Common Gastrointestinal (GI) Problems in Women

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Common GI problems in Women

- Irritable Bowel Syndrome
- Gallstones
- Colon cancer
- Celiac disease
- Inflammatory Bowel Disease
Anatomy of the GI tract

- Parotid gland
- Salivary gland
- Esophagus
- Liver
- Gallbladder
- Stomach
- Pancreas
- Large intestine (Colon)
- Small intestine
- Appendix
- Rectum
- Anus
Stomach

- Breaks down food
- Mixes food with hydrochloric acid and protein-digesting enzymes
Liver, gallbladder and pancreas

- Bile is produced by the liver and stored in the gallbladder
- Bile is important for the absorption of fats and fat-soluble vitamins (A, D, E, K)
- Pancreatic enzymes break down proteins, fats and carbohydrates
- Bicarbonate neutralizes acids

WebMD.com
Small intestine

Digestion and absorption of
- Simple carbohydrates
- Peptides and amino acids
- Fatty acids
- Electrolytes
- Vitamins
- Trace elements
Colon

- Absorbs water
- Bacteria that metabolize undigested polysaccharides (fiber) into short-chain fatty acids
- Bacteria that produce vitamin K
There is normal inflammation in the gut

Inflammatory cells in the lining of the gastrointestinal tract protect the body from harmful organisms and their toxic products
There is normal inflammation in the gut

Inflammatory cells in the lining of the gastrointestinal tract protect the body from harmful organisms and their toxic products.

A state of controlled, low-intensity warfare exists in the GI tract.
Tools to evaluate the GI tract
Ileocecal valve
Normal villi
Upper Endoscopy

Erosive esophagitis

Barrett’s esophagus

Duodenal ulcer

Gastric ulcer
Computed Tomography (CT)
Magnetic Resonance Imaging (MRI)

Ultrasound

http://www.webmd.com/digestive-disorders/abdominal-ultrasound-showing-the-gallbladder
Irritable Bowel Syndrome (IBS)

- Affects 15% of adults in the United States
- Women are diagnosed 3 times as often as men
- Abdominal pain or discomfort
- Altered bowel habits
  - No infection
  - No inflammation
  - No cancer
  - No obstruction
IBS Presentation

• Three subtypes
  – Diarrhea-predominant
  – Constipation-predominant
  – Alternator

• Symptoms are chronic and relapsing-remitting
• Life expectancy is that of general population
• Symptoms tend to be stable
IBS Mechanisms

• Abnormal contractions
• Visceral hypersensitivity
• Processing abnormalities in the central nervous system

• Symptoms modulated by
  – Stress
  – Menstrual cycle
IBS Evaluation

• No diagnostic test
• CLINICAL diagnosis

• Initial tests: blood counts, chemistry, erythrocyte sedimentation rate, and stool test for occult blood
• Other tests: Thyroid, bacteria, parasites

• Rule out:
  – Lactose malabsorption
  – Celiac disease
  – Gynecologic pathology
Red Flags

• Any of the following warrants evaluation for organic causes:
  – Age greater than 50
  – Unexplained weight loss
  – Anemia
  – Gastrointestinal bleeding
  – Persistent or progressive symptoms
  – Family history of colon cancer
IBS Management

• Education about mechanisms (brain-gut axis, stress) and coping

• Dietary modifications
  – Identify symptoms related to specific foods
  – Avoid gas-producing foods
    (eg, beans, onions, celery, carrots, raisins, bananas, apricots, prunes, Brussels sprouts, wheat germ, pretzels, and bagels)
  – Diet low in fermentable oligo-, di-, and monosaccharides and polyols (FODMAPs)
  – In select cases, avoid lactose and gluten
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<thead>
<tr>
<th>Category</th>
<th>Type</th>
<th>Examples</th>
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<tr>
<td>F</td>
<td>Fermentable</td>
<td>Wheat, barley, rye, onion, leek, white part of spring onion, garlic, shallots, artichokes, beetroot, fennel, peas, chicory, pistachio, cashews, legumes, lentils, and chickpeas</td>
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<td>O</td>
<td>Oligosaccharides</td>
<td>Fructans, galacto-oligosaccharides</td>
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<td></td>
<td>Disaccharides</td>
<td>Lactose</td>
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<td></td>
<td>Monosaccharides</td>
<td>&quot;Free fructose&quot; (fructose in excess of glucose)</td>
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<td></td>
<td>Polyols</td>
<td>Sorbitol, mannitol, maltitol, and xylitol</td>
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IBS Management

- **Diarrhea-predominant**
  - Fiber supplementation
  - Antidiarrheal medications (Loperamide)
  - Alosetron (5-hydroxytryptamine-3 receptor antagonist)

- **Constipation-predominant**
  - Fiber
  - Linaclotide (guanylate cyclase agonist)
  - Osmotic laxatives
  - Lubiprostone (chloride channel activator)

- **Pain and bloating**
  - Anticholinergics
  - Tricyclic antidepressants
  - selective serotonin reuptake inhibitors

- **Rifaximin (antibiotic)**
Gallstones

- Gallstones are found in at least 10% of the population
- 80% of cases are without symptoms and will not develop complications
- Complications
  - Biliary colic
  - Cholecystitis
  - Pancreatitis
- Risk factors (the five “F’s”)
  - Female gender
  - Fat
  - Forty (and older)
  - Fertile (pregnant)
  - Fair skinned
  - Other: Rapid weight loss, diabetes, inflammatory bowel disease, cirrhosis, and immunocompromised state
Colon Cancer

• Risk of colon cancer is 5% (90% after age 50)

• Colon cancer arises from benign polyps
  – Colonoscopy allows identification and resection of polyps
  – Colonoscopy has been shown to decrease the incidence of colon cancer
Colon Cancer

• **Risk factors**
  – Obesity, red and processed meat, tobacco, excessive alcohol, diabetes
  – Family history of colon polyps and colon cancer
  – Hereditary syndromes
  – Colitis
  – African American race:
    ACG and ASGE recommend that screening begin at age 45 in African Americans

• **Symptoms**
  – Change in bowel habits, rectal bleeding, anemia
  – In advanced cases, weight loss and obstruction

• **GET SCREENED !!!**
Celiac Disease

- **Autoimmune** disorder that can occur in **genetically predisposed** people where the ingestion of **gluten** leads to damage in the small intestine

- Gluten is a general name for the proteins found in wheat, rye, barley

- In the United States, prevalence is:
  - 0.75% in the not-at-risk groups
  - 1.8% in symptomatic patients
  - 4.5% in first-degree relatives
  - 2.5% in second-degree relatives

The ratio of clinically diagnosed to undetected CD is approximately 1:10
Small Bowel Damage in Celiac Disease
Small Bowel Damage in Celiac Disease
Celiac Disease

- 1:1 sex ratio in children
- 2:1 female:male ratio in adulthood
- 20% of cases occur in people older than 60 years

Risk factors
- Northern European ancestry
- IgA deficiency
- Insulin-dependent diabetes
- Turner syndrome
- Trisomy 21
- Dermatitis herpetiformis

Presentations
- Abdominal pain, bloating, “IBS”, lactose intolerance
- Fatigue, pubertal delay, infertility
- Anemia, metabolic bone disease, abnormal liver tests
- Diarrhea, weight loss, malnutrition
- Small bowel lymphoma, small bowel adenocarcinoma, refractory sprue

Treatment: Gluten-free Diet
Inflammatory Bowel Diseases (IBD)

• Disorders of **chronic** bowel inflammation
• The IBDs are **not**
  – Food allergies       – Infections
  – Food sensitivities   – Irritable bowel syndrome

• Affect more than one million Americans
• Two main types
  – Ulcerative Colitis
  – Crohn’s disease
Inflammatory Bowel Diseases (IBD)

- Disorders of chronic bowel inflammation
  - Controlled inflammation ("a good thing") becomes UNCONTROLLED inflammation ("too much of a good thing")
Types of IBD

ULCERATIVE COLITIS (UC)
- Continuous, inflammation of the lining (mucosa) of the colon
- Colon only

CROHN’S DISEASE (CD)
- Patchy, full-thickness inflammation
- Mouth to anus involvement, mostly lower small intestine and colon
- Fistulas, abscesses, strictures
- Worsens with smoking

Indeterminate Colitis
10%-15%
Ulcerative Colitis

1. Normal or inactive disease
2. Mild disease (erythema, decreased vascular pattern, mild friability)
3. Moderate disease (marked erythema, absent vascular pattern, friability, erosions)
4. Severe disease (spontaneous bleeding, ulcerations)
Crohn’s disease
How do we treat IBD?

• Killing inflammatory cells
• Inactivating inflammatory cells
• Preventing cells from getting activated
• Restoring cells that help control inflammation
• Preventing cells from finding their way to the gut
• Restoring the normal balance of bacteria
• Preserving the integrity of the lining of the gut
• Improving healing of the gut lining
Thank you