SURGICAL MANAGEMENT AND OUTCOMES IN ULCERATIVE COLITIS

Removal of the entire colon and rectum is curative, so surgical treatment is the "gold standard."

Indications for Operation:

- Intractability:
  - colitis refractory to medical management
  - often due to side effects of medical treatments
  - most common indication for operation
  - fulminant colitis: attack of significant diarrhea, intolerable abdominal
  - pain, and clinical deterioration $\Rightarrow$ early operation
- Dysplasia/Carcinoma:
  - high-grade dysplasia $\Rightarrow$ absolute indication
  - low-grade dysplasia $\Rightarrow$ controversial; many recommend
  - difficult to diagnosis in setting of active inflammation; should be
  - confirmed independently by two experienced pathologists
- Massive Colonic Bleeding:
  - very infrequent; less than 5% of urgent UC colectomies
  - most respond to conservative management
- Toxic Megacolon:
  - acute colitis accompanied by significant colonic dilatation
  - high fever, severe abdominal pain, tenderness, tachycardia, leukocytosis
  - predisposed to perforation
  - treatment: IVF resuscitation, antibiotics, steroids, immunosuppressives
  - clinical deterioration despite above $\Rightarrow$ urgent operation

Operations:

- Total Proctocolectomy with End-Ileostomy:
  - removes entire colon, rectum, and anus
  - performed in one stage; avoids problems of multiple operations
  - disadvantages: permanent stoma, problems with healing perineal wound
  - indicated in poor candidates for restorative proctocolectomy
    - elderly and incontinent
- Total Abdominal Colectomy with Hartmann's Closure or Mucous Fistula:
  - used in acutely sick patients (fulminant colitis, toxic megacolon)
  - avoids long operative time and pelvic dissection
  - can leave seriously diseased rectum, rectal bleeding can continue
  - also indicated if Crohn's vs. UC cannot be determined preoperatively
- Total Proctocolectomy with Ileal Pouch-Anal Anastomosis:
  - gold standard
  - avoids permanent stoma and permits BMs per rectum
  - requires good anorectal function and sphincter tone
  - generally performed on patients younger than 65

- many complications related to pouch and low anastomosis (see below)

Controversies:

- Temporary Diverting Ileostomy:
  - ileostomy protects low anastomosis ⇒ series of 110 pts had no leaks
  - ileostomy related complications at Mayo Clinic
    - mechanical ⇒ 39 of 157 (retraction, prolapse, fistula, abscess, bowel obstruction)
    - functional ⇒ 111 of 157 (peristomal irritation, leakage, high output, incomplete diversion)
  - studies have shown similar functional outcomes and complication rates with and without diversion
  - consensus: if anastomosis is under tension or blood supply is questionable ⇒ ileostomy
  - other factors to consider: patient's general health, comorbidities, nutritional status, anemia, age, steroids, immunosuppressive drugs
- Mucosectomy Vs. Double-Staple Technique:
  - Mucosectomy:
    - removal of all rectal mucosa with hand sewn anastomosis
    - advantage: eliminates all colonic mucosa, risk of later dysplasia
    - disadvantage: slight decrease in sphincter function, more
    - nocturnal leaking, more technically difficult
    - absolute indication: dysplasia of rectum
  - Double-Staple:
    - retained short rectal segment, mucosa to mucosa stapled anastomosis
    - easier operation
    - better sphincter function, preserves transition zone and nerve endings
  - conflicting studies have shown both improved fecal continence at night with staples and no difference between techniques
  - septic complications had better prognosis with stapled anastomosis

- Laproscopic Vs. Open:
  - improved cosmesis, reduced pain, earlier return of bowel function,
  - earlier discharge vs. longer operative times
  - also decreased chronic pain and SBO laproscopically
- Age:
  - generally reserved for younger patients
  - however, Bauer et al. reported on 66 patients older than 50 with similar overall morbidity, mortality, and function when compared to 253 patients younger than 50

Complications:

- typical early and late complications of abdominal surgery: bleeding, infection, obstruction, etc.
- Anastomotic Complications:
  - up to 16% in major series with septic complications

    - fistula, sinus, abscess with anastomosis
    - management guidelines not well defined
    - Gorfine et al report salvaging pouch function in 29 of 51 patients
- Pouchitis:
    - most common long-term complication
    - nonspecific inflammation of the ileal reservoir
    - frequent and looser stools, urgency, abdominal/pelvic discomfort
    - endoscopic/histologic evidence of nonspecific active acute inflammation
    - etiology unclear; bacterial proliferation, bacterial stasis, endotoxin
    - incidence varies from 8-59%
    - treatment: broad spectrum antibiotics (Flagyl)
    - long-term pouch function not compromised unless refractory
- Other complications:
    - Anastomotic Stricture
    - Cuffitis: only in patients without mucosectomy
    - Pouch-Vaginal Fistula

Outcomes:

- Functional:
    - series of 409 patients, 15 year follow-up (Mayo)
    - mean stool frequency per day: 5.5 at year 1, 6.2 at year 15
    - more daytime fecal incontinence, but not frequent episodes
    - at 5, 10, and 15 years, 100%, 95%, and 91% of patients were able to work at same job
- Patient Satisfaction:
    - most large series report greater than 80% patient satisfaction with surgery
    - even in study of patients with chronic pouchitis, 91% were satisfied, 94% would undergo the operation again if needed, and 95% would recommend it to other UC patients

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