Crohn’s Disease and the Ileal Pouch

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Disclosures

• Relevant:
  • None

• Outside of topic:
  • Ethicon Endosurgery Consultant
  • Medtronics Consultant
Ileal Pouch Anal Anastomosis

- After removal of the colon and rectum
- Create new reservoir with small intestine
- Allows transanal defecation and ideally avoids permanent ileostomy
Life with IPAA

Functional outcome

Average BM per 24 hrs: 6
Complete continence: 53-76%
Overall Satisfaction: 96%


Total 24 hours B.M: 5 (1-15)
Nocturnal seepage: 44%
Antidiarrheal usage: 39%

Meagher 1998 Br J Surg
IPAA Patient Outcomes

- 1885 patients
  - Mean f/u 11 years
  - Pouch success
    - 5 years 96%
    - 20 years 92%
  - Fecal incontinence
    - Day -- 5% (5yrs) v 11% (20yrs)
    - Night -- 12% (5yrs) v 21% (20yrs)
  - No decrease in QOL with time
- 92% in same job

Crohn’s Disease

- Inflammatory process of intestinal tract
  - Can involve any part of the intestines
- About 60% Crohn’s patients with colonic involvement
  - ~50% of patients with Crohn’s colitis have no small intestinal involvement
  - ~40% of patients with Crohn’s colitis have rectal sparing
  - Obviously, proctocolectomy not applicable to patients with normal colon
Crohn’s Disease

- Treatment of isolated Crohn’s colitis
  - Segmental colectomy
  - Abdominal colectomy with ileorectal anastomosis
IPAA in Crohn’s Disease

- Crohn’s disease long felt to be a contraindication to ileal pouch
- Many patients with diagnosis of ulcerative colitis receive pouch
  - Some have diagnosis changed to Crohn’s disease based upon future clinical course
IPAA in Crohn’s Disease

• UC patients at surgery, diagnosis changes, sometimes termed “phenotype switch”
  – Pathologic specimen
  – Endoscopy
  – Clinical course
Crohn’s Disease

- IPAA with patients with occult Crohn’s (25 patients)
  - 9 patients with potential evidence of Crohn’s preoperatively (6 anal)
    - 1 of 9 pouches remain functioning
  - 16 patients without any evidence of Crohn’s preoperatively
    - 15 pouches remain functioning

IPAA in Crohn’s Disease

• 1005 IPAA over 11 years
  – 67 Crohn’s (~7%)
• 3.4% pouch failure
  – Of 34 failures, 17 were Crohn’s
  – 25% of Crohn’s patients failed

IPAA in Crohn’s Disease

- Long-term results of IPAA in patients with Crohn’s
  - 37 patients of 1509 (2.5%)
    - 22 UC, 9 indeterminate, 6 Crohn’s on histopathology of resected specimen
  - 11 complex fistulas
  - Pouch failure 17 (45%)
    - 10 excised, 7 defunctionalized
  - 20 intact pouches
    - 3-10BM per day

IPAA in Crohn’s Disease

- Long-term results of IPAA Crohn’s
  - 1270 IPAA patients (36 CD, 21 IC)
  - Pouch complications
    - CD 64%
    - IC 43%, UC 22%
  - Pouch failure rates
    - CD 56%
    - IC 10%, UC 6%
  - When successful, IPAA and Crohn’s affords good functional outcome

• Long-term outcomes of IPAA with CD
  – 204 (7%) pts with IPAA and Crohn’s
    • 10% intentional (Dx known prior)
    • 47% incidental (Dx made histopathologic)
    • 43% delayed (Dx on clinical development)
      – Mean 36 months after IPAA
  – 10 year pouch survival 71%

IPAA in Crohn’s Disease

IPAA in Crohn’s Disease

- Long-term outcomes of IPAA with CD
  - Predictors of pouch loss:
    - Delayed diagnosis
    - Pouch-vaginal fistula
    - Pelvic sepsis
  - Patients with pouch intact
    - 72% normal continence
    - 7 BM per day
    - Excellent QOL studies

IPAA in Crohn’s Disease

- Long-term outcomes of patients with IPAA
  - 3707 patients
  - CD 4% (150 patients)
  - 82% pouch retention at 10 years
  - Quality of life and functional outcomes similar to UC an FAP patients

“IPAA is an excellent option for... select patients with Crohn’s disease.”

Crohn’s with Anorectal Disease

- Anorectal Crohn’s
  - Fistula / Abscess
  - Fissure
  - Hemorrhoids
- Anal disease incidence varies with different report (22-78%)
Perianal Disease

- IPAA with UC patients and known prior perianal disease
  - 52 of 753 patients
    - Fissure 17
    - Perianal abscess 13
    - Fistula 7
    - Rectovaginal fistula 3
    - Hemorrhoids/skin tags 23
  - 21% with multiple diagnoses


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<th>Type of Disease</th>
<th>No. of Conditions</th>
<th>No. of Prior Procedures</th>
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<td>Fissure-in-ano</td>
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<td>7</td>
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<td>Anal abscess</td>
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<td>Fistula-in-ano</td>
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<tr>
<td>Rectovaginal fistula</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Skin tags/hemorrhoids</td>
<td>25</td>
<td>9</td>
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A total of 52 patients had a total of 65 perianal problems.
Perianal Disease

- IPAA with perianal disease
  - Higher risk of leak
    - 21% versus 11% (no anal pathology)
  - Perianal complications
    - 11.5% vs 1.7% (no anal pathology)
  - No difference in total pouch failure rate
  - Crohn’s disease rates low in both groups (1.9% vs 2.7%)

Is there a role for planned IPAA in patients with Crohn’s disease?
Known Crohn’s Diagnosis
Long Term Results – France

• 31 patients with diagnosis of Crohn’s
  – None had anal or small bowel disease prior
  – All underwent IPAA
  – Mean f/u 59 months

• 6 (19%) Crohn’s related complications
  – 3 Pouch-perineal fistula
    • 2 pouch excisions
  – 1 extra-sphincteric abscess, 1 PV fistula

• Good functional outcomes (same as UC)

Known Crohn’s Diagnosis
Long Term Results – France

• For patients with full 10 year f/u
  – 20 patients
  – 35% Crohn’s related complications
  – 10% pouch excision

• Postoperative diagnosis of Crohn’s was only predictive factor for Crohn's-related complications.

Known Crohn’s Diagnosis
Long Term Results – UK

• 52 patients (n=1652) with indeterminate colitis and Crohn’s colitis
  – 26 with IC favoring UC
  – 26 with CD or IC favoring CD
    • 57% pouch loss
  – Functional outcomes similar

Tekkis, et al. Colorect Dis, 2005
Known Crohn’s Diagnosis
Long Term Results – UK

**Diagram:**
- **Cumulative ileal pouch survival**
- **Follow up (years):** 0.0, 2.5, 5.0, 7.5, 10.0
- **Groups:**
  - Group 1: n = 26, 10, 7, 5, 2
  - Group 2: n = 26, 19, 13, 10, 5

Tekkis, et al. Colorect Dis, 2005
“At present, an IPAA is not recommended in a patient with Crohn’s colitis.”

From: The second European evidence-based Consensus on the diagnosis and management of Crohn’s disease: Current management, 2010
Acceptable Rates of Failure?

- These rates of pouch loss acceptable (?)
  - Only other option is permanent stoma
  - Patient is young
- Some surgeons and patients agreed to try IPAA with Crohn’s when only other option would be ileostomy
Typical Patient
- Small intestinal involvement
- Rectal sparing
- Many with anal disease

IPAA and Crohn’s Disease
IPAA and Crohn’s Disease

- Ideal Patient for IPAA
  - Rectal involvement requiring resection
  - No anal disease or history of prior anal disease
  - No small intestinal involvement
Surgeons should not proceed with IPAA lightly, but may be acceptable for selected patients with Crohn’s

Potential IPAA patients must be
- Free of small bowel and anal disease
- Have diffuse colorectal involvement
- Be warned of potentially higher risks of complications and pouch loss