Colitis: Causes

- **Infection** (viral, bacterial, fungal, parasitic)
- Toxicity (drugs)
- Allergy
- **Ischemia**
- Radiation
- Graft-vs-host disease
- **Idiopathic**

Idiopathic Inflammatory Bowel Disease (IBD)

- Incidence: 1-2 million Americans
- Frequent in Jews (Ashkenazi)
- Genetic predisposition:
  - 1st degree family members 30-100 times; twin studies
- Candidate genes on chromosomes 12 and 16
- Interaction of epithelial factors (trefoil factors) and immune system factors (interleukins, IFN-gamma, TNF)

Idiopathic Inflammatory Bowel Disease

**Definition**

- Chronic relapsing inflammatory disease
- Unknown etiology
- Exacerbations
- Remissions
- Bloody diarrhea

Crohn’s Disease

**Classification**

- Terminal ileitis (40%)
- Ileocolitis (30%)
- Colitis (30%)
- Upper GI Crohn’s disease (2 - 20%)
**Crohn’s Disease**

**Macroscopic Pathology**

- Segmental
- Skip areas
- Stiff thickened bowel wall
- Linear ulcers
- Cobblestone mucosa
- Creeping fat
- Rectal sparing

**Crohn’s Disease**

**Microscopic Pathology**

- Necrosis of individual epithelial cells
- Cryptitis and crypt abscesses
- **Aphthoid ulcers**
- Fissures
- **Patchy** chronic inflammation, **transmural**
- **Granulomas**
- Crypt irregularity
- Metaplasia: Paneth cell, **pyloric**
Crohn’s Disease
Complications

- Stricture
- Fistulae
- Dysplasia
- Cancer (4 - 20x)
Ulcerative Colitis

Classification

- Ulcerative proctitis / proctosigmoiditis (60 - 80%)
- Left-sided colitis (30 - 40%)
- Extensive colitis / pancolitis (10 - 20%)

Macroscopic Pathology

- Diffuse colitis, usually most marked distally
- Red friable mucosa
- Broad-based ulcers
- Pseudopolyps

- Shortened colon
- Backwash ileitis
Ulcerative Colitis

Microscopic Pathology

- Diffuse mucosal inflammation (plasma cells, lymphocytes, eosinophils, neutrophils)
- Cryptitis
- Crypt abscesses
- Ulcers
- Crypt irregularity and atrophy
- Metaplasia: Paneth cell

Ulcerative Colitis

Complications

- Toxic megacolon
- Dysplasia
- Carcinoma:
  - 2% after 20 years of left-sided colitis
  - 10% after 20 years of pancolitis
  - 15 - 20% after 30 years of pancolitis
IBD: Differential Diagnosis

- Infectious colitis
- Ischemic colitis
- Microscopic colitis
- Irritable bowel syndrome (IBS)
Microscopic Colitis

- **Lymphocytic colitis**: lymphocytic infiltration of surface and crypt epithelium, increased inflammatory cells in the lamina propria
- **Collagenous colitis**: same as above plus increased subepithelial collagen
- **Clinical**: watery diarrhea, endoscopically normal colon, middle aged adults
- **Cause**: unknown, association with celiac disease, multiple drugs, family hx of intestinal diseases

Diarrhea in AIDS

- Cryptosporidiosis
- Microsporidiosis
- Isosporiasis
- Cyclosporiasis
- CMV colitis
- MAC enterocolitis
- HIV enteropathy
Extra-intestinal Manifestations

1. Manifestations the severity of which correlate with severity of bowel disease
   a. Colitic arthritis: migratory and transient, usually not deforming; knees, hips, ankles, elbows, wrists
   b. Skin lesions: Pyoderma gangrenosum and erythema nodosum
   c. Ocular lesions: uveitis and episcleritis
   d. Calcium oxalate kidney stones

2. Manifestations the severity of which doesn’t correlate with severity of bowel disease
   a. Sacroiliitis and ankylosing spondylitis: progressive and crippling; not ameliorated by colectomy or improvement of bowel disease
   b. Sclerosing cholangitis: leads to biliary cirrhosis; not improved by colectomy