Inflammatory Bowel Diseases

• Ulcerative Colitis
• Crohn’s Disease
• Diverticulitis
• Irritable Bowel Syndrome*

Common Factors

• Chronic/episodic
• Uncertain cause
• Genetic component
• Inflammation
• Alterations in epithelial cell function

Ulcerative Colitis

• From rectum into colon
• Demographics
  – Onset 20 - 40
  – Family history
  – Jewish descent
  – More prevalent in white and northern European
• Dietary component
• Bacterial or viral origin?
• Immunologic component
  – IgG antibodies
  – T cells

Pathophysiology of UC

• Primary Lesions
  – Limited to mucosa
  – Most severe in rectum/sigmoid colon
  – Inflammation and leukocytic infiltration
• Secondary lesions
  – Erosion of primary lesion: hemorrhage
  – Crypt abscesses
    • Necrosis
    • Edema and thickening of muscularis: narrowed lumen

Clinical Manifestations of UC

• Intermittent remission and exacerbation
  – Diet
  – Stress
  – Watery diarrhea
  – Bleeding
  – Pain
  – Urge to defecate
  – Purulent mucus
• Mild
  – Minimal symptoms
  – Limited Colon involvement
Clinical Manifestations of UC

- Severe
  - Entire colon
  - Fever, tachycardia
  - 10 - 20 BMs/day
  - Dehydration
  - Weight loss
  - Complications
  - Toxic Megacolon
  - Anal fissures
  - Hemorrhoids
  - Abscesses
  - Hemorrhage - shock

Ulcerative Colitis

- Extraintestinal symptoms (5 - 15%)
  - Polyarthritis and sacroilitis
  - Osteoporosis (also r/t steroids)
  - Gall stones
- Evaluation
  - History & Physical
  - ABD radiology
  - Labs & stool cultures
  - Colonoscopy

Treatment of UC

- Treatment based on severity
- Diet: avoid triggers; increase fiber
- Stress management
- Drugs
  - Steroids
  - Salicylates
  - Immunosuppression
- Severe
  - Hospitalization
  - TPN
  - Surgical resection/colostomy

Crohn’s Disease

- Affects any part of the GI tract
  - Mouth to Anus
  - Distal small intestine
  - Proximal large intestine
- Genetic factors
  - Macrophage activation
- Demographics
  - Younger onset (teens)

Pathophysiology of Crohn’s

- Inflammation
  - Submucosa
  - Mucosa
  - Serosa
- Skip lesions
- Longitudinal and transverse fissures
- Granulomas
- Fistulas

Manifestations of Crohn’s

- Usually starts as “irritable bowel”
- Diarrhea
- Bypass fistulas
- Abscesses
- Malabsorption
- Psychosocial issues
Crohn’s Disease
- Eval & Treatment
  - Similar to UC
  - Surgery

Diverticular Disease
- Diverticulosis
  - Asymptomatic
  - Decreased fiber
  - Increased intracolonic pressure
  - Genetic
- Diverticulitis
  - Diarrhea
  - Constipation
  - Distension
  - Abcess or perforation
    - Fever
    - Pain
    - Leukocytosis
    - Septic shock
    - Death

Diverticulosis/itis
- Evaluation
  - Usually found by accident
- Treatment
  - Fiber
  - Avoid nuts***
  - Probiotics
  - Antibiotics
  - Surgery

Irritable Bowel Syndrome
- Functional “Disease”
  - Diarrhea
  - Constipation
  - Mixed
- Demographics
- Evaluation
  - Exclusion

IBS
- Treatment
  - Triggers
  - Fiber
  - Exercise
  - Medications

Nonspecific IBS Drugs
- Antispasmodics
  - Hyoscyamine
  - Dicyclomine (Bentyl)
- Bulk-forming agents
- Antidiarrheals
- TCAs
IBD Drugs

- Salicylates
  - Unsure mechanism
  - Reduces inflammation
  - Reduces symptoms
- Glucocorticoids
- Immunomodulators
  - Azathioprine & Mercaptopurine
  - Cyclosporine
  - Infliximab

Steel Cut Oatmeal

- Ingredient list
  - 1 tablespoon butter
  - 1 cup steel cut oats
  - 3 cups boiling water
  - 1/2 cup whole milk
  - 1/2 cup plus 1 tablespoon low-fat buttermilk
  - 1 tablespoon brown sugar
  - 1/4 teaspoon cinnamon

Steel Cut Oatmeal

- Directions
  - In a large saucepot, melt the butter and add the oats. Stir for 2 minutes to toast. Add the boiling water and reduce heat to a simmer. Keep at a low simmer for 25 minutes, without stirring.
  - Combine the milk and half of the buttermilk with the oatmeal. Stir gently to combine and cook for an additional 10 minutes. Spoon into a serving bowl and top with remaining buttermilk, brown sugar, and cinnamon.