



The Primary Care Physician's Approach to Gastrointestinal Complaints in the Elderly


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Objectives




- Identify age-related changes in the gastrointestinal tract
- Identify the most common presentation, diagnosis and treatment of gastrointestinal complaints in the elderly
- Recognize when consultation of a gastroenterologist is warranted for the most common gastrointestinal complaints in the elderly






Importance


- Over 35 million people over 65 years old in US
- 35-40% of geriatric patients will have at least 1 GI symptom / year
- 60-70% of healthcare costs are spent on elderly



Importance



- GI illness in the elderly are a source substantial morbidity, mortality and cost in US
 - Estimated at \$142 billion per year
- GI complaints account for an estimated 10% of general practitioners time/work
- In the last several years, a change in medical climate has emphasized decreased cost






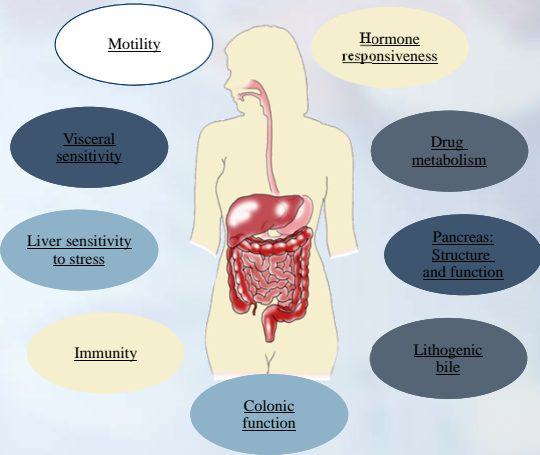
Importance

- Early recognition of patients with benign ailments, will decrease unnecessary testing
 - Decreases cost and risk to patient
- Early recognition of malignant or potentially life threatening illnesses will allow early treatment




Age-Related Changes in the Gastrointestinal Tract






- Many common GI complaints may manifest differently in the elderly than they do in younger patients.

Hall KE, et al. *Gastroenterology*. 2005;129:1305-1338.




Esophagus


- Dysphagia, regurgitation, chest pain, and heartburn are common in elderly
- Presbyesophagus
 - Decreased contractile amplitude
 - Polyphasic waves
 - Incomplete relaxation of LES
 - Esophageal dilation



Esophagus (cont.)




- Dysphagia- history is the most important tool in diagnosis
 - Progressive?
 - Painful?
 - Solids vs liquids
 - Temperature dependent?
 - Regurgitation?
 - Initiation?
- Barium swallow should be initial first test





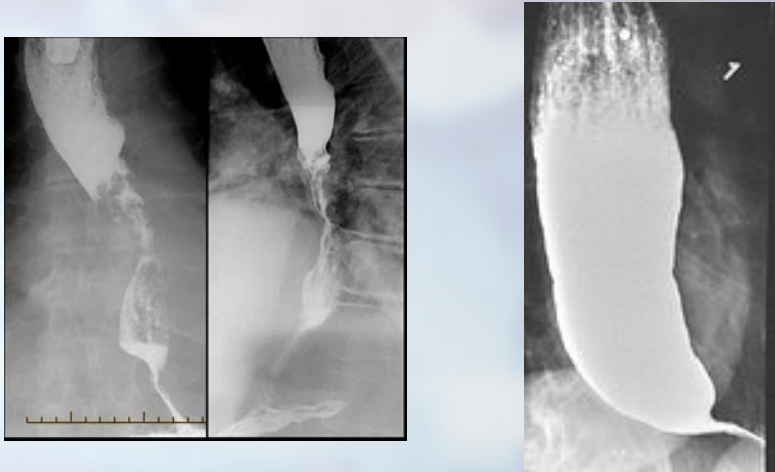
Esophagus (cont.)


- GERD
 - Peptic stricture vs malignancy vs spasm
- Diffuse esophageal spasm
- Achalasia
- Zenker's
- Physiological



Barium swallow

- Esophageal CA
- Achalsia






GERD


- 4th most common ailment seen in primary care
- May start with trial of PPI
- When to get EGD
 - Alarm signs → dysphagia (after BS), blood in stool, cough, weight loss or anemia)
 - Symptoms greater than 5 years → Barrett's







Barium swallow

- Zenker's DC






- Presbyesophagus







GERD- Treatment Options


- Lifestyle modifications
 - Weight loss, avoid trigger foods, smoking cessation, do not eat 3 hrs prior to laying flat, elevate HOB
- H2RA vs PPI
 - > 3 episodes weekly
 - Drug interaction
 - Side effects



Stomach



- Ulcers
 - H. Pylori
 - NSAIDs
- Dyspepsia
- Gastroparesis






Aging and the Stomach



Decreased	Increased
<ul style="list-style-type: none"> • Clearance of liquids from stomach • Perception of gastric distention • Cytoprotective factors • Mucosal blood flow and impaired sensory neuron function in animal models 	<ul style="list-style-type: none"> • Contact time with NSAIDs or other noxious agents in delayed emptying • Tendency for gastric mucosal injury in delayed emptying • Prevalence of <i>H. pylori</i> associated with increased risk of bleeding peptic ulcer, pernicious anemia, and lymphoma







Peptic Ulcer Disease



- Mucosal defenses decrease as we age
- Causative factor exposure increase as we age
 - NSAIDs, H. Pylori, co-morbidities
- Patient at increased risk of ulcer bleeding due to increased usage of anti-coagulant / anti-thrombotic meds







Peptic Ulcer Disease

- **H. pylori**
 - Test and treat strategy
 - Urease breath test
 - Fecal antigen
 - Test of eradication
 - Consider EGD if alarm signs





American College of Gastroenterology first-line *H. pylori* regimens (adult dosing, oral administration)

Patients who are not allergic to penicillin and have not previously received a macrolide	Standard dose PPI* twice daily (or esomeprazole 40 mg once daily) plus clarithromycin 500 mg twice daily, and amoxicillin 1000 mg twice daily for 10-14 days [†]
Patients who are allergic to penicillin, and who have not previously received a macrolide or metronidazole or are unable to tolerate bismuth quadruple therapy	Standard dose PPI twice daily, clarithromycin 500 mg twice daily, metronidazole 500 mg twice daily for 10-14 days [‡]
Patients who are allergic to penicillin or failed one course (above) of <i>H. pylori</i> treatment	Bismuth subsalicylate 525 mg four times daily, metronidazole 250 mg four times daily, tetracycline 500 mg four times daily, standard dose PPI* twice daily for 10-14 days ^Δ OR Bismuth subcitrate 420 mg four times daily, metronidazole 375 mg four times daily, tetracycline 375 mg four times daily [◊] , standard dose PPI* twice daily for 10-14 days ^Δ

H. pylori: *Helicobacter pylori*; PPI: proton pump inhibitor.
 * Lansoprazole 30 mg twice daily, omeprazole 20 mg twice daily, pantoprazole 40 mg twice daily, or rabeprazole 20 mg twice daily.
[†] Eradication rates of 70 to 85 percent.
[‡] Eradication rates of 75 to 85 percent.
^Δ Eradication rates of 75 to 90 percent.
[◊] A combination preparation of bismuth subcitrate-metronidazole-tetracycline is available in the United States (trade name Pylera).


Table adapted from data published in: Chey WD, Wong BCY. American College of Gastroenterology Guideline on the Management of *Helicobacter pylori* Infection. *Am J Gastroenterol* 2007; 102:1808.





Peptic Ulcer Disease


- NSAIDs- Beers list
- International guidelines recommend the use of gastroprotective therapy (PPIs preferred) for at risk patients
 - >65 yo, history of ulcer, serious comorbidities, concomitant treatment with anti-coagulants



Peptic Ulcer Disease



- Treatment
- PPI therapy for minimum 3 months
 - Longer if exposure to causative agent is going to indefinite
- Repeat EGD at 3 months to document healing
 - Neoplasm







Gastroparesis

- Most common upper GI motility disorder in elderly
- Acute causes
 - Viral
 - Metabolic
 - Hyperglycemia
 - Drugs
 - Tricyclic antidepressants, opiates, CCBs



Gastroparesis




- Chronic
 - Drugs- same as previous
 - Diabetes
 - Neurological
 - CVA, MS, Parkinson's
 - Endocrinopathy
 - Surgical- post vagotomy
 - Neoplasm
 - Radiation







Gastroparesis

- Abdominal pain, nausea, vomiting, early satiety
- EGD- rule out neoplasm (don't forget about barium)
- Gastric emptying scintigraphy
- Relevant labs and imaging to look for underlying causes.



Gastroparesis

- Treatment
 - Find and treat underlying cause
 - Lifestyle modifications- small frequent, low-fiber, low fat meals
 - Prokinetics
 - Metoclopramide- side effects prohibit use
 - Other agents are temporary or unavailable in US





Dyspepsia


- Can be a symptom or a diagnosis
- Caused by ulcer, GERD, neoplasm, SIBO and many other ailments
- Nonspecific symptoms- epigastric burning, pain, anorexia, nausea, early satiety, bloating, belching etc



Dyspepsia




- ACG recommends anyone over the age of 55 with dyspepsia undergo EGD
- Functional dyspepsia- presence of one or more of the following: postprandial fullness, early satiation, epigastric pain or burning and no evidence of structural disease (including at upper endoscopy) to explain the symptoms. Symptoms for at least 3 months and started 6 months prior to diagnosis.
 - Rome III







Functional dyspepsia


- Appears to be visceral hypersensitivity
- Treatment- underlying cause
 - PPI
 - Prokinetics
 - Tricyclic antidepressants



Small Intestinal Bacterial Overgrowth



- Prolongation of the intestinal transit time in the elderly population predisposes to SIBO
 - Diabetes
 - Scleroderma
 - Structural lesions- strictures, adhesions, diverticula
 - Decreased acidity- gastritis, surgery, PPI





Small Intestinal Bacterial Overgrowth

- Symptoms nonspecific
 - Fatigue, nausea, vomiting, diarrhea, weight loss, bone pain, arthralgia
 - If severe, signs of malabsorption present
- Diagnosis- clinical
 - Jejunal aspirate
 - Hydrogen breath test
 - Schilling test



Small Intestinal Bacterial Overgrowth


- Treatment- underlying cause
 - Diet- high fat and low carbohydrate
 - Prokinetics
 - Antibiotics- Rifaxamin, fluoroquinolones
 - Often require repeat course
 - Probiotics- not helpful







Colon


- OLD PEOPLE FIXATE ON THEIR BOWELS!!!!!!!
- Too often, not enough, too loose, too hard, too much, not enough, smells different, looks different, explosive, like peanut butter, and on and on



Constipation




- 26-24% of women and 16-30% of men over age of 65
- Large differential
 - Chronic constipation
 - Slow transit constipation
 - Pelvic floor dysfunction (dysynergia)
 - Medications
 - Obstruction







Constipation


- Constipation is not a physiologic consequence of normal aging, however, decreased mobility and other comorbid medical conditions may contribute to its increased prevalence in older adults



Age-related changes in colonic motility




- Reductions in myenteric neurons, calcium influx, and tensile strength of the collagen/muscle fibers
- No clear effect of age on colonic transit, as many constipated older patients have normal transit times.







Age related changes to Ano-rectum


- Reduced rectal compliance
- Impaired rectal sensation
- Decreased sphincter pressures



Constipation



- Definitions
 - Physician → infrequent BMs, less than 3 / week
 - Patient → hard stools, incomplete evacuation, abdominal discomfort, bloating, straining, sense of anorectal blockage requiring manual maneuvers





Constipation


- Prevalence → 33% over age of 60
- 80% of those patients have slow transit constipation, dyssynergic defecation or combination



Constipation Workup



- H+P- rectal exam
- CBC with consideration of CMP, TSH (cost effective?)
- Colonoscopy → alarm features (blood, anemia, weight loss, pain, family history of CRC)
 - Remember screening / surveillance guidelines





Constipation Workup


- If patient not colonoscopy candidate consider barium enema
- Xray
- Sitz marker study
- Anorectal function / manometry



Constipation Treatment

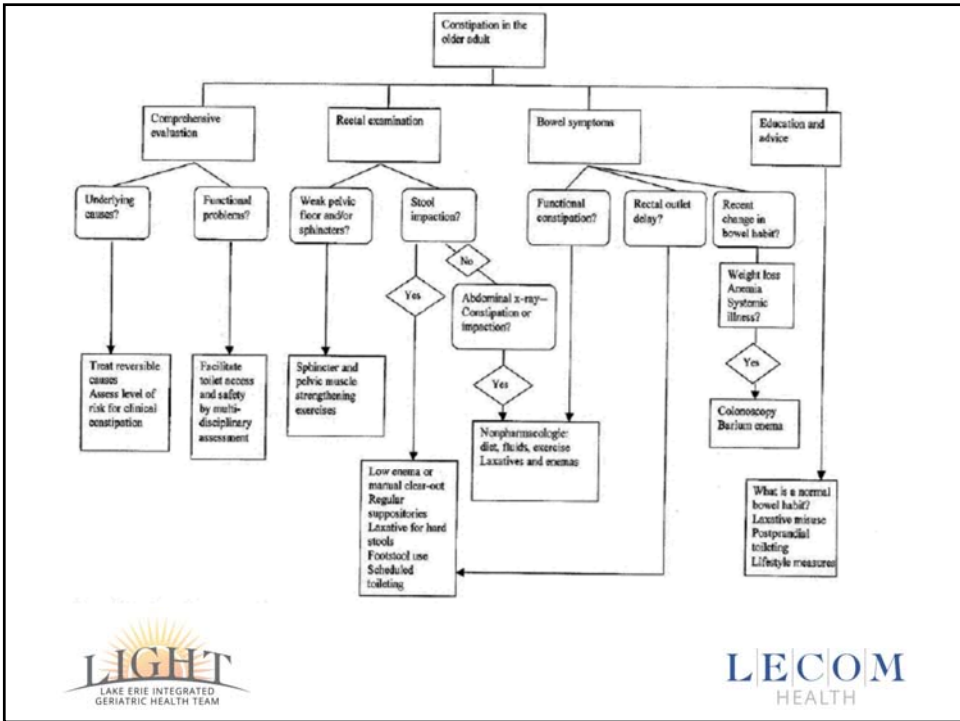


- Dietary fiber, bulking agents, osmotic and stimulant laxatives, stool softeners, prokinetics, biofeedback, surgery
- Review meds to see if any adjustments can be made
 - CCBs, tricyclic anti-depressants, anti-cholinergics, opiates etc.






Constipation Complications




- Fecal incontinence (often perceived as diarrhea)
- Encopresis *****
- Impaction
- Stercoral ulcerations
- Prolapse







Diarrhea


- Loose stools of more than 200 g per day in a least 3 bowel movements per day
- Approximately 85% of all mortality associated with diarrhea involves the elderly



Causes of Diarrhea in the Elderly



Common Causes	Less Common Causes
Infections	Celiac disease
Drug-induced diarrhea	Inflammatory bowel disease
Malabsorption	Thyrotoxicosis
Fecal impaction- encoparesis	Scleroderma with systemic manifestations
Colonic carcinoma	Whipple's disease
Small bowel bacterial overgrowth	Amyloidosis with small bowel involvement
Diabetic diarrhea	Pancreatic insufficiency

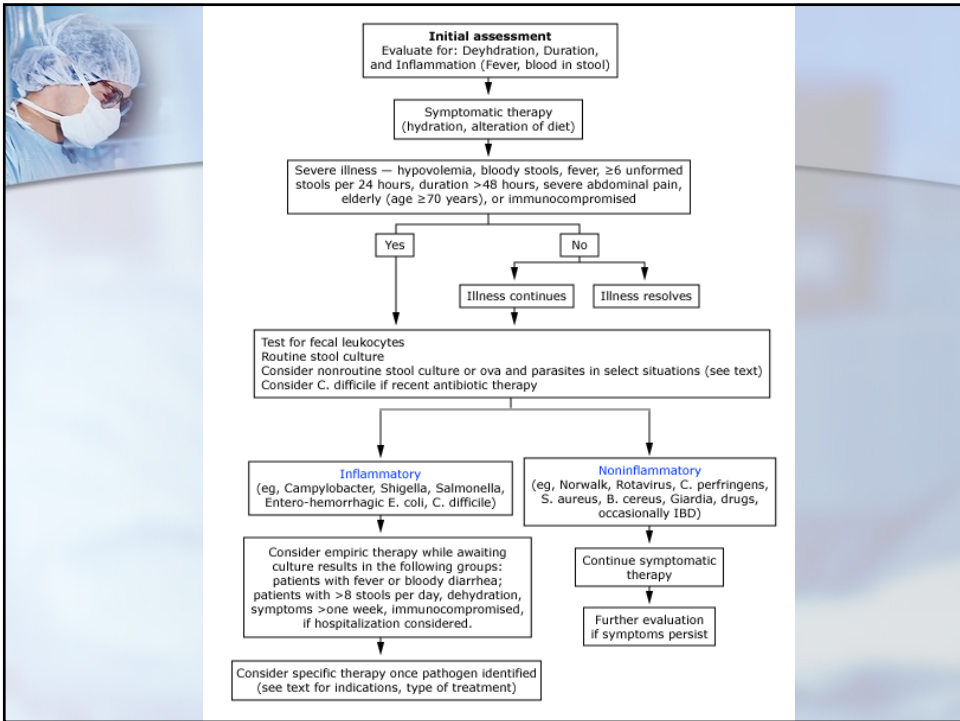




Acute diarrhea

- Initial assessment of fluid status is of utmost importance
- Most commonly infection though very little increased risk than young

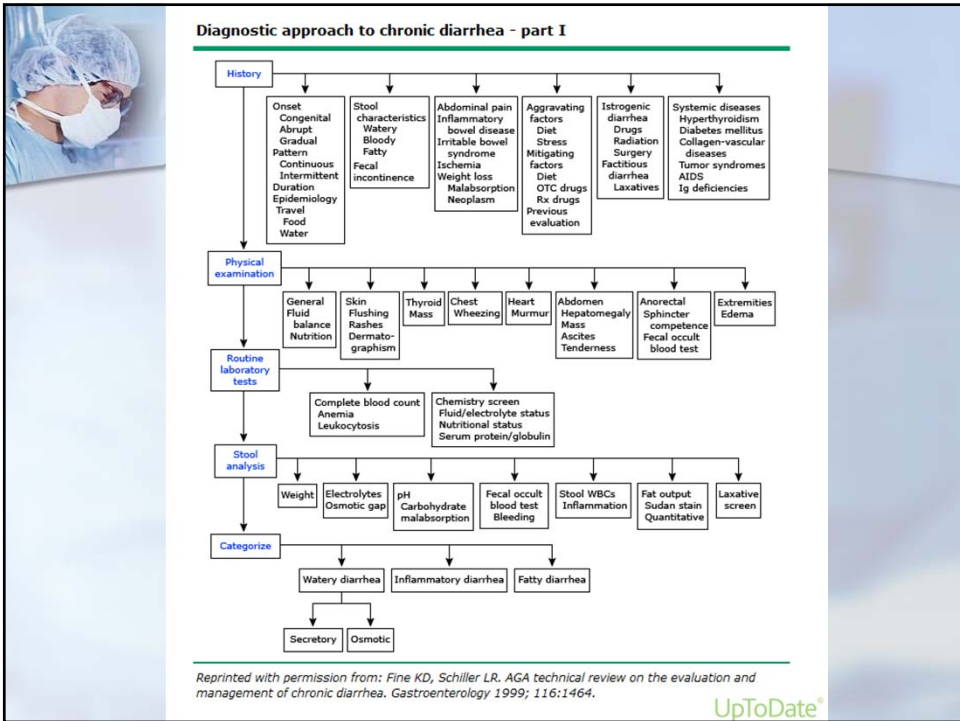


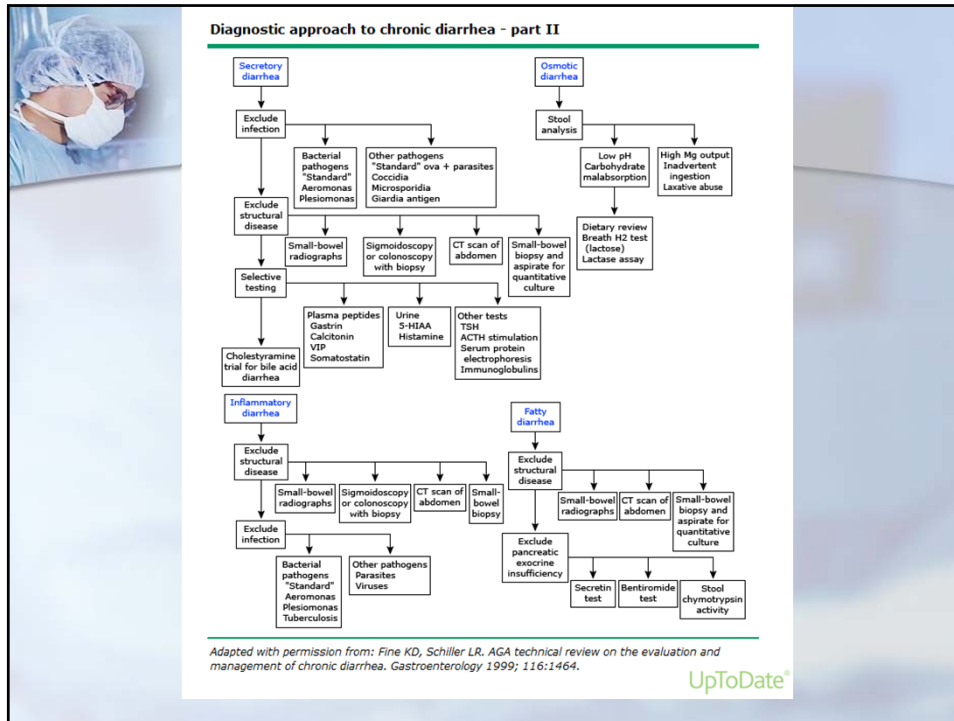


Chronic diarrhea

- Defined as diarrhea that lasts for 4 weeks
- The approach to chronic diarrhea in the elderly is generally the same as in younger adults





Thank you...

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