GI Assessment, Diagnosis and Case Studies

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SOAR Session #6
Abdominal Assessment

- 4 Quadrants:
  * Right Upper
  * Right Lower
  * Left Upper
  * Left Lower
Abdominal Assessment

- 9 Regions:
Abdominal Assessment
Right Upper Quadrant Organs

- Liver
- Gallbladder
- Duodenum
- Pancreas Head
- Right Kidney and Adrenal
Right Lower Quadrant Organs

- Cecum
- Appendix
- Right Ovary and Fallopian Tube
Left Upper Quadrant Organs

- Stomach
- Spleen
- Pancreas
- Left Kidney and Adrenal
Left Lower Quadrant Organs

- Sigmoid Colon
- Left Ovary and Fallopian Tube
Nursing Assessment - History

- Dysphagia
- Weight Gain or Loss
- Pain
- Appetite
- Nausea/Vomiting
- Diarrhea/Constipation
- Past Abdominal Problems
Nursing Assessment - History

- Allergies
- Current Medications
- Alcohol/Drugs/Tobacco Use
- Nutrition
- Exposure to Infectious Disease
- Stress
- Pregnant
Nursing Assessment

- General Observation
- Inspection
- Auscultation
- Percussion
- Palpation
Preparing for Exam

- Provide Privacy
- Expose the Abdomen
- Empty Bladder
- Place Patient Supine with at Side
- Warm Hands and Stethoscope
- Assess Painful Areas Last
Inspection

- Overall Observation
- Flat? Distended? Symmetrical?
- Skin Color
- Scars
- Visible Pulsations
- Peristalsis
Inspection Abnormalities

- Distention
- Hepatomegaly
- Ascites
Inspection Abnormalities

- Enlarged Gallbladder
- Umbilical Hernia
Cullen’s Sign

* Bluish sign at umbilicus is a sign of bleeding in the peritoneum
Grey Turner’s Sign
* Bruising on the flanks indicating a retroperitoneal bleeding
Inspection Abnormalities

- Spider Angiomas:
  - * Indicative of Liver Disease – Cirrhosis
Inspection Abnormalities

- Visible Peristalsis
- Video
Nursing Assessment - Auscultation

- Always listen before you touch!!
- Bowel sounds mean the GI tract is working
- Hyper? Hypo?
- Listen for 5 minutes before documenting no bowel sounds
Nursing Assessment - Percussion

- Tympany – Sound of air in the gut
- Resonance – Lower pitched and hollow
- Dullness – Flat sound without echoes: Liver, Spleen, Ascites, Distended Bladder
Percussion Technique
Nursing Assessment - Palpation

- Light Palpation – Depress 1 cm
- Deep Palpation – Depress 5-8 cm
- Always assess tender areas last
- Watch patient’s expression during palpation
Palpation Techniques
• Assessing the Liver
Examination of Kidney

- Normal kidneys are not usually palpable.

- Right kidney may be felt to slip between hands during exhalation
Palpation Abnormalities

- Tenderness
- Masses
- Firmness or Muscle Rigidity

** Could be a sign of intraabdominal bleeding – Stop Palpation!! **
GI Diagnosis
Pancreas

- A large gland located behind the stomach and next to the duodenum
- 2 Purposes:
  * Secretes digestive enzymes into small intestine for digestion of carbohydrates, proteins and fats
  * Releases insulin and glucagon to help regulate blood glucose metabolism
Pancreatitis

- 2 Forms:
  - Acute: Sudden inflammation over a short period of time
  - Chronic: Commonly follows acute pancreatitis due to ongoing inflammation of the pancreas
Acute Pancreatitis

- Causes:
  - Gallstones
  - Heavy Alcohol Use
  - Medications
  - Infections
  - Trauma
  - Metabolic Disorders
  - Surgery
  - Up to 30% of cases have an unknown cause
Acute Pancreatitis

- Symptoms:
  - Upper abdominal pain, made worse with eating
  - Swollen abdomen
  - Nausea and Vomiting
  - Fever
  - Tachycardia
Acute Pancreatitis

- **Diagnosis:**
  - Amylase and Lipase levels
  - Ultrasound
  - CT Scan
  - Glucose Tolerance Test
  - Pancreatic Function Test
Acute Pancreatitis

- Treatment:
  - IV Fluids
  - Pain Meds
  - Removal of Gallbladder
  - Antibiotics
Chronic Pancreatitis

- Causes:
  * Prolonged Alcohol Use
  * Acute Pancreatitis
  * Gallstones
  * Cystic Fibrosis
  * Hereditary disorders of the Pancreas
Chronic Pancreatitis

• Symptoms:
  * Constant pain in upper abdomen radiating to the back
  * Weight loss caused by poor nutrient absorption
  * Diabetes
Chronic Pancreatitis

Diagnosis:
- Previous acute pancreatitis
- Amylase and Lipase levels
- Pancreatic Function Tests
- CT scan
- Ultrasound
Chronic Pancreatitis

Treatment:
- Pain Meds
- Pancreatic Enzymes
- Insulin
- Low-fat diet
- Surgery
- Stop drinking and smoking
Normal Pancreatic CT
Acute Pancreatitis CT
Chronic Pancreatitis with Calcifications
Liver

- Important in protein production and blood clotting to cholesterol, glucose and iron metabolism.
- Liver is the largest internal organ and largest gland in the body.
- Weighs approx 3-3.5 pounds.
Liver, Gallbladder and Pancreas
Liver Disease

- The broad term "liver disease" applies to many diseases and disorders that cause the liver to function improperly or stop functioning altogether.
Liver Diseases

- Hepatitis B
- Hepatitis C
- Long term alcohol use
- Cirrhosis
- Malnutrition
- Acute liver failure from medications
Liver Failure

- Symptoms:
  * Nausea
  * Loss of appetite
  * Fatigue
  * Jaundice
  * Bleeding easily
  * Swollen abdomen
Liver Failure

- Treatments:
  - Reverse medication cause
    - Ex. Tylenol overdose, acetylcysteine
  - Supportive care for viruses
  - Liver transplant
Liver Disease Prevention

- Hepatitis B Vaccine series
- Well balanced diet
- Limit alcohol consumption
- Good hygiene and hand washing
- Protect yourself from accidental needlesticks
- Don’t share razors or toothbrushes
Gastitis

- Gastritis is an inflammation, irritation, or erosion of the lining of the stomach
- Can be acute or chronic
- Caused by H pylori, infections, bile reflux
- Diagnosed by upper GI, labs, fecal occult blood test
Gastritis

- Medications
  - Antacids
  - Proton Pump Inhibitors
  - Histamine Blockers
  - Carafate
  - Mucosal Barrier Enhancers
  - Penicillin

**See Treating Ulcer Disease and Gastritis Handout**
GI Bleed

- Describes any form of bleeding in the GI tract, from the pharynx to the rectum.
- The degree of bleeding can range from nearly undetectable to acute, massive, life-threatening bleeding.
- A good history and exam can help determine the seriousness and the cause.
GI Bleed

- Causes:
  * Peptic Ulcers
  * Erosive Gastritis/Eosophagitis
  * Chronic Liver Disease
  * Forceful Vomiting
  * Stress Gastritis
  * Long-term NSAID Use
GI Bleed

- Symptoms:
  - Hematemesis
  - Syncope
  - Epigastric/Abdominal Pain
  - Dysphagia
  - Heartburn
  - Jaundice
GI Bleed

- Diagnosis:
  - CBC, BMP, Type and Cross, Ca level
  - Orthostatic blood pressures
  - Chest X-ray
  - Endoscopy
  - NG tube and gastric lavage
  - CT scan
Bleeding Ulcer
GI Bleed

- Management:
  * Maintain the airway
  * 1 or 2 large bore PIVs
  * Replace blood loss with NS, D5.45, LR
  * Foley
  * Surgical Repair
GI Bleed

- Medications:
  - Antacids
  - Proton Pump Inhibitors
  - Histamine Blockers
  - Carafate
  - Mucosal Barrier Enhancers
  - Penicillins

** See “Treating Ulcer Disease and Gastritis” Handout**
Clinical Signs of Blood Loss

- <1000ml
- 1000-1500ml
- 1500-2000ml
- >2000ml

** See Handout **
Mr B is a 57-year-old man who was admitted yesterday after starting to pass black stools. He has a two-day history of severe stomach pains and has suffered on and off with indigestion for some months.

He is a life-long smoker, with mild chronic cardiac failure (CCF) for which he has been taking enalapril 5 mg BID for 2 years. He also recently started taking naproxen 500 mg BID for arthritis.

Yesterday his hemoglobin was reported as 10.3 g/dL (range 12–18 g/dL), platelets 162 × 10⁹/L (range 150–450 × 10⁹/L), INR 1.1 (range 0.8–1.2) He was mildly tachycardic (87 bpm) and had a slightly low blood pressure of 115/77 mmHg and was given 1.5 L of saline.

He has just returned from endoscopy this morning and has been newly diagnosed as having a bleeding duodenal ulcer. He has been written up for his usual medication for tomorrow if he is eating and drinking again.
GI Case Study #1

- What risk factors does he have for a bleeding ulcer?
- Has his treatment been appropriate so far? Why? Any tests he may still need?
- Should he be given a proton pump inhibitor?
- What discharge teaching should he get?
GI Case Study #2

- Mrs. Miller
- See Handout
GI Case Study #2

- What is the difference between acute and chronic pancreatitis?
- Define signs and symptoms of acute pancreatitis?
- What are the causes of pancreatitis?
- How will the spironolactone be given thru the NG?
- What type of diet will Mrs. Miller be advanced to next?
- Besides the KUB and labs, what other tests should Mrs. Miller get done?
Mr. W, 59 years old, is divorced and unemployed. He was admitted to an acute medical ward at the hospital presenting with general malaise, a grossly distended abdomen, swollen ankles and jaundice. It was also noted that he smelt of alcohol and was showing signs of alcohol withdrawal.
GI Case Study #3

- What is cirrhosis of the liver?
- What are causes of cirrhosis?
- What are signs and symptoms of cirrhosis?
- What labs/tests help to diagnose Cirrhosis?