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

- GI illness in the elderly are a source of 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.

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
- Achalasia
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**
- Clearance of liquids from stomach
- Perception of gastric distention
- Cytoprotective factors
- Mucosal blood flow and impaired sensory neuron function in animal models

**Increased**
- Contact time with NSAIDs or other noxious agents in delayed emptying
- Tendency for gastric mucosal injury in delayed emptying
- Prevalence of *H. pylori* 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)

<table>
<thead>
<tr>
<th>Patients who are allergic to penicillin and have not previously received a macrolide</th>
<th>Standard dose PPI* twice daily (or esomeprazole 40 mg once daily), clarithromycin 500 mg twice daily, and amoxicillin 1000 mg twice daily for 10-14 days†</th>
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<tbody>
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<td>Patients who are allergic to penicillin, and who have not previously received a macrolide or metronidazole or are unable to tolerate bismuth quadruple therapy</td>
<td>Standard dose PPI* twice daily, clarithromycin 500 mg twice daily, metronidazole 500 mg twice daily for 10-14 days†</td>
</tr>
<tr>
<td>Patients who are allergic to penicillin or failed one course (above) of H. pylori treatment</td>
<td>Bismuth subsalicylate 323 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† OR Bismuth subsalicylate 420 mg four times daily, metronidazole 275 mg four times daily, tetracycline 375 mg four times daily: standard dose PPI* twice daily for 10-14 days†</td>
</tr>
</tbody>
</table>

* PPI: proton pump inhibitor.
† Eradication rates of 70 to 85 percent.
‡ Eradication rates of 75 to 80 percent.
§ A combination preparation of bismuth subsalicylate-metronidazole-tetracycline is available in the United States (trade name Pylera).

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

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
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

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**Constipation**

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

- 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
Consipation

- 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, tricylcic anti-depressants, anti-cholinergics, opiates etc.
Constipation Complications

- Fecal incontinence (often perceived as diarrhea)
- Encoparesis
- Impaction
- Stercoral ulcerations
- Prolapse
Diarrhea

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

Causes of Diarrhea in the Elderly

<table>
<thead>
<tr>
<th>Common Causes</th>
<th>Less Common Causes</th>
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<tbody>
<tr>
<td>Infections</td>
<td>Celiac disease</td>
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<tr>
<td>Drug-induced diarrhea</td>
<td>Inflammatory bowel disease</td>
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<tr>
<td>Malabsorption</td>
<td>Thyrotoxicosis</td>
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<tr>
<td>Fecal impaction- encoparesis</td>
<td>Scleroderma with systemic manifestations</td>
</tr>
<tr>
<td>Colonic carcinoma</td>
<td>Whipple's disease</td>
</tr>
<tr>
<td>Small bowel bacterial overgrowth</td>
<td>Amyloidosis with small bowel involvement</td>
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<tr>
<td>Diabetic diarrhea</td>
<td>Pancreatic insufficiency</td>
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</table>
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...

- Drossman DA. The functional gastrointestinal disorders and the Rome III process. Gastroenterology. 2006;130:1377-1390
- Firth M, Prather CM. Gastrointestinal motility problems in the elderly patient. Gastroenterology. 2002;122; 1688-1700