INFLAMMATORY BOWEL DISEASE IN CHILDREN

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INFLAMMATORY BOWEL DISEASE IN CHILDREN
CHILDREN ARE DIFFERENT!
INFLAMMATORY BOWEL DISEASE IN CHILDREN

- Diagnosis
- Indications for surgery
- Surgical options
- The role of minimally invasive surgery
- Psychosocial considerations
- Outcomes
CASE 1

• Nine year old Portuguese boy, small for age
• 3 week history of crampy abdominal pain
• 2 day history of right lower quadrant pain
CASE 1

- Nine year old Portugese boy, small for age
- 3 week history of crampy abdominal pain
- 2 day history of right lower quadrant pain
- Admitted to hospital, noted to be anemic
- No change for 3 days
- Taken to operating room
• Diagnosis of “ileitis” and appendicitis
• Pathology consistent with Crohn’s disease
• Treated medically
PRESENTATION OF IBD IN CHILDREN MAY BE ATYPICAL

- Nonspecific abdominal pain or diarrhea
- Anemia
- Joint pain
- Recurrent anal fistulae or fissures
- Delayed onset of puberty
- Growth failure
CASE 2

- Fourteen year old boy with ileocelecal Crohn’s disease
- Controlled on prednisone 30 mg/day
- Recurrent symptoms if dose decreased
- Complaints:
  - Younger brother bigger than him
  - No signs of puberty
  - Cushingoid
  - Warming the bench during basketball season
Is surgery indicated?
INDICATIONS FOR SURGERY

• Complications of the disease
  – Bleeding
  – Perforation
  – Obstruction

• Failure of medical management
  – Continued symptoms
  – Adverse drug effects
INDICATIONS FOR SURGERY

- Complications of the disease
  - Bleeding
  - Perforation
  - Obstruction

- Failure of medical management
  - Continued symptoms
  - Adverse drug effects
  - Unknown long-term drug effects
  - Growth failure
CASE 2

• Preoperative preparation
  – Nutrition
  – Wean steroids

Bowel rest

TPN

Enteral feeds
CASE 2

- Preoperative preparation
  - Nutrition
  - Wean steroids

Bowel rest

TPN

Enteral feeds
CASE 2

Initial response: “No #*@$@*# way I’m putting one of those things in my nose!!”

Week 1: “This isn’t as bad as I thought”

Week 2: Back to school, tube feeds at night

Week 3: “You want to see how fast I can put it down?”

Week 4: Off steroids

Week 5: Ileocelecal resection with uncomplicated postoperative course
CASE 2

- Preoperative preparation
  - Nutrition
  - Wean steroids
  - Abscesses
CASE 2

• Preoperative preparation
  – Nutrition
  – Wean steroids
  – Abscesses

• Localization of diseased bowel
  – Endoscopy and colonoscopy
  – UGI and follow-through
  – MR enterography
Goal of surgery is relief of symptoms
SMALL BOWEL CROHNS DISEASE: PRINCIPLES

- Remove severely involved bowel
- Leave in grossly involved bowel that is not felt to be causing symptoms

- Anastomosis vs ileostomy

- Strictureplasty for multiple short segments
LAPAROSCOPIC-ASSISTED ILEOCOLIC RESECTION
LAPAROSCOPIC-ASSISTED ILEOCOLIC RESECTION
LAPAROSCOPIC-ASSISTED ILEOCOLIC RESECTION

- No difference in narcotic use, time to full diet
- No difference in complications
- Shorter hospital stay
- Better cosmetic result

Diamond & Langer, JPGN 2001
STRICTUREPLASTY
LAPAROSCOPIC ILEOCOLIC RESECTION + STRICTUREPLASTY
CASE 3

• Five year old girl
• Two-year history of ulcerative colitis
• Uncontrolled on prednisone and 5-ASA

• Issues
  – Timing of colectomy
  – What operation?
COLECTOMY IN THE YOUNG CHILD

• Long-term effects of drug therapy
• Cancer risk
• Psychological considerations
  – Body image and stoma acceptance
• Greater uncertainty about the diagnosis
  – Crohn’s vs UC
ULCERATIVE COLITIS VS CROHNS?

- Distribution of the disease
- Anal involvement
- Small bowel involvement
- Biopsies
ULCERATIVE COLITIS

Goal of surgery is cure
ULCERATIVE COLITIS: OPTIONS

- Total proctocolectomy with permanent ileostomy
- Sphincter-preserving “restorative” proctocolectomy
  - with ‘J’ or ‘S’ pouch
  - with straight pull-through
PROCTOCOLECTOMY WITH ILEOSTOMY

- Remove sphincter (permanent)
- Preserve sphincter
“RESTORATIVE” PROCTOCOLECTOMY

- Hand-sewn
- Stapled
J-POUCH: HOW MANY STAGES?

- One stage
- Two stage
  - Colectomy and pouch with loop ileostomy
  - Ileostomy closure
- Three stage
  - Colectomy with ileostomy
  - Pouch with loop ileostomy
  - Ileostomy closure
INDICATION FOR STAGING
(MY OPINION)

- One stage – Polyposis
- Two stage – Most cases
- Three stage
  - Sick, malnourished
  - High dose steroids
  - Unclear pathology
  - Very young child
LAPAROSCOPIC COLECTOMY
LAPAROSCOPIC COLECTOMY

- Earlier ileostomy function
- Earlier oral intake
- Longer operative time
- No difference in hospital stay or narcotic use
- No difference in complications

Proctor et al, JPS 2002
STRAIGHT PULLTHROUGH VS POUCH?

Rintala & Lindahl, JPS 1996
Stool frequency per 24 hr

During day

During night

STRAIGHT PULLTHROUGH VS POUCH?

Multi-centre review of 250 cases from 3 centres

Seetharamaiah et al, JPS 2009
STRAIGHT PULLTHROUGH VS POUCH?

Seetharamaiah et al, JPS 2009

Stool frequency per 24 hr

During day

During night

Pouchitis/ileitis
STRAIGHT PULLTHROUGH VS POUCH?

Incontinence rate at 24 months

Seetharamaiah et al, JPS 2009
STRAIGHT PULLTHROUGH VS POUCH?

- Meta-analysis of 13 studies involving children
- Short term adverse events similar
- Perianal sepsis more common with straight pullthrough
- “Pouch” failure more common with straight pullthrough
- Stool frequency lower with pouch

Tilney et al, JPS 2006
INFERTILITY

Waljee et al, Gut 2006
CROHNS COLITIS

Goal of surgery is relief of symptoms
CROHNS COLITIS: OPTIONS

• Colon and rectum out, permanent ileostomy
• Colon out, leave rectum in with ileostomy
• Colon out, leave rectum in with anastomosis
• Segmental resection (rare)
• Loop ileostomy
THE PROBLEM OF “INDETERMINATE” COLITIS

• 10% of children with idiopathic colitis

• Difficult call, particularly < 10 years of age

• “Cautious” good results from restorative proctocolectomy
CASE 4

• 9 year old girl
• Persistent anal pain and drainage
• Seen by general surgeon in another country, skin tags noted and biopsied
• Worsening symptoms
CASE 4
ANAL CROHNS DISEASE

- DDx
  - Chronic granulomatous disease
  - Infections like TB
- Workup for extent of disease
- As little anal surgery as possible
- Abscess drainage
ANAL CROHNS DISEASE: ROLE OF ANTI-TNF DRUGS

- Evidence of efficacy
- Ensure no active sepsis
- Drain or seton to prevent recurrent abscess
ANAL CROHNS DISEASE

- Workup for extent of disease
- As little anal surgery as possible
- Abscess drainage

- Defunctioning ileostomy
- Total proctocolectomy and permanent ileostomy
CASE 5

• Ten year old boy with 4 year history of Crohns

• Steroid-induced osteoporosis, myopathy, cataracts

• Hospital admission every 1-2 months
CASE 5
EFFECT OF IBD ON FAMILY DYNAMICS

• Father left when illness began
• Child shifted between parents in different cities
• Ileocecal resection, followed by anastomotic leak and prolonged course
• During hospitalization, sibling alone with Aunt
• Over 4-year illness, missed two years of school
PSYCHOSOCIAL ISSUES

- Body image and sexuality
- Control and independence
- Effect of chronic illness on well siblings
- School
- Development of social skills and interactions
Over 70,000 Canadians have an ostomy
Most Canadians don’t even know what an ostomy is

It’s about time we stopped covering up

For more information go to www.ostomycanada.ca
LONG TERM OUTCOME AFTER SURGERY FOR CROHNS DISEASE

• Rule of thirds
  – 1/3 long term improvement
  – 1/3 5-10 years improvement
  – 1/3 early recurrence

• 90% of children need further surgery

• Role of cipro/flagyl/5-ASA/azathioprine?
LONG TERM OUTCOME AFTER SURGERY FOR ULCERATIVE COLITIS

- Cured of ulcerative colitis
- Pouchitis
  - 30-50% incidence
  - 5% severe
- Excellent long term continence and quality of life
- Increased risk of infertility
THANK YOU FOR YOUR ATTENTION!