Fistulizing Crohn’s Disease
Are Fistulas really your FRIEND?

C. Stefan Kenel-Pierre, M.D.
Kings County Hospital Center
Department of Surgery
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History

• 55M c PMHx of HTN, Crohn’s disease
  – Significant perianal disease f/u at OSH
  – Maintained on single agent Asacol as outpt
• Denies history of smoking, ETOH
• No family history of IBD/malignancy

• 2/2013: OR for perforation at splenic flexure
• Returns to KCH for follow up management
• Outpatient GI consultation
  – Recommended small bowel series
• Surgery follow up → patient desired reversal
• Barium enema pre-op
  – Enterocolic fistula
Physical Examination

• Afebrile, normotensive, not tachycardic

• Abdomen
  – Midline wound nicely healed, no fistulae
  – Soft, non-tender/non-distended
  – Colostomy pink, viable, formed stools.

• Buttock
  – Multiple fistulae, purulent discharge
Operative Findings

- Exploratory laparotomy
- Extensive lysis of adhesions
- Enterocolic, enteroenteric fistulae identified
- Sigmoid stump and fistulae were resected
- EBL: 275mL
Postoperative Course

• POD#0-1: in PACU, started on clear liquids
• POD#2: ostomy functional, tolerating diet
• POD#3: discharged home

• Clinic visit POD#9: tolerating diet, healing well
Questions?
During exploratory surgery for presumed appendicitis, the cecum and appendix are found to be normal. The terminal 50 cm of ileum, however, is inflamed, beefy red, and slightly edematous. It is soft, and there is no proximal ileal distention. Which of the following is the most appropriate operative choice?

a) Appendectomy  
b) Resection of involved ileum and the appendix  
c) Placement of irrigation catheters and appendectomy  
d) Closure without appendectomy or ileal resection  
e) Bypass ileo-ascending colostomy
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Background

- Chronic, unremitting inflammatory condition
- First described by Crohn et al. in 1923
- Incidence & prevalence are rising in U.S.
- Slight female preponderance
- Mean age 33-39 years at diagnosis
Clinical Features

- Aphthous ulcers
- Discontinuous, *skip lesions*
- Variable clinical presentation
- Abdominal pain
- Diarrhea
- Weight loss
- Perianal disease
Pathophysiology

- Genetics + trigger + altered immunity
- Etiology
  - Hygiene hypothesis
  - Infection hypothesis
  - “Cold chain” hypothesis
Vienna Classification

• Age at diagnosis
  – A1 < 40 years
  – A2 > 40 years

• Location of disease
  – L1: ileal
  – L2: colonic
  – L3: ileocolic
  – L4: upper

• Disease behavior
  – Inflammatory
  – Stricturing
  – Penetrating
Montreal Classification

- **Age at diagnosis**
  - A1 < 16 years
  - A2 17-40 years
  - A3 > 40 years

- **Location**
  - L1: Ileal
  - L2: Colonic
  - L3: Ileocolic
  - L4: Isolated upper dz

- **Behavior**
  - B1: Inflammatory
  - B2: Stricturing
  - B3: Penetrating
  - P: Perianal dz
A 49 year-old man with Crohn’s disease is found to have recurrent perianal abscesses. He is brought to the OR and found to have a fistula-in-ano. Which of the following is true?

a) The internal openings of fistulae whose external opening is in the posterior quadrants are always in the posterior midline.
b) The most common type of fistula is intersphincteric.
c) Excision of the entire fistulous tract is necessary for cure.
d) Fistulas associated with Crohn's disease are usually lower and less complex than spontaneous ones.
e) Fibrin glue is the most effective means of treating most fistulas.
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Fistulizing Crohn’s Disease

- Fistula formation affects 17-50% of patients
- Classified according to location
  - External
  - Internal
- Perianal dz: initial manifestation in 10%
  - Low/High
  - Simple/Complex
Fistula-in-Ano

- Suprasphincteric
- Intersphincteric
- Transphincteric
- Extrasphincteric
Imaging

- Enteroclysis
- CT
- MRI
- Endoscopic U/S
- Examination under anesthesia
Treatment

- Medical/Pharmacologic
  - Antibiotics
  - 5-ASA
  - Immunomodulators
  - Biologicals
- Surgery
  - Internal
  - External/Perianal
Surgical Treatment

• Indications
  – Complete obstruction
  – Acute perforation
  – Growth retardation
  – Medically refractory disease
Surgical Options

• Fistulotomy
• Seton (cutting/non-cutting)
• Advancement flap
• Fistula Plug
• Diversion/Proctectomy
Medical Management

- Antibiotics
  - Metronidazole, Ciprofloxacin, Rifaximin
- Mesalamine/mesalazine
- Azathioprine/6-mercaptopurine
- Methotrexate/Tacrolimus
- Steroids
- Biological
Biological Therapy

- Infliximab
- Adalimumab
- Certolizumab pegol
ACCENT II

- N= 282 patients
- 3 month history of perianal, trial of 40 weeks
- 69% responded to infliximab at 2, 6, q 8 wks
- After 54 weeks, 46% had sustained response

- Perianal disease recurrent, prone to tx failure
Adalimumab Trials

• CLASSIC I (TNF antagonist-naïve pts)
  – Clinical symptoms: all dosing regimens better
  – Remission: high dose superior (36 vs 12%)

• GAIN (Infliximab non-responders)
  – 21% remission
  – ~50% had clinical benefit
Step-Up vs Top-Down
Why Not Biologics?

- Infections
- Infusion reactions
- Reactivation of latent TB
- Increased risk of lymphoma
- Hepatosplenic T-cell lymphoma
Risk Factors for Recurrence

- Smoking
- Short disease duration prior to surgery
- Disease > 100 cm
Future of Treatment

- Novel therapies
  - Sargramostim (granulocyte-macrophage CSF)
  - Adsorptive carbon

- Personalized therapy: who? what? when?
  - Serology
  - Genetics
Summary

• Fistulae major problem in Crohn’s, up to 50%
• No role for 5-ASA or steroids in perianal dz
• Biologic therapy is effective in fistulizing dz
• ‘Top-Down’ approach gaining support
• Surgery in select cases
• Optimal tx algorithm is multidisciplinary
• A 23 year old male who is an active smoker and drinker asks about his relative risk of developing inflammatory bowel disease. You tell him:

a) “You are at increased risk for ulcerative colitis, stop.”
b) “You are at increased risk for Crohn’s disease, stop.”
c) “You are at increased risk for both UC and CD, stop.”
d) “You are fine... smoke and drink the night away.”
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References

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