Surgery & Inflammatory Bowel Disease

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Why

- **Elective Surgery:**
  - Failure of medical therapy
  - Neoplasia (abnormal growth of tissue)
    - Multi-focal low-grade dysplasia, high-grade dysplasia, invasive cancer; does NOT start as a polyp
    - Risk of colorectal cancer 8-10 years after initial diagnosis
  - Extra-intestinal manifestations- growth retardation
  - Intestinal obstruction or blockage (CD)
  - Fistula (CD)
  - Abscess (CD)
Why

• Emergent Surgery
  – Perforation
    • CD: nearby stricture
    • UC: toxic megacolon
  – Bleeding
  – Obstruction
  – Severe colitis
Normal Anatomy

Photo courtesy of meatwod.com
Surgery for Ulcerative Colitis

- 23-45% of patients will require surgery
- 15% require urgent surgery
- To cure the disease
- Remove entire colon and rectum
- Different surgical options developed over the years
Total Proctocolectomy with End Ileostomy

- Remove the entire colon and rectum
- End ileostomy

BUT can irritate skin, requires emptying appliance several times a day, and people would like to avoid wearing an appliance if possible

Photos courtesy of zazzle.com and allaboutbowelsurgery.com
The Continent Ileostomy

• ...the Koch pouch
• Creates a reservoir using small intestine with a valve so that no appliance is needed
  – You intubate pouch and empty it when full

Photos courtesy of pinstake.com and quoteko.com
Ileal Pouch-Anal Anastomosis (IPAA)

• Introduced in 1978
• Removes the entire colon and rectum
• Preserves the anus and anal sphincter
• Creates a neo-rectum or reservoir using small intestine
• Temporary diverting loop ileostomy while the ileoanal anastomosis heals
• Usually a two-stage procedure
• Rarely as a one-stage procedure
• Average of 5-7 bowel movements per day
The Ileal-Anal Reservoirs

• Most popular is the J-pouch

Figure 29-15. Different ileal pouch configurations.

Figure courtesy of The ASCRS Textbook of Colon and Rectal Surgery
Ileoanal J-pouch
Ileal Pouch-Anal Anastomosis (IPAA)

• Occasionally three-stage procedure
  1. Remove colon, leave rectum, end ileostomy
  2. Return at later time to remove rectum, ileal pouch-anal anastomosis, diverting loop ileostomy
  3. Ileostomy closure
     - Usually 6 weeks after surgery
     - 1st check IPAA to ensure healing
   – Urgent surgery
   – Unclear diagnosis
Different Surgical Techniques

Photos courtesy of goldenarticulations.blogspot.com
Complications after J-pouch Surgery

- Pathology shows Crohn’s Disease and not Ulcerative Colitis
- Anastomotic leak/ pelvic sepsis: 4-8%
  - Abscess, reoperation, poor pouch function
- Wound infection/breakdown
- Postoperative ileus
- Postoperative small bowel obstruction- 30% long-term risk
- Pouchitis- 50% long-term risk, treated with antibiotics
- Infertility
  - 0-5% risk of difficulty with erection and/or ejaculation
    - May consider banking sperm
  - Adhesions
- Complications related to having an ileostomy
- Pouch fistula
- Pouch failure
Complications Related to Ileostomies

- Skin irritation – MOST COMMON
- Leakage from the appliance
- Dermatitis
- Dehydration from high output
  - Average output 500-600 ml/day
- Hyponatremia, hypokalemia
- Parastomal hernia
- Stoma stenosis
- Stoma prolapse
- Urinary stones

Photos courtesy of thesecretdiarrhea.com, sages.org, stomawise.co.uk
Surgery for Crohn’s Disease

• Up to 75% of patients may require surgery
• To treat the symptoms
  – canNOT cure the disease
  – Removing/bypassing disease
  – Ignore asymptomatic disease
• Fibrostenosing disease
  – Strictures => obstructive symptoms
• Fistulizing disease
• Anorectal disease
  – Anal fistula, fissures, hemorrhoidal skin tags
Surgery for Crohn’s Disease

• Fibrostenosing disease
  – Resect the narrowed/obstructed segment and reanastomose the intestines together

Images courtesy of gi.jhspso.org
Surgery for Crohn’s Disease

Figure courtesy of The ASCRS Textbook of Colon and Rectal Surgery
Surgery for Crohn’s Disease

- Crohn’s colitis
  - If rectum normal, remove colon and connect small bowel to rectum

Images courtesy of medtronic-gastro-uro.com.au and searchpp.com
Surgery for Crohn’s Disease

• Crohn’s colitis
  – If rectum diseased and/or significant perianal disease, remove colon, rectum, and anus
  • Permanent end ileostomy

Images courtesy of medtronic-gastro-uro.com.au and phoenixuoaa.org
Surgery for Crohn’s Disease

• Anorectal Disease
  – Anal fistula, fissures, hemorrhoidal skin tags
  – Treatment depends on if rectum diseased
  – Goal is to treat symptoms and NOT cure the disease
    • Includes minimizing damage to anal sphincter muscles
Different Surgical Techniques
Complications after Surgery

• Recurrence of disease
  – Usually at site of anastomosis
  – 50% within 5 years of resection
    • 50% will need second surgery
• Anastomotic leak/ pelvic sepsis
  – Abscess, reoperation
• Wound infection/breakdown
• Postoperative ileus
• Small bowel obstruction secondary to postoperative adhesions
• Infertility: if rectum removed
• Complications related to having an ileostomy
• Short bowel syndrome
In Preparation for Surgery

• Understand the disease process as best as possible
  – Laboratory tests: anemia, malnutrition, electrolyte disturbances
  – Small bowel follow through vs CT enterography vs MR enterography
    • Signs of CD vs UC
    • Locations and extent of diseased intestines
    • Amount of remaining non-diseased intestines
  – Upper/lower endoscopies
Small Bowel Follow Through

Image courtesy of med-ed.virginia.edu
CT Enterography

Image courtesy of cedars-sinai.edu
MR Enterography

Image courtesy of kmhlabs.com
In Preparation for Surgery

• Continue eating your diet and nutritional supplements to maintain adequate nutritional status
• Referral to enterostomal therapist (UC)
• Medication management between both the surgeon and the gastroenterologist...
In Preparation for Surgery

• **Immunosuppressive medications**
  – Steroids (Prednisone)
    • Increased risk of postoperative infectious complications
      – > 40 mg /day- highest risk
      – > 10 mg /day for > 1 month
    • Cannot usually taper off
    • Stress-dose steroids perioperatively and taper off postop
  – Biologics (anti-TNF alpha)
    • Controversial: possible increased infectious complications if within 6-8 weeks of last dose of Remicade

• **Immunomodulators (AZA, 6MP)- ok preop**
• **Sulfasalazine and 5-ASA- ok preop**
Postoperative Course

- Discharged 2-5 days after surgery for CD and 3-7 days after surgery for UC
Now What?

- Surgery for Ulcerative Colitis does not normalize your bowel habits
- Surgery for Crohn’s disease is not curative
- YOU need to know you are ready for surgery prior to having surgery
- Find a surgeon with whom you are comfortable and who is well-versed in surgery for inflammatory bowel disease
  - Colorectal surgeon: www.fascrs.org
  - General surgeon: www.facs.org
- Plan on continued follow-up with your physicians