Pouchitis and Cuffitis
A bloody mess

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Ileal-pouch anal anastomosis

Proctocolectomy with J-pouch Reconstruction Stage 1

Types of pouch

https://my.clevelandclinic.org/health/treatments/17379-pouch-procedure--recovery/types-of-surgeries
A = efferent limb  
B = pouch  
C = afferent limb  
D = anastomosis

The anatomy of a pouch
Pouch function and life span

• 4-8 motions a day, 1-3 motions at night
• Continent
• Good QOL at 12 months
• Dietary modification + loperamide
• Fecal incontinence up to 40-50% in 20-30yrs
• 15% pouch failure at median 6 yrs
  • Loop ileostomy or pouch excision
  • Even higher in Crohn’s disease 25-100%
Symptoms

**Inflammatory**
- Cuffitis
- Pouchitis
- Secondary pouchitis

**Surgical**
- Leak
- Fistula
- Volvulus
- Efferent limb
- Stricture/stenosis

**Functional**
- Irritable pouch syndrome

**Neoplastic**
- Pouch cancer

Bloody motions
Fever
Frequency
Tenesmus
Pain
Incontinence
Vaginal/perianal discharge
Weight loss
Clinical approach

• History
  • Review previous scopes, histology and operation notes
  • Toxins

• Examination+ Biopsies
  • Endoscopy
  • Examination under anaesthesia

• Investigations
  • Bloods
  • MRI/ CT
  • Stool cultures
Standardised pouchoscopy report

A. Classic Pouchitis
B. PSC-associated Pouchitis
C. Ischemic Pouchitis

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Pouchitis

• Most common long term complication
• Cumulative incidence 20-50% (1 – 5 yrs)
• 40% occur in the 1st 12 months post ileostomy closure
• 40% single episode only
• 5-20% end up with refractory disease
• Risk factors
  • Extensive UC, PSC, pANCA +ve, non-smoker, young, regular NSAIDs, obesity, backwash ileitis, genetic polymorphisms
Pathogenesis

Idiopathic
- Gut microbiota
- Host immune response
- Genetic

Secondary (20-30%)
- Crohn’s disease
- Radiation
- Ischaemia
- Infection
Pouch disease activity index (PDAI)

Histology useful in clinical practice
- Detection of specific pathogens (such as CMV, Candida)
- Granulomas
- Ischemia
- Mucosal prolapse
- Dysplasia

Chronic histological may reflect ‘normal’ adaptive changes to stasis

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Score</th>
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<tbody>
<tr>
<td>Clinical</td>
<td></td>
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<tr>
<td>Stool frequency</td>
<td></td>
</tr>
<tr>
<td>Usual postoperative stool frequency</td>
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<tr>
<td>1-2 stool/d &gt; postoperative usual</td>
<td>1</td>
</tr>
<tr>
<td>3 or more stool/d &gt; postoperative usual</td>
<td>2</td>
</tr>
<tr>
<td>Rectal bleeding</td>
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<tr>
<td>None or rare</td>
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<tr>
<td>Present daily</td>
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<tr>
<td>Fecal urgency or abdominal cramps</td>
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<tr>
<td>None</td>
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<tr>
<td>Occasional</td>
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<tr>
<td>Usual</td>
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<tr>
<td>Fever (temperature &gt; 37.8 °C)</td>
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<tr>
<td>Absent</td>
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<tr>
<td>Present</td>
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<td>Endoscopic findings</td>
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<td>Edema</td>
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<tr>
<td>Granularity</td>
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<tr>
<td>Friability</td>
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<tr>
<td>Loss of vascular pattern</td>
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<tr>
<td>Mucous exudates</td>
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</tr>
<tr>
<td>Ulceration</td>
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</table>

Histological findings - acute histological inflammation
- Polymorphonuclear leucocyte infiltration
  - Mild | 1 |
  - Moderate without crypt abscess | 2 |
  - Severe with crypt abscess | 3 |
- Ulceration per low-power field (mean)
  - < 25% | 1 |
  - 25% - 50% | 2 |
  - > 50% | 3 |

Total pouchitis disease activity index (max 18) pouchitis ≥ 7
Classification of pouchitis

**Duration**
- acute (< 4 weeks)
- Relapsing (≥3 acute episodes in 12 months)
- chronic (≥ 4 weeks)

**Antibiotic response**
- Responsive
- Dependent
- Refractory

**Cause**
- Idiopathic
- Secondary
Treatment

• Antibiotics initial treatment
  • Ciprofloxacin 500mg BD or Metronidazole 400mg TDS po 14 days

• [website]

• Escalating therapies (budesonide, biologics..)
  • ? Reducing pouch failure incidence
  • Crohns still leading cause of pouch failure
CMV

• May not be always pathogenic
• Probably uncommon cause of pouchitis
• Clinical features
  • Fever
  • Prepouch ileal ulcerations
  • Immunosuppression more common
• Histology
  • Immunohistochemistry/ PCR
  • Inclusion bodies not always present
  • Biopsies taken from ulcers more likely to contain CMV DNA
• Treatment
  • 2-4 week course of ganciclovir
  • Repeat endoscopy should be considered to confirm CMV eradication/ mucosal healing, especially when features of Crohns i.e deep mucosal ulcerations and/or prepouch ileitis
• Prognosis
  • Most have normal pouch function after treatment for CMV
Cuffitis

• Retained columnar epithelium 1.5-2cm
• UC or UC-like inflammatory process vs other (ischaemia/ surgical sepsis/ dysplasia)

• Clinical
  • Can co-exist with pouchitis
  • > bloody
  • Toxic megacolon, fulminant colitis, preoperative biologic use

• Usual treatment is topical ASA, steroids → → biologics
  • Responsive
  • Dependent
  • Refractory up to 50% - 1/3 Crohns, 1/3 surgical complications,
    • Pouch failure around 10%
Summary

• Pouchitis and cuffitis are challenging conditions to diagnose and treat
• 1\textsuperscript{st} line 	extit{rx} for pouchitis = antibiotics
• 1\textsuperscript{st} line 	extit{rx} for cuffitis = immunomodulators
• Multidisciplinary approach essential
  • Surgical anatomy
  • Complex medical pathogenesis
  • Balance with function and quality of life