Benign Colorectal Conditions

Nishit S. Shah, MD
VCU School of Medicine

Diverticular disease - definitions

- Diverticulosis - presence of diverticula
- Diverticulitis - presence of inflammation and infection
- Diverticular disease - full spectrum of disease

Diverticulosis – endoscopic appearance

Diverticulosis – radiological appearance

Clinical presentation

- Diverticulosis – incidental finding; ? IBS
- Diverticulitis – related to spectrum of disease
  - history
  - LLQ pain (93 - 100%); ? RLQ pain if sigmoid redundant
  - fever (57 - 100%) – high temp if peritonitis/abscess
  - nausea / vomiting – not common
  - change in bowel habit
  - urinary sx - ? inflammation near bladder; ? fistula
  - previous attacks
  - rectal bleeding not common; not massive

Clinical presentation

- Diverticulitis – related to spectrum of disease
  - abdominal tenderness – localized vs. diffuse
  - fever – more common with complicated disease
  - abdominal mass – LLQ; up to 1/3 of patients
  - ? systemic signs – sepsis, circulatory dysfunction
Investigations

- Routine laboratory tests
  - CBC → WBC (69-83%)
  - UA
- Radiological studies
  - plain AXR
    - ? ileus, ? dilated colon, ? free air
- If diagnosis is clear no further tests are needed in uncomplicated disease
  - BUT 34-67% misdiagnosis rate

Investigations - radiology

- CT scan – diagnostic modality of choice
  - CT findings
    - pericolic fat streaking (88%)
    - diverticula (73%)
    - wall thickening
    - abscess/phlegmon

Classification

- Uncomplicated
  - symptomatic uncomplicated
  - recurrent symptomatic
  - 85%
- Complicated – 15%
  - hemorrhage – uncommon in diverticulitis
  - stricture → LBO
  - fistula
  - SBO – post-inflammatory adhesions
  - perforation – abscess, peritonitis

Uncomplicated diverticulitis - medical management

- Treatment
  - bowel rest + antibiotics
  - outpatient if –
    - mild disease – no systemic symptoms/signs
    - able to tolerate limited diet
    - if not immunosuppressed – steroids, ? diabetes
  - inpatient if –
    - significant pain
    - localized peritoneal signs

Acute diverticulitis – indications for operation

- 2 episodes of uncomplicated diverticulitis requiring hospitalization
- 1 episode of uncomplicated diverticulitis in immunocompromised patient
  - including diabetes, AIDS, renal failure
- 1 episode of complicated diverticulitis
Management of complicated diverticulitis

- Fistula – 12% of pts
- Colovesical most common – 65%
  - 2/3 have urinary sx – most commonly pneumaturia
  - dx – CT, BE, cystoscopy, urine culture
  - tx – colon resection + 1° anastomosis
    - en bloc resection if ? malignant etiology
- Colovaginal – 2nd most common
  - virtually never occurs with uterus in situ
- Also – colocutaneous, coloenteric, coloureteric
Lower GI Bleeding

- Upper vs Lower – distal to ligament of Treitz
  - diverticulosis – not –itis – usually proximal
  - angiodysplasia – usually on right
  - cancer, IBD, ischemic, radiation

Lower GI Bleeding

- Resuscitate – isotonic fluids/blood
  - type and cross, r/o coagulopathy
- R/O upper GI source – NG, EGD
- R/O anorectal source – ano-proctoscopy

Lower GI Bleeding

- Diagnosis
  - colonoscopy
  - bleeding scan (0.1 cc/min)
  - angiography (0.5 cc/min)
- 75 % stop spontaneously
- Surgery - if massive (> 6U PRBCs/24 h), if unable to stop through c-scope, angio.
  - try to localize in order to perform "guided" resection
  - if unable to localize → subtotal colectomy

Lower GI Bleeding

- Pseudomembranous colitis
  - Caused by gram +ve anaerobe
    - C. difficile
  - Prior Abx use; esp in immunosuppressed
  - Tetrad – fever, watery diarrhea, abdominal pain, ↑WBC
Pseudomembranous colitis

- Toxins A and B – B detected in ELISA
- Dx – stool culture for type B cytotoxin; flex sigmoidoscopy → yellow plaques
- Differ dx – IBD (more chronic hx), ischemic colitis (bloody diarr)

Ulcerative colitis

- Diffuse inflammatory disease limited to (sub)mucosa of colon and rectum
- Etiology unknown
- Sxs – diarrhea, abdom pain – not severe, rectal bleeding
- 10% may be toxic/fulminant

Ulcerative colitis - diagnosis

- BE
  - in acute phase – edema, ulceration, ? thumb-print
  - in chronic phase – fibrosis, loss of haustra, pattern, shortening especially of L side, strictures
- Endoscopy
  - loss of normal vascular pattern; contact bleeding; granularity; superficial ulcers, pseudopolyps
  - presence of disease from the dentate line cephalad in continuity with proximal involvement

Pseudomembranous colitis

- Tx – stop Abx, PO (or IV) MNZ, PO vancomycin (only works enterally)
- 3-20% develop toxic state – 65% of these will require surgery

Ulcerative colitis

- Always has rectal disease
- “Backwash ileitis” in 10%
- Signs - non-specific in non-fulminant disease. If toxic – abdominal distension. If perforation – peritonitis
Ulcerative colitis - diagnosis

Ulcerative colitis - treatment

- Medical treatment
  - routes of delivery: topical, oral, intravenous
  - medications
    - 5-ASA compounds
    - corticosteroids
    - immune-modulating agents - Azathioprine and 6-MP; Cyclosporine

Ulcerative colitis

- Relationship to carcinoma
  - risk with pancolonic disease, age of onset, duration (> 10y), active disease/severity
  - incidence of CRC in UC - 2 - 5%
  - most common site - rectum

Ulcerative colitis

- Indications for surgery
  - fulminant (toxic) UC
  - toxic megacolon
  - frank perforation - usually with toxic dilatation
  - refractory to medical tx - most common
  - extracolonic manifestations - PG, EN, LFT abnorm., joint/eye abnorm
  - malignant degeneration - development of dysplasia
Crohn’s disease

- Chronic, relapsing, **transmural**, **segmental**, **granulomatous** disease that can affect any portion of GI tract
- Etiology unknown
- Sxs – diarrhea (**non-bloody**), abdom pain, fever, malaise, malnutrition, **anorectal**
- Most common site ileocolic

Crohn’s disease - diagnosis

- History and Physical
- UGI – strictures, dilated areas, thickened bowel
- BE – thickened bowel, ulcers, longitud fissures
Crohn's disease - diagnosis

- Endoscopy – normal rectum in 40-50%, aphthous ulcers, fissures, cobblestoning, patchy
- Operative – thickened mesentery, creeping fat, serositis, thickened bowel

Crohn's disease - complications

- Obstruction
- Perforation → abscess, → fistulas
- Carcinoma – less common vs UC
- Toxic megacolon – in Crohn's colitis

Crohn's disease - treatment

- Medical treatment
  - routes of delivery: topical; oral; intravenous
  - medications
    - 5-ASA compounds
    - corticosteroids
    - antibiotics – MNZ, ciprofloxacin
    - immune-modulating agents - Azathioprine and 6-MP; Cyclosporine; infliximab (anti-TNF-α)
Crohn’s disease - treatment

- Indications for surgery – in 70-75% of pts
  - stricture, chronic obstruction,
  - abscess or fistula,
  - bleeding
  - extracolonic complications - PG, PAN, uveitis
  - disease intractability – most common
  - emergency indications
  - remember – SURGERY NOT CURATIVE (cf UC)

Anorectal disorders

- Hemorrhoids
  - anatomy
    - 3 sinusoid cushions, not veins. LL, RAL, RPL. Functions – cushion, lining
  - etiology
    - constipation; pregnancy; ↑ IS dysfunc; aging. Not portal HTN
  - classification
    - external (distal to dentate line); internal (proximal to dentate line), graded 1-4

Hemorrhoids

- symptoms
  - pain, mucus discharge, bleeding
- exam
  - rectal, anoscopy. if 40+ y consider full colon evaluation
- treatment
  - non-operative
    - diet (↑ fibre), soaking
  - operative
    - banding, sclerotx, hemorrhoidectomy

Anorectal disorders

- Fissure – tear → pain, rectal bleeding
  - usually in midline – esp post midline
  - if lateral - ? AIDS, Crohn’s, lymphoma, STD
- Treatment
  - non-operative: high-fiber, soaks, stool softeners
    - NTG ointment – relaxes sphincter spasm
  - operative
    - lateral sphincterotomy, fissurectomy

Anal fissure
Anorectal disorders

- Perirectal abscess
  - usually cryptoglandular
  - also Crohn’s, actinomycosis, TB
- Classification
  - perianal, ischiorectal, intersphincteric, supralevator
- Pain, swelling, drainage
- Treatment – I/D

Perirectal abscess

Fistula-in-ano

- Fistula-in-ano
  - usually sepsis arising at the dentate line
- Classification
  - inter- (70%), trans-, supra-, extra-sphincteric
  - Goodsall’s law
- Treatment – define anatomy
  - based on relation to sphincters

Fistula-in-ano

Hidradenitis suppuritiva

- Hidradenitis suppuritiva
  - chronic recurring inflammatory condition of apocrine glands and adjacent skin / con. tissue
- Presents – nodule → abscess → sinuses
- Treatment – perianal hygiene, I/D, WLE

Hidradenitis suppuritiva
Anorectal disorders

- Pilonidal disease
  - obstructed hair follicle in sacrococcygeal area
- Abscess → Sinus
- Treatment – I/D, marsupialization, WLE

Rectal prolapse

- ? etiology
  - deep cul-de-sac, weak pelvic floor, redundant sigmoid, patulous anal sphincter
  - associated with incontinence / constipation
  - treatment – perineal; abdominal

Hemorrhoids