Pouch surgery a surgeons view

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We wanted the army guy, not the gastroenterologist.
Ileal pouches

- Ulcerative colitis
- Familial adenomatous polyposis
- Crohn’s disease
- Chronic constipation
Indications for surgery in UC

- Acute fulminant colitis
- Chronic symptoms refractory to medical treatment
- Dysplasia
- Cancer
- PSC liver transplantation
Surgery for ulcerative colitis

- Total colectomy and ileostomy
- *Subtotal and ileorectal anastomosis*
- Proctocolectomy with end ileostomy
- Kock continent ileostomy
- Ileal pouch-anal anal anastomosis
Acute ulcerative colitis

- Poorly patients
- Low Hb, septic
- Low albumin
- High dose steroids
Acute colitis

- Subtotal colectomy
- Laparoscopic *or open*
- Long rectal stump

No place for panproctocolectomy or restorative proctocolectomy in the acute setting
Subtotal colectomy
Proctocolectomy with end ileostomy

- Eradicates disease
- Perineal wound
- Permanent ileostomy
Proctocolectomy
Ileal pouch-anal anastomosis

Straight ileoanal anastomosis

Nissen 1933
Best 1952
Ravitch & Sabistion 1955

Continent ileostomy

Koch 1969

Park & Nicholls 1978

Ileal pouch-anal anastomosis
Rudolf Nissen
Berlin Chirurgical Society 1933
Straight ileo-anal anastomosis

- Frequency of bowel movements 8-15/24h
- Faecal soiling
Ileal pouch-anal anastomosis

Straight ileoanal anastomosis

Continent ileostomy

- Nissen 1933
- Best 1952
- Ravitch & Sabiston 1955

Ileal pouch-anal anastomosis

Koch 1969

Park & Nicholls 1978
Intra-abdominal “Reservoir” in patients with permanent ileostomy
Preliminary observations on a procedure resulting in fecal
“Continence” in five ileostomy patients
Nils G. Kock Arch Surg 1969
Kock continent ileostomy problems

- Stomal stenosis
- Unfolding of nipple valve
- High failure rate
Valve angulation in a Kock reservoir
Food concretions within a Kock reservoir
Ileal pouch-anal anastomosis

Straight ileoanal anastomosis

Continent ileostomy

Nissen 1933
Best 1952
Ravitch & Sabiston 1955

Ileal pouch-anal anastomosis

Koch 1969
Park & Nicholls 1978
Proctocolectomy without ileostomy for ulcerative colitis.
A G Parks and R J Nicholls
S pouch

- Long efferent spout
- Self intubation in up to 50% of patients
Difficult reach
Ileal J pouch
- Dr Utsonomiya (Japan)

- 2 limbs of ileum
- Quick and simple
- Most popular
W pouch

- Capacious pouch
- Hand sewn
- Good function
J or W pouch?
Open IPAA vs Lap IPAA
Laparoscopic Ileal pouch procedure
Advantages and disadvantages of the laparoscopic approach

- Smaller wounds
- Reduced blood loss
- Less pain
- Faster recovery
- Hernias
- Adhesions
- Fertility

- Longer operation
- Learning curve
- ‘Off camera’ injury
- Long term outcome data
Questionmarks

• Low dissection

• Multiple staple lines

• Pouch orientation
Loop ileostomy or not?

- Reduce serious consequence of leak
- But
  - Difficult to form
  - Often poor spout
  - High output
  - Difficult closure
No loop ileostomy

Criteria

• No steroids
• Good pouch
• No tension
• -ve leak test
Results UHB 2005-09

Total
n=20

LRPC
n=13

stoma
n=6

no stoma
n=7

LRP
n=7

no stoma
n=6

stoma
n=1

stoma
n=6

no stoma
n=7

no stoma
n=6

stoma
n=1
Results UHB 2005-09

• 20 patients  (M:F = 7:13)

• Median age  30 (16-67) years

• Urgency of surgery
  • Elective  17
  • Emergency  3

• Conversion rate 2/20(10%)
## Intra-operative data (n=20)

<table>
<thead>
<tr>
<th></th>
<th>minutes (range)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Median operating time</strong></td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>240 (150 - 390)</td>
</tr>
<tr>
<td>LRPC</td>
<td>270</td>
</tr>
<tr>
<td>LRP</td>
<td>200</td>
</tr>
<tr>
<td><strong>Conversion (rate)</strong></td>
<td>1 (5%)</td>
</tr>
<tr>
<td><strong>Intra-operative complications</strong></td>
<td>none</td>
</tr>
<tr>
<td><strong>Median blood loss in mls (range)</strong></td>
<td>100 (10-250)</td>
</tr>
</tbody>
</table>
## Length of stay

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Overall</th>
<th>With Stoma</th>
<th>Without Stoma</th>
</tr>
</thead>
<tbody>
<tr>
<td>LRPC (n=13)</td>
<td>13 (5-30)</td>
<td>11 (5-15) (n=6)</td>
<td>12 (6-30) (n=7)</td>
</tr>
<tr>
<td>LRP (n=7)</td>
<td>7 (3-14)</td>
<td>7 (n=1)</td>
<td>9.5 (3-14) (n=6)</td>
</tr>
</tbody>
</table>
Functional Outcomes - QEH

- Pouch Frequency / day of 16 patients
  - average: 6
  - range: 1-10
  - median: 5

- Pouch Frequency / night of 7 patients
  - average: 3
  - range: 0-5
  - median: 2

- incontinence: 0
- urgency: 0
- constipation: 1
Fertility and ileal pouch surgery

- Systemic review and meta-analysis
- Infertility-achieving pregnancy in 12 months of attempting conception
- Threefold increase in infertility after IPAA
- Increase from 15% to 48% in women post IPAA

Waljee et al, Gut, 2007; 56: 735
Fertility after laparoscopic IAPP

- 21 women laparoscoped at ileostomy closure
  - 15 (71%) no adnexal adhesions
  - 5 filmy adhesions 1/3 one adnexa
  - 1 filmy adhesions 1/3-2/3 one adnexa
  - 0 patients with adhesions to both

Incisional herniae

- 155 open 165 lap
- IH at 5 years
- 19 (13%) lap vs 53 (33%) open P<0.001
- CLASSIC trial
- Trends towards reduced IH and AIO in lap group
Adhesions after IPAA

- 34 patients laparoscopic evaluation at ileostomy closure
- 23 (68%) no abdominal wall adhesions
- 11 filmy avascular adhesions
- 0 dense adhesions

Total intracorporeal IPAA
Surgical approaches

- Open surgery
- Laparoscopic hand assisted
- Robotic surgery
- Trans-anal surgery
Robotic surgery
Robotic surgery - endowrist
Trans-anal surgery

• Addresses access issues in a narrow pelvis
• New procedure
• Outcomes need evaluation
How do I decide?

Proctocolectomy & pouch
  Laparoscopic approach

Proctectomy & pouch
  Laparoscopic
  Robotic
  Transanal
Choose your hospital and surgeon

- Not a ‘common’ procedure
- Centers with ‘high’ volumes
- Surgeons who have high volumes
What should your surgeon tell you?

- Describe the operation
- Explain the risks
general and specific
- Discuss ileostomy
- Describe the functional outcomes
- Pouch failure & longer term complications
Information

- Colorectal nurse specialist
- Information leaflets DVDs
- Patient contact
Risks: general

• Cardiovascular
• Respiratory
• Thromboembolism
Risks: specific

- Bleeding
- Infection-wound
- Leaks
- Sepsis
- Nerves
- Fertility
Functional outcomes

- Frequency
- Urgency
- Continence
Longer term outcomes

- pouchitis
- sepsis
- fistula
- Crohn’s disease
- pouch failure
The ileal-pouch anal anastomosis
Double stapled IPAA
- operative technique
Ileal pouch-rectal anastomosis