GI: Assessment and Diagnostics (2022)

Health History establishes timeframe and baselines – question changes in appetite, weight, stool patterns

- Chief Complaint/present illness/ Age, gender, culture
- Past medical history:
  - Allergies
  - Previous GI disorders
  - Previous abdominal surgery or trauma
  - Chronic laxative use
  - Medications (including OTC meds)
  - Smoking history/Alcohol use
  - Travel history
- Family history: cancer
- Psychosocial history
- Nutritional History
- Elimination Patterns
- Activity/ADLs
- Sleep/Rest

Abdominal Pain

Characteristics:
Deep
Diffuse
Severe
Vaguely situated at midline.

Usually confined to area of affected viscera
Aching or burning
Constant
Sharp
Gnawing
Colicky
Crampy
Radiating

Question relationship to food, alcohol, medications

Relief measures:
milk, antacids, food, position changes, belching, elimination
relationship to intake of medications
relationship to menstrual cycle
accompanying symptoms

Oral Assessment:
Observe for abnormalities – color, pallor, cyanosis, cracking, ulcers, fissures, nodules, tumors, missing or decayed teeth, Swelling, bleeding, inflammation of gums
Have patient remove dentures
Look for lesions, ulcers fissures
Palpate any suspicious areas

Abdominal Assessment = inspection, auscultation, percussion, palpation

4 quadrants - Sequence very important

Inspection

- At eye level
- Note patient's position of comfort – knees flexed? Side-lying? Fetal position?
- Note contour – convex vs. concave
- Cullen's sign – bluish around umbilicus. Indicates hemorrhage or blood in the belly
- Note any pulsations
- Measure abdominal girth (fluid, distention)

Auscultation

- Listen in each quadrant until hear bowel sounds – high pitched gurgles every 5-15 seconds normal
- Listen for full 5 minutes in each quadrant before say 'bowel sounds absent".
- Turn off NG tube before auscultate – **remember to turn back on!!**

Percuss

- Detect fluid/solid or air
- Tympanic sound is normal (air)

Palpate

- Board-like abdomen or muscle guarding – sign of peritonitis
- Subcutaneous emphysema – air under skin leaking from bowel perforation
- Rebound tenderness (Blumberg's Sign) – pain on rebound classic sign peritonitis
- McBurney's Point – 1/3 distance between umbilicus and iliac crest. Pain = appendicitis
- DO NOT palpate any pulsations!

Diagnostic Studies
Focus on Nursing Responsibilities

- CBC: anemia, infection, hemorrhage
- WBCs: infection
- PT: clotting levels
- Electrolytes: altered in many GI issues, need to be replaced
- Liver function studies (LFTs), Amylase, Lipase:
  - ALT = most specific for liver damage
  - Bilirubin - liver, gallbladder, biliary tract

  - AST
  - GGT
  - Alkaline phosphatase - ALT - increased with hepatic
  - Amylase & lipase = pancreas

- Oncofetal Antigens: CEA and CA 19-9

- Fecal analysis – consistency, color, blood, pus, fatty content

- Fecal Culture: detects bacteria

- Ova & parasite (O&P)=detects parasites or their eggs-hookworm, tape worm, pin worm

- Fecal Occult Blood Test (hemoccult, guaiac)

- Gastric Analysis: provides information about secretory function of mucosa; HCl acid & Pepsin
  - Basal Gastric Secretion
  - Gastric Acid Stimulation
  - NPO x 12 hours prior

Other Diagnostic Studies:

- Paracentesis - Void prior to procedure**,** apply drsg after, monitor as post-op VS

- Esophageal manometry: Evaluates quality of esophageal peristalsis - intraluminal pressures, NPO

- Acid Perfusion or Bernstein test: used to differentiate esophageal pain from angina, give HCl acid

- GI Cocktail – determine between GERD and Heart in ED - Maalox, lidocaine, donnatol

Radiology Testing

- Plain film of abdomen: air and fluid
- CXR: gallstones frequently picked up on chest xray.
- CAT Scan/MRI: with or without contrast; either drink or IV
- Upper GI Series/Barium swallow: NPO before, drink barium, laxatives post, stools = white
- Lower GI series/Barium enema: instill contrast, crampy, urge to defecate, stools = white, bowel prep before and low fiber diet
- Abdominal Angiogram: catheter inserted into blood vessel & dye injected to provide information about arterial, capillary, +/or venous network of major abdominal organs.

Endoscopy

- Upper Endoscopy: NPO prior and keep NPO until gag reflex returns
- Colonoscopy: examination of large bowel for polyps, tumors, ulcerative colitis. Bowel Prep before.
- Sigmoidoscopy – scope into sigmoid colon
- ERCP: endoscopic retrograde cholangio-pancreatography; NPO
- MRCP - Magnetic Resonance Cholangiopancreaticography

Nuclear Imaging Scans – radioactive contrast dye

- Gastric Emptying Study
- HIDA: evaluates hepato-biliary function, gallbladder
- Bleeding Scan: used in non-urgent situations to ID GI bleeding sites.

Others
Ultrasounds
Video Capsule Endoscopy- passes naturally within 24 hours

Liver Biopsy – needle inserted through abdominal wall into liver, sample removed for microscopic exam
Potential complications:

- hemorrhage (check PTT prior to)
- chemical peritonitis from bile leak into abdomen
- pneumothorax: improper placement of needle into thoracic cavity

Nursing – position patient on right side for 2 hours after procedure, monitor for hemorrhage.

Community Resources: specialized nursing, home health care, local and national support groups.

Geriatric Considerations:
Changes in functional ability of GI tract
Tooth enamel and dentin wear down
Susceptible to cavities
Periodontal disease = loss of teeth

Decreased sense of taste and smell
Anorexia, lack of interest in eating
Decreased motility, decrease in HCL acid
Liver changes affect metabolism of drugs and hormones
Pancreas function decreases = NIDDM
Increase incidence of gallstones
Economic considerations
    May lack money to buy nutritious foods
Susceptible to constipation, fecal impaction, incontinence, flatulence