IBD and PSC
Integrated Medical and Surgical Care

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www.uch.edu/ibd
PSC-IBD
(PSC-associated IBD)

• Approximately ¾ of PSC patients have IBD

• PSC is more common in UC vs Crohn’s

• PSC-IBD Characteristics:
  – Mild pancolitis
  – Rectal sparing
  – Very mild ileal inflammation ("backwash ileitis")
PSC-IBD
Management Issues

• Generally well-controlled

• Increased risk of colon dysplasia/cancer

• Up to one-third will have colectomy

• Pouchitis: 2/3 PSC vs 1/3 no PSC
PSC-IBD

Increased Risk of Colon Dysplasia/Cancer

• 5% Lifetime Risk of Colon Cancer in the General Population

<table>
<thead>
<tr>
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<th>Ulcerative Colitis</th>
<th>PSC-IBD</th>
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<tbody>
<tr>
<td>10 years</td>
<td>2%</td>
<td>10%</td>
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<tr>
<td>20 years</td>
<td>8%</td>
<td>33%</td>
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<tr>
<td>30 years</td>
<td>18%</td>
<td>40%</td>
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• Risk goes up soon after the diagnosis of coexisting PSC/IBD

→ Evaluate all patients with PSC for IBD
→ Start CRC screening immediately at diagnosis of PSC-IBD
→ Perform annual colonoscopy

Gut 1997;41:522-25
CGH 2011;9:52-56
PSC-IBD

How to Reduce Colon Cancer Risk?

• Minimize inflammation

• No clearly effective medical prevention
  – Mixed results for ursodeoxycholic acid (UDCA)

• Annual colonoscopy (chromoendoscopy)
PSC-IBD

Methods of Colon Cancer Surveillance

• **Narrow Band Imaging (NBI)**
  – Blue light: hemoglobin absorption
  – Penetration of mucosa only
  – Highlights vessels
  → No better than standard colonoscopy

• **Chromoendoscopy**
  – Spray blue dye to highlight abnormalities
  – Targeted biopsies, not random
  – Colon must be uninflamed and clean
  → Better than standard/NBI

→ Chromoendoscopy is the emerging standard of care for colon cancer surveillance for PSC-IBD patients (and probably soon for all IBD patients)
Colorectal Surgery in PSC-IBD

- Why is colectomy performed?
- J-pouch or something less?
- If J-pouch, what does the PSC patient need to know?
- Is colectomy safe after a liver transplant?
- What effect will transplant have on colitis?
Total and Subtotal Colectomy

Rectal sparing in 52% PSC-UC compared to 6% in UC alone
--Loftus et al. IBD, 1997
Total Colectomy (Proctocolectomy)

Indications
- Significant co-morbidity
- Elderly, frail
- Marginal or poor sphincter strength
- Some rectal cancers
- Failed IPAA
- Morbid obesity
- Patient choice
J-Pouch
Ileal Pouch Outcomes (N=3703)

- Early Morbidity
  - IPAA leak 5%, Pelvic sepsis 6%
- Late Morbidity
  - Failure 5%, SBO 13%, Pouchitis 34%
- Function
  - BM: 5-7 per day, 1 at night
  - Pad use: 25%
  - Incontinence (never/rarely): 80%
- Female Infertility: 30-60%
- Female Sexual Dysfunction: 10-25%

Pouchitis

Pouchitis occurs about twice as often in PSC-IBD patients compared to IBD patients.

Shen B. CGH 2013;11:1538-1549
Ileal J-Pouch in PSC

• The 1-, 5-, 10- and 20-year risk of **acute pouchitis** for PSC-IPAA was 10%, 19%, 31% and 65% respectively, compared to 3%, 10%, 14% and 28% in UC-IPAA (p=0.03).

• More PSC-IPAA (36%) had poor **nocturnal pouch function** (vs 2% in UC-IPAA; p=0.0016).

• There were no differences in surgical complications, quality of life or sexual function between the 3 main groups.

→ PSC-IPAA suffer more acute pouchitis and have worse functional outcomes than UC-IPAA.

IPAA after Liver Transplant for PSC

• We reviewed our multi-institutional experience performing proctocolectomy-IPAA for UC after Liver Transplant for PSC

• During a median follow-up of 52 months, complications have included transient dehydration (n = 6), chronic pouchitis (n = 2), recurrent PSC (n = 2), small bowel obstruction (n = 2), and pouch-anal anastomotic stricture (n = 1)

• Median 24-h stool frequency was 5, and fecal continence was reported as satisfactory by all patients

→ Proctocolectomy-IPAA can be performed safely after OLTX.

PSC-IBD
Liver Transplant Status and Colitis

• Cleveland Clinic, 1985-2011

• Liver transplant in 86, no liver transplant in 81

• In the no transplant group:
  – More UC flares
  – More often require colectomy (75 vs. 27%)

• Liver transplant independently decreases the risk for colectomy in UC-PSC (HR= 0.43)

U. Navaneethan, 2012
IBD Surgery in PSC: SUMMARY

- Colorectal Cancer/dysplasia
- Liver transplant appears to reduce the need for colectomy
- J-Pouch can be safely made after liver transplant
- Ileorectal anastomosis is an option
- Pouchitis is more common in PSC patients
- Screening for cancer must continue
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END
Low-Grade Dysplasia

- Characterized by nuclei confined to basal half of the cell
- 30-54% risk for progression to HGD or CRC at 5 years
- 15-20% have CRC at immediate colectomy
- Multifocal LGD carries same risk of progression as unifocal
- May progress directly to CRC
  - 92% tubuloglandular carcinomas

Arch Pathol Lab Med 2010;134:876-95
Lancet 1994;343:71-74
Gastroenterology 2004;126:1634-48
Gastroenterology 2003;125:1311-19
High-Grade Dysplasia

- Characterized by nuclei stratified haphazardly across basal & apical halves of the cell
- 32% risk for progression to CRC at some follow up period
- 42% have CRC at immediate colectomy

Arch Pathol Lab Med 2010;134:876-95
Lancet 1994;343:71-74
Ursodeoxycholic Acid

- Ann Intern Med. 2001;134:89-95
  - Decreased risk of dysplasia
    - aOR 0.14, p=0.005
    - Mean dose 10mg/kg

- Gastroenterology. 2003;124:889-93
  - Decreased risk of dysplasia
    - OR 0.26, p=0.034

  - No change in risk of dysplasia, Improved overall mortality
    - Dysplasia - RR 0.59, p=0.17
    - Mortality – RR 0.44, p=0.02
Ileal Pouch Anal Anastamosis

- Is there a risk of cancer in the pouch or rectal cuff following IPAA?
  - Retrospective review, 3203 patients with IPAA for IBD
    - 38 (1.19%) patients with pouch neoplasia
      - 11 adenocarcinoma, 3 SCC, 1 lymphoma, 23 dysplasia