Diagnosis and Management of Perianal Disease

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Crohn’s or not Crohn’s?

● Only 1% of perianal fistulas are due to Crohn’s disease

● 10% of Crohn’s patients will initially present with perianal disease

● Common perianal fistulas arise from infected anal glands at the dentate line, i.e. “cryptoglandular” origin

● 50-75% of Crohn’s pts with a perianal fistula will have a “simple” fistula-in-ano
# Perianal Lesions in Crohn’s

**Crohn’s**
- Internal opening above dentate line
- External opening is >3cm from anal verge
- Multiple openings
- Wide tracts
- Associated anal pathology
  - Large tags
  - Anal fissure off midline

**Not Crohn’s**
- Internal opening at dentate line
- External opening is <3cm from anal verge
- Single opening
- Narrow tracts
- No associated anal pathology
Pertinent History

Crohn’s
- Recurrent abscess/fistulas in different locations
- Associated gi symptoms
- Anal pain common (usu due to associated pathology)
- Family history of inflammatory bowel disease

Not Crohn’s
- Recurrence of abscess/fistula in same location
- No associated gi symptoms
- Anal pain uncommon unless abscess
Perianal Lesions in Crohn’s

- Skin tag – 37%
- Hemorrhoids – 7%
- Fissure – 19%
- Anal ulcer – 12%
- Low fistula – 20%
- High fistula – 6%
- Rectovaginal fistula – 3%
- Perianal abscess – 16%
- Anorectal stricture – 9%
- cancer

Cumulative Incidence of Perianal Fistula

Figure 3. Cumulative incidence of perianal fistulas among 176 Olmsted County, Minnesota, residents diagnosed with Crohn’s disease between 1970 and 1993. Modified and reprinted with permission from Schwartz et al.25

Schwartz et al. Gastroenterology 2002
Normal Anatomy and Etiology

Ulceration in the anal Canal or rectum
Glands at the dentate line

Susceptibility locus on chromosome 5 recently implicated in patients with perianal crohn’s disease

Armuzzi et al. Gut 2003
Normal Anatomy

Superficial/Simple Fistulae – do not cross the sphincter
Classification Systems of Perianal Crohn’s Disease

• Parks (only addresses fistulas)
• Cardiff
  – Each major manifestation is graded (0-2)
  – Ulcerations, Fistulas, stricture
  – Classified as high (extending above dentate line, sometimes to levator muscles) or low (below dentate line)
  – Location of Crohn’s disease
Parks Classification

A – Superficial – below internal and external sphincter

B – Intersphincteric – between internal and external sphincter

C – Transsphincteric – from intersphincteric space through external sphincter

D – Suprasphincteric – over top of puborectalis and penetrates levator muscle

E – Extrasphincteric – outside external sphincter

Must also note – branching, horseshoeing
• Physical Exam
  – Identify anal skin tags, fissures, fistulae, abscesses, strictures, and rectovaginal fistulae

• Endoscopic Exam
  – Identify evidence of inflammation in the rectum

• Fistula classification
  – Simple – low superficial, or low intersphincteric, or low transsphincteric. Has a single opening, no pain/fluctuation to suggest abscess, no evidence of rectovaginal fistula or anal stricture
  – Complex – high intersphincteric, extrasphincteric or suprasphincteric (origin of tract). May have multiple external openings, be associated with pain, fistula, or anorectal stricture.
Frequency of Perianal Fistulas According to the Anatomic Location of Disease Involvement

- Colon only (without rectal involvement) 41%
- Small intestine only 12%
- Colonic dz with rectal involvement 92%

Hellers et al. Gut 1980
Diagnosis

- Exam Under Anesthesia (EUA)
  - Visual inspection, palpation
  - Use of malleable probes
  - Enhanced by use of hydrogen peroxide
  - Allows for concomitant surgical therapy
- MRI
- Endoanal ultrasound

- Prospective blinded study of 34 patients with suspected Crohn’s perianal fistulas, there was good agreement between all 3 modalities.
- Combination of 2 yielded an accuracy of 100%

Schwartz et al. Gastroenterology 2001
Medical Treatment

• Antibiotics
  – Metronidazole shown to heal fistulas 83% of 21 patients in open series (data scarce for cipro)
  – Useful in the short-term or intermittently
  – Long-term use leads to peripheral neuropathy and nausea

• Immunomodulators
  – Response rate of 54% in meta-analysis
  – IV cyclosporin or tacrolimus work short-term and often relapse on cessation of drug
  – Topical tacrolimus may be effective in perianal or ulcerating, but not fistulizing crohn’s disease

Bernstein et al. Gastroenterology 1980
Hart et al. IBD 2007
Medical Treatment

• Biologics
  – Generally, biologic therapy should follow drainage of abscess or following seton removal. This may be delayed in complex fistulas until there is some evidence of healing.
  – ACCENT 2 – 64% of 306 treated patients had response with 55% closing all fistulae.
    • Median response time of 2 weeks
    • Hospitalization episodes, days, surgical episodes all reduced
## MEDICAL THERAPIES

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Azathioprine/6-Mercaptopurine in Fistulizing Crohn’s Disease*

*Primary endpoint of these studies was the treatment of active inflammatory CD
†Complete healing or decreased discharge

Infliximab for Crohn’s Perianal Fistulas

Primary endpoint; ≥50% reduction in open fistulas

*Initial Fistula Response to Infliximab n = 94*

- 68% for 5mg/kg
- 56% for Placebo
- 26% for 10mg/kg

p<0.001   p=0.041
Medical Management

• Issue of incomplete deeper healing despite superficial healing.

• Should we be following complex fistulae with MRI/Ultrasound?

• What about those patients with stricturing luminal disease?
Underlying Malignancy

• 2500 patients with Crohn’s disease
  – Prospective database between 1940-1992
  – 15 lower GI cancers
    • 12 in the rectum/anus
Perianal Crohn’s Disease – Surgical Treatment Options

- Fistulotomy
- Setons
- Advancement Flap
- Fibrin Glue / Fistula Plug
- Diversion / Proctectomy
Setons
Other Surgical Options for Fistulas

• Cutting Seton

• Diverting Ileostomy
  – Does not alter course of disease
  – Only a small percentage get restoration of the intestinal continuity
    • 6 / 29 (21%)\(^1\)
    • 2 / 21 (9.5%)\(^2\)

2- Zelas, Annals Surg 1980
Proctocolectomy

• Despite intensive therapy around 10 -15% of patients with perianal Crohn’s disease will come to proctectomy.

• Rate of proctectomy at Mayo was 8.4% at 10 yrs and 17.5% at 20 years¹

¹- Wolff, Diseases Colon Rectum 1985
Alternative Therapies

• Local Infliximab Injection
  – Healing of 10/15 patients after 3-12 infusions of 15 to 21 mg
  – Clinical response in 6/11 patients (4/11 maintained healing at 10.5 months)

• Thalidomide

Poggili et al. Dis Colon Rectum 2005
Asteria et al. Scand J Gastroenterol 2006