The Role of Surgery for Crohn’s Disease and Chronic Ulcerative Colitis

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Surgery is **NOT** the Primary Treatment for Inflammatory Bowel Disease

HOWEVER

- Surgery Can:
  - Alleviate Symptoms
  - Address Serious Complications
  - Improve Quality of Life
  - Be Lifesaving
THE DECISION TO UNDERGO SURGERY IS **NEVER** TAKEN LIGHTLY

THE BENEFIT MUST FAR EXCEED RISKS
THERE ARE NO BETTER ALTERNATIVES
WHO SHOULD PERFORM SURGERY FOR IBD

- Qualified
- Experienced
- Specialized Tertiary Care Center
- High Volume
Indications

**ELECTIVE**
- Refractory disease
- Steroid dependence
- Drug intolerance
- Growth retardation
- Dysplasia/Cancer prophylaxis

**EMERGENT**
- Massive bleeding
- Perforation
- Fulminant colitis
THE NEED FOR SURGERY AND THE TIMING OF SURGERY MUST BE COORDINATED BETWEEN:

- The Patient
- The Gastroenterologist
- The Surgeon
Advances in Medical Treatment

- Reduced need for emergency surgery
  - due to catastrophic complications
    - massive hemorrhage
    - perforation
    - fulminant colitis
    - acute obstruction
How many of you know someone who has undergone surgery for their Crohn’s Disease or Chronic Ulcerative Colitis?
1/2 OF ALL PATIENTS WITH IBD WILL REQUIRE SURGERY
Ulcerative Colitis

- Moderate-High Activity: 20%
- Low Activity: 30%
- No Symptoms: 50%

Disease Activity

- Patients with UC (%)

Colectomy Rate (%)

- Years: 0, 5, 10, 15, 20
- Rates: 10%, 23%, 31%
Chronic Ulcerative Colitis

Surgical Treatment
Operations

- Emergency operation
  - Repair perforation
  - Diversion
- Total abdominal colectomy + ileostomy
- Total proctocolectomy + ileostomy
- Restorative proctocolectomy
Restorative Proctocolectomy

Pouch procedure
J-Pouch
Ileoanal J-pouch
Pullthrough procedure
Ileoanal pullthrough procedure
Ileoanal anastomosis
Ileal pouch anal anastomosis (IPAA)
Surgery for CUC

- Availability of sphincter preserving surgery has improved patient acceptance
- Some extraintestinal manifestations may improve
  - Thromboembolic events
  - Erythema nodosum
  - Arthralgias
Pouch-y Training

- 10 Stools per day initially
- 6 month adaptation, 4-6 stools per day
Results

- 4-6 stools per day
- 80% of patients completely continent
  - 20% minor night time incontinence
- Able to defer defecation
- No cramps, no bleeding
- No prednisone
- NO COLITIS
## Quality of Life
### IPAA versus Ileostomy

<table>
<thead>
<tr>
<th>Category</th>
<th>IPAA</th>
<th>Ileostomy</th>
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<tbody>
<tr>
<td>Satisfaction</td>
<td>95%</td>
<td>93%</td>
</tr>
<tr>
<td>Performance</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Sports</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Body image</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Diet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>QOL(utility)*</td>
<td>0.87</td>
<td>0.97</td>
</tr>
<tr>
<td>Regrets</td>
<td>3%</td>
<td>33%</td>
</tr>
<tr>
<td>Preference</td>
<td>87%</td>
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</table>

*No statistical difference*
Complications

- Pouchitis
- Cuffitis
- Ileoanal stricture
- Pouch fistula
- Diarrhea
- Incontinence
- Perianal dermititis
- Recurrent IBD
- Sexual dysfunction
- Infertility
- Small bowel obstruction
- Pouch prolapse
- Emptying dysfunction
Do-It-Yourself Maintenance
Care and Feeding of Your Ileal J-Pouch

- Diet
  - What to eat
  - When to eat
  - What not to eat
- Anti-diarrheals
- Bulk agents
- Probiotics
- Perianal skin care
Restorative Proctocolectomy Controversies

- Laparoscopic versus Open
- 1 Stage versus 2 or 3 Stage
- Mucosectomy + Hand sewn versus
- Double Staple
Controversies

- Indeterminate colitis
- Crohn’s disease
- Cancer surveillance
  - Neoplasia
    - 1% at 5 years
    - 5% at 25 years
Crohn’s Disease

Surgical Treatment
Crohn’s Disease

IS

NOT

CURABLE

WITH

SURGERY
Crohn’s: Complications

- Obstruction
- Fistula formation
- Abscess
- Anorectal disease
- Bleeding
- Dysplasia/Cancer
Crohn’s Enteritis
Operative Treatment

- Drainage of abscess
- Ileocecal Resection
- Repair of fistula
- Bowel resection
- Strictureplasty
### Probability of Surgery for Crohn’s Disease: Copenhagen County, Denmark

<table>
<thead>
<tr>
<th>Year After Diagnosis</th>
<th>1 Surgery (%)</th>
<th>2 Surgeries (%)</th>
<th>≥ 3 Surgeries (%)</th>
<th>No Surgery (%)</th>
</tr>
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<tbody>
<tr>
<td>5</td>
<td>37</td>
<td>7</td>
<td>5</td>
<td>51</td>
</tr>
<tr>
<td>10</td>
<td>39</td>
<td>11</td>
<td>12</td>
<td>39</td>
</tr>
<tr>
<td>15</td>
<td>34</td>
<td>14</td>
<td>22</td>
<td>30</td>
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<table>
<thead>
<tr>
<th>Type of lesion</th>
<th>Percent of patients</th>
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<tbody>
<tr>
<td>Tags</td>
<td>37</td>
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<tr>
<td>Hemorrhoids</td>
<td>7</td>
</tr>
<tr>
<td>Fissure</td>
<td>19</td>
</tr>
<tr>
<td>Stricture</td>
<td>9</td>
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<tr>
<td>Abscess</td>
<td>26</td>
</tr>
<tr>
<td>Fistula</td>
<td>29</td>
</tr>
<tr>
<td>Total</td>
<td>54</td>
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</table>
Perianal Crohn’s

- Skin tags-May be removed-Poor healing
- Hemorrhoids-Caution-fistula formation
- Perineal ulcers-Unroof, debride
- Fissures-Non-op Rx-Preserve sphincter
- Stenosis-Dilatation
- Abscess-I & D
- Fistula-6-34%, usually with rectal Crohn’s
Crohn’s Fistula

<table>
<thead>
<tr>
<th>Disease</th>
<th>Incidence</th>
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<tbody>
<tr>
<td>Ileal</td>
<td>12%</td>
</tr>
<tr>
<td>Ileocolonic</td>
<td>15%</td>
</tr>
<tr>
<td>Colonic</td>
<td>41%</td>
</tr>
<tr>
<td>Colorectal</td>
<td>92%</td>
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<tr>
<td><strong>Overall incidence</strong></td>
<td><strong>13-38%</strong></td>
</tr>
</tbody>
</table>
Options for Treatment of Anorectal Fistula

- Simple
  - Fistulotomy

- Complex
  - Draining Seton
  - Fibrin glue
  - Endorectal Advancement Flap
Treatment of Crohn’s Colitis

- Segmental resection
- Abdominal colectomy with ileorectal
- Total proctocolectomy with ileostomy
Epidemiology and Statistics

- 1 million ostomates in US
- 100,000 ostomy surgeries per year
- 3 per 1,000 population
- 1/3 ileostomy, 1/3 colostomy, 1/3 urostomy
## Frequency of Stoma Complications (%)

<table>
<thead>
<tr>
<th>Complication</th>
<th>Overall</th>
<th>In outpatient practice</th>
<th>Surgically treated</th>
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</thead>
<tbody>
<tr>
<td>Peristomal herniation</td>
<td>30.2</td>
<td></td>
<td></td>
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<tr>
<td>Prolapse</td>
<td>8.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stenosis</td>
<td>18.5</td>
<td></td>
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<tr>
<td>Retraction</td>
<td>1.3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermatitis</td>
<td>12.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peristomal abscess</td>
<td>0.8</td>
<td></td>
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</tbody>
</table>
Patient Perspective

- Support
  - Enterostomal therapy
  - Support groups
  - Physician
  - Internet