabilizing with bandages.

39 □ Rectal Bleeding
• Common complaint
• Blood may appear in undergarments or may be passed during a bowel movement.
• Can be caused by sexual assault, ___________________, 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.

40 □ Sexual Assault
• Do not examine genitalia unless there is obvious bleeding.
• The patient should not wash the area, douche, defecate, eat, or drink until examined.
• Offer to call the local rape crisis center.
• Document carefully and preserve evidence.
• Use same __________________ EMT if possible