Chapter 16: Gastrointestinal, Genitourinary and Reproductive Emergencies

Objectives

- 16-1: List the possible causes of emergencies involving the gastrointestinal, genitourinary and reproductive systems
- 16-2: List the signs and symptoms of emergencies involving the genitourinary system
- 16-3: List the signs and symptoms of emergencies related to the gastrointestinal system
- 16-4: List the signs and symptoms of emergencies related to the reproductive system
- 16-5: Describe and demonstrate how to assess the abdomen
- 16-6: Describe and demonstrate the management of a patient with a gastrointestinal, genitourinary or reproductive emergency
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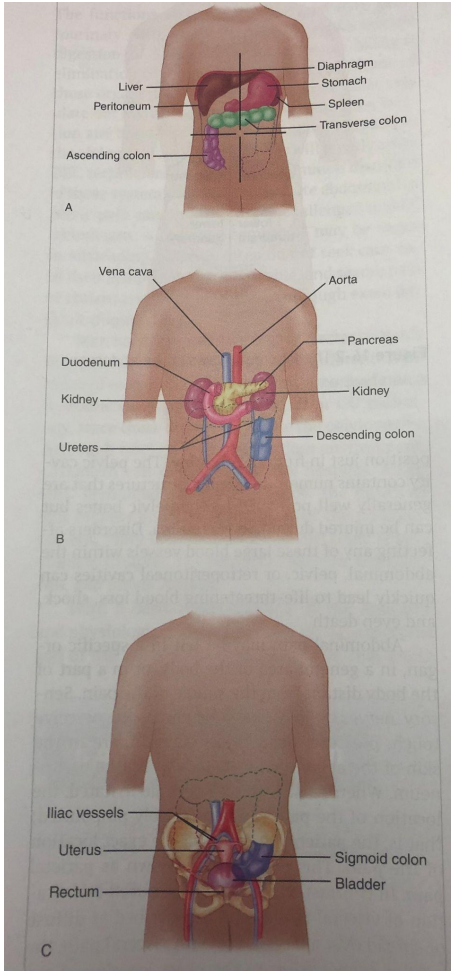
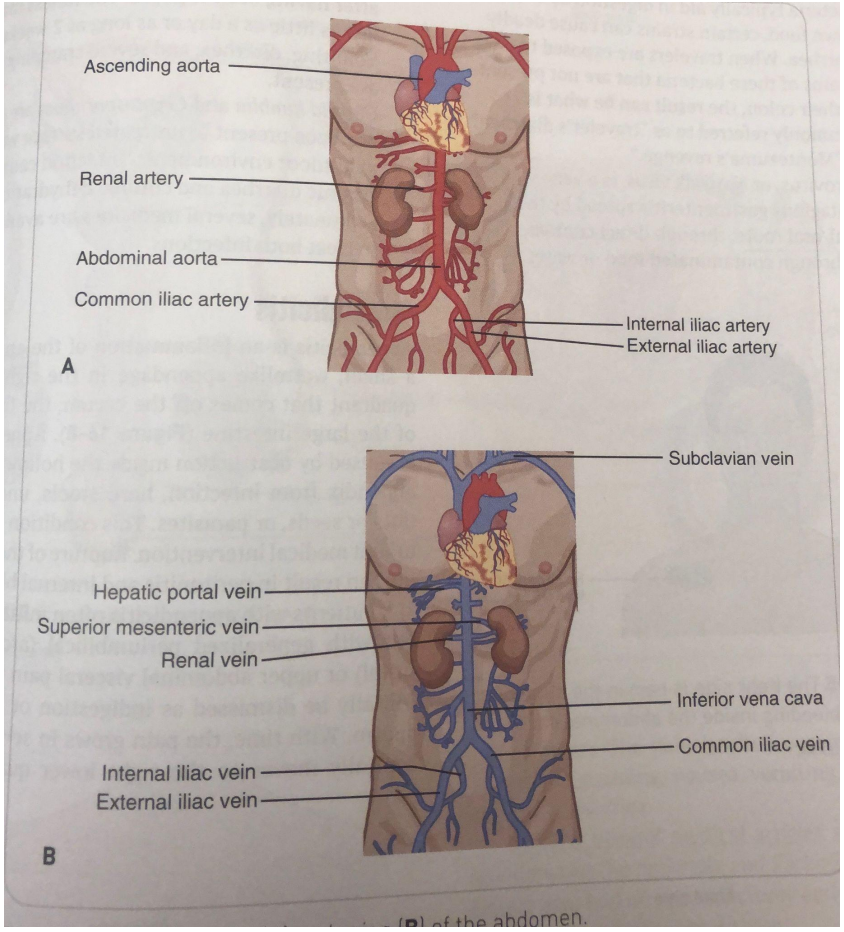
Chapter Overview

- Gastrointestinal (GI) and Genitourinary (GU) are responsible for things like digestion of food, regulation of water balance, and waste elimination.
- The unique challenge is that these injuries tend to be extremely painful and symptoms are often vague or misleading.
- Embarrassment and severe pain make a thorough exam difficult.

Solid vs. Hollow Organs

- Hollow organs contain food, bile, feces or urine. They are the stomach, gallbladder, small and large intestines, appendix, ureters and urinary bladder.
- If these organs rupture it is dangerous because they contain irritants and contaminants that can desterilize the abdominal cavity
- Soft organs within the abdomen are the liver, pancreas, spleen, and ovaries.
- If these organs rupture, it causes profuse internal bleeding and can lead to hemorrhagic shock


Liver
Peritoneum
Diaphragm
Stomach
Spleen
Transverse colon
Ascending colon
A
Vena cava
Aorta
Pancreas
Duodenum
Kidney
Kidney
Ureters
Descending colon
B
Iliac vessels
Uterus
Rectum
Sigmoid colon
Bladder
C


Ascending aorta
Renal artery
Abdominal aorta
Common iliac artery
Internal iliac artery
External iliac artery
A
Subclavian vein
Hepatic portal vein
Superior mesenteric vein
Renal vein
Inferior vena cava
Common iliac vein
Internal iliac vein
External iliac vein
B

Medical Problems

- **Gastroenteritis**: Inflammatory condition of the stomach lining and/or intestines and it is the most common. Typically caused by a bacterial, viral or parasitic infection. Patients present with cramping, bloating, nausea, vomiting and diarrhea. Pain may be localized to the upper quadrants. Not life threatening, but if pain persists, it can be dangerous

- **Appendicitis:** Inflammation of the appendix. Described in the textbook as small and wormlike. Problem is caused by an obstruction due to infection, undigested foods or parasites. Ruptures result in internal bleeding and peritonitis. Right lower quadrant but that is not a hard rule
- **Pancreatitis:** Digestive enzymes are activated before they are released and they damage the pancreas. Can be a mild or life threatening problem and can be recurring in some patients. Referred pain in back or left shoulder but also in top two quadrants. Guarding regularly seen in patients.

- **Hepatitis:** Liver inflammation. Can be acute but also exhibited in chronic scenarios lasting up to multiple months, too. Viral infection is the most common cause. Patients present with flu like symptoms and jaundice. Jaundice is yellowing of skin and mucous membranes due to bilirubin buildup.
- **Cholecystitis and Gallstones:** Inflammation of the gallbladder and the most common cause is a gallstone. Causes vary and so do sources of gallbladder blockage. History of abdominal pain following a meal is common. Like pancreatitis and hepatitis, it can be acute or chronic.

- **Bladder Infections and Pyelonephritis:** When bacteria gets into the bladder and causes it to become sterile. Results in painful urination and abdominal/pelvic pain. Pyelonephritis is a bacterial infection that involves one or both kidneys and the ureters, leading to a urinary system infection. Women are more prone due to smaller urinary system which allows bacteria to spread more easily. Severe distress is common and symptoms are ranging
- **Bowel Obstruction**: Serious emergency when SI or LI gets obstructed. Results in digestive tract failure and patients are often bloated or distended.

- **Perforated Bowel:** Whole of tear in the intestinal wall. Leads to peritonitis, sepsis and even death if not immediately treated. Intense pain that worsens with movement or deep breathing.
- **Inflammatory Conditions of the Stomach, Esophagus and Upper Small Intestine:** Gastritis (stomach inflammation), esophagitis (caused by gastroesophageal reflux disease) and peptic ulcers are also notable emergencies. These are Upper GI scenarios and can result in upper quadrant or chest pain. Bloating can cause hematemesis (blood-stained vomit). Acute bleeding is bright red and chronic patients will have darker colored blood. Patients also present with melena (oxygenated blood in stool),

- **Abdominal Aortic Aneurysm:** Abdominal aorta wall can be weakened over time until it balloons (aneurysm). Ruptures are usually failure due ot scale of blood loss. Patients present with shock and feel pain throughout the abdomen. Unequal femoral pulses are often found in AAA scenarios.
- **Acute Abdomen**: Sudden and severe pain in the abdomen. Encompasses many medical problems listed prior. Patients present guarding. Myocardial Infarction may present as Acute Abdomen.

Patient Assessment

- Determine if pain is constant or intermittent,
- Determine if the pain has moved since initial onset.
- What aggravates the injury? Deep breathing, movement, urination, etc. (Reference table 16-4, pg. 349).
- Find associated signs like Nausea, vomiting, diarrhea and fever
- Remember that due to the wide range of possible injuries, assessment and exact determination of injury scenario may not be possible

Physical Examination

- Ease anxiety as best as possible and then help patient into a comfortable position, likely supine with knees flexed, so that you can palpate the abdomen.
- Two steps: inspection and palpation. Observe for bulging, discoloration or trauma and palpate for pain, masses or tensing in any of the four quadrants.
- Start by palpating pain site furthest from patient's initial understanding.

Emergency Management

- Many serious conditions require in depth physician evaluation, surgical correction or long term care. OEC technicians improve patient comfort and gauge level of care needed.

Key Terms

- Acute abdomen, Bladder infection, ectopic pregnancy, guarding, hematemesis, jaundice, melana, ovarian cyst, pancreatitis, pelvic inflammatory disease, peritoneum, peritonitis and referred pain.

Chapter Questions

2. Gastroenteritis involves inflammation of the stomach lining and intestines.. This condition is typically caused by:

A. A bacterial, viral or parasitic infection
B. The crystallization of mineralized salts in the kidney
C. Fertilized egg implanting in fallopian tube
D. Bowel obstruction

Chapter Questions

5. When assessing patient with abdominal pain in the right upper quadrant, you should begin palpating in the :

A. Right upper
B. Left upper
C. Right lower
D. Left lower

Chapter Questions

8. Management of a patient with an acute abdomen includes:

A. Transferring patient to definitive care
B. Providing water for the patient to drink
C. Providing and energy bar for the patient
D. All of the above

Practicals: Pelvic Splint and Wrap

-Wrap: Two people needed. Slide it under the pelvis and exchange ends while twisting. Then just tuck it in to itself.

-Splint: Make sure there's nothing in pockets to obstruct. Using two people, pull from both sides till you hear the click then fasten. Two clicks is ok it is still tight. Position properly by feeling for your own pelvis and depending on nature of the injury, check patient pelvis location, too.