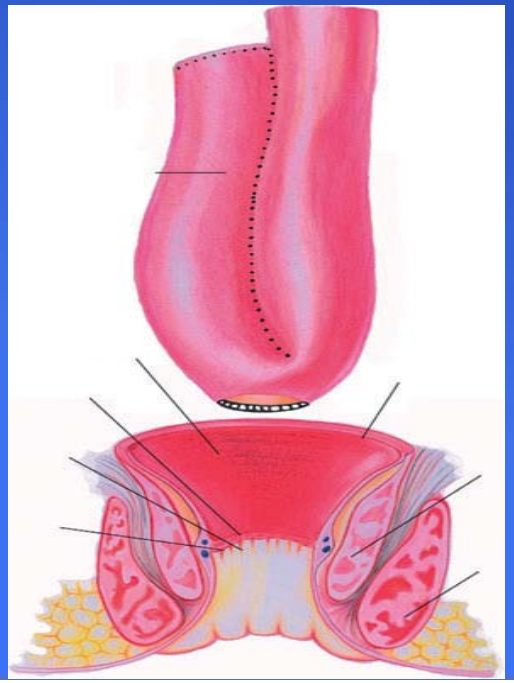
The positives and negatives of pouches

The Gastroenterologist's viewpoint



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Glossary

- **Colectomy**- removal of colon
- **Dysplasia**- abnormal cells that can become cancerous
- **Ileum-** name of part of small intestine
- **Ileal pouch anal anastomosis** -operation offered to ulcerative colitis patients when removing colon
- **J pouch-** shape of the pouch
- **Ostomy/stoma**- any opening from an organ (intestine) to skin

Who may require a Colectomy?

- Surgery is an important therapeutic tool for IBD
- 1/3 of patients with ulcerative colitis may require surgery

This may be due to

  - Persistent activity of disease despite maximal medication
  - Dysplasia- achange in the intestinal cells that may lead to cancer

- Patients with “Familial adenomatous polyposis”- FAP
  - Inherited condition, 100 polyps
  - If left untreated may develop cancer by age 30-40

What are the surgical operations?

- 3 operations may exist

1. Conventional proctocolectomy
    1. Removal of colon and formation of stoma
2. Restorative Proctocolectomy with ileo-anal pouch
    1. Joining ileum to anus
3. Ileo rectal anastomosis
    1. Only suitable if no dysplasia or inflammation

What is a Pouch?

- A pouch may be formed to
  - Maintain continuity of the bowel
  - Form a reservoir to maintain continence
  - To improve quality of life

What is the surgical procedure?

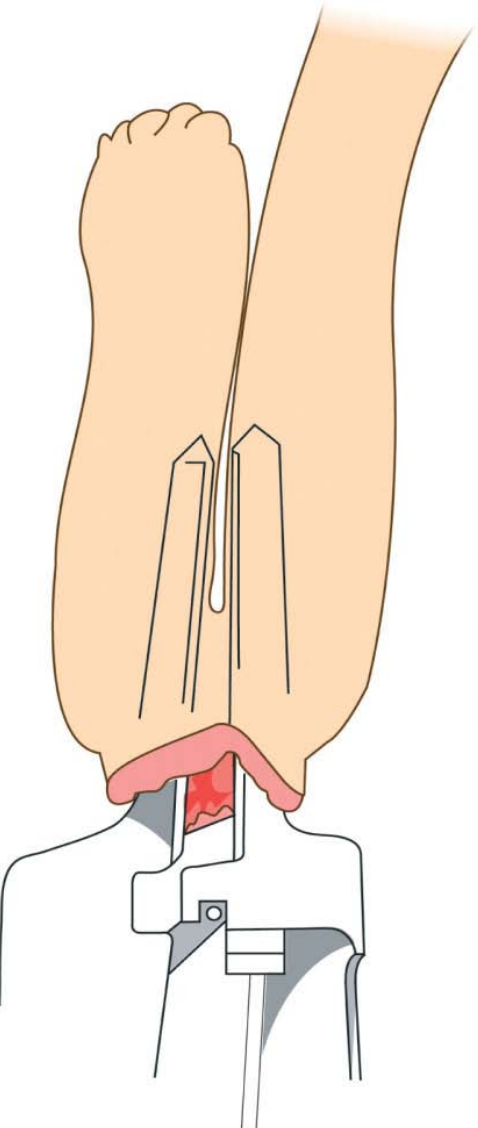
- The J pouch procedure is performed in stages
- This allows healing and produces best long term outcome
- Process may take anywhere from 4 to 12 months

Stage 1

- Colectomy-
  - the 1 st stage is removal of colon with rectum in place

- Surgeon creates a temporary stoma
  - opening in the abdominal wall for a bag ileostomy
    - This empties digested food from the small intestine

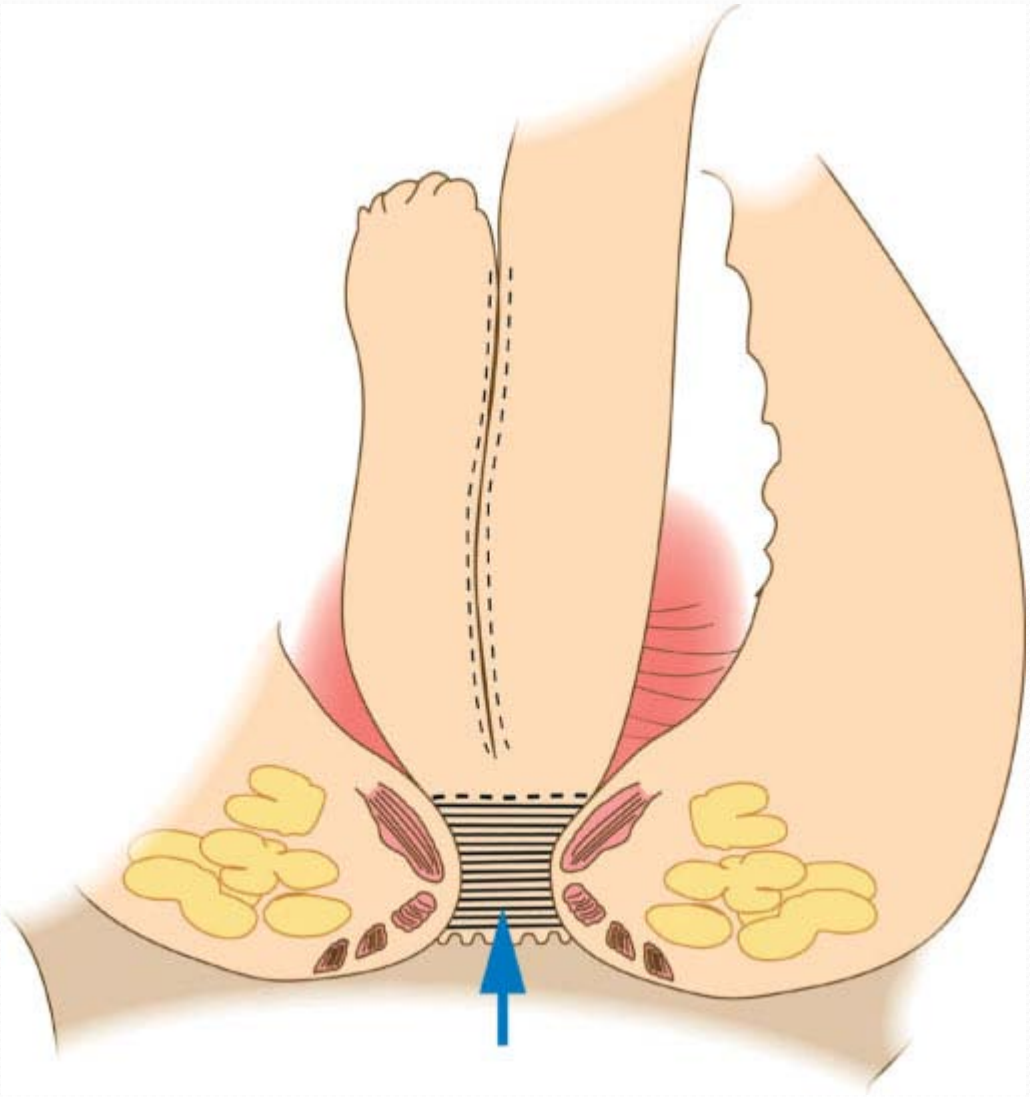
Stage 2- Construction of an ileal J pouch



- Construction of a reservoir by pulling down 30-40 cm of ileum
- Serves as storage of the digested food

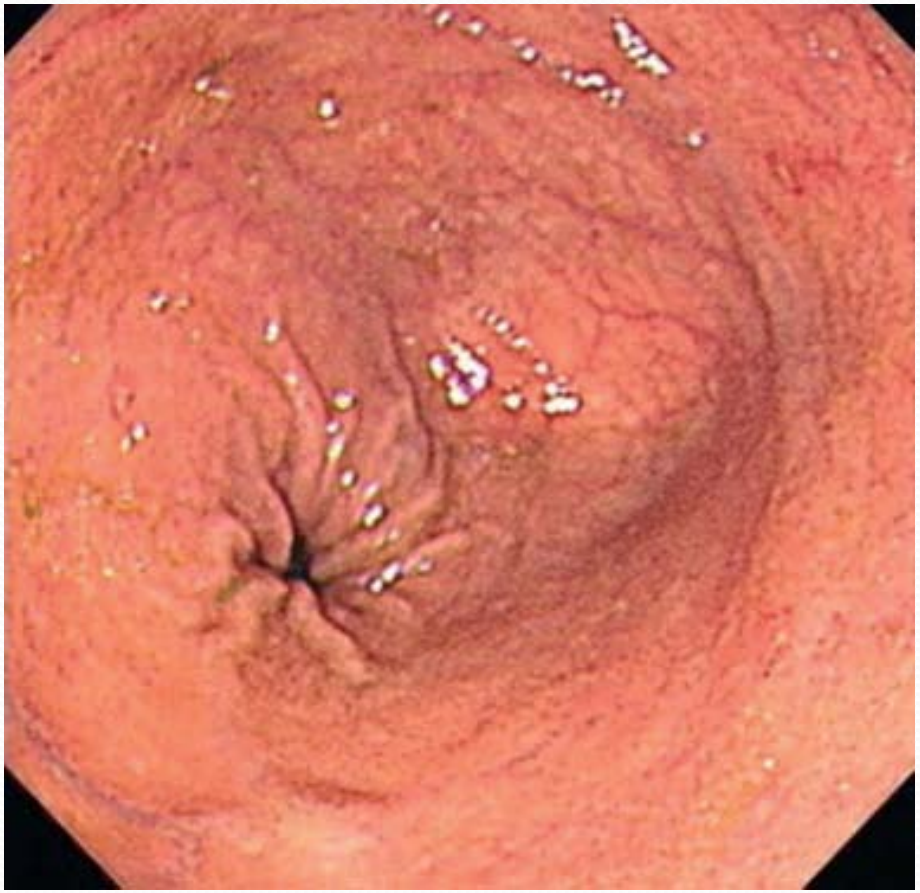
BSJ 2007

Stage 3- Pouch connected to top of anal canal



Attachment to anus
In some cases a small area of rectum may remain

Healthy pouch on Endoscopy



Normal pouch function

- Following pouch surgery over 20 years
  - stool frequency 4-8 per 24 hrs
  - Urgency uncommon
  - Faecal leakage daytime 4%
  - Faecal leakage nightime 4% at 10 yrs
    - May increase slightly at 25 years

APT 2008

Medical aspect of Pouch

- Bones
- Metabolic
  - Iron, B12, Folate
- Pouch function
- Dysplasia

Reminder of positive aspects of Pouches

- Studies have shown that people with pouches have same quality of life as general population
  - Better than having an intact “sick colon”
- Avoidance of powerful immune suppressing medication
- Allows continuity of the bowel
- Resume normal work, social and sexual activity

What are the causes of stool frequency?

- There are various causes of stool frequency

- Not all are due to inflammation or “pouchitis”

What are the causes of Pouch Dysfunction?

Cause	Mechanism	Symptoms
Mechanical	Stricture- narrowing Anal Sphincter weakness Small volume pouch	Small volume stool Incomplete emptying
Inflammatory	Pouchitis, Infection- bacterial/viral/ fungal Inflamed cuff (rectal remnant)	Increased frequency Urgency Abdominal pain
Functional	"Irritable Pouch Syndrome"	Increased frequency Urgency Abdominal pain
Non pouch	Medication- NSAID Bile salt diarrhoea Small bowel bacterial overgrowth Coeliac disease Pancreatic diarrhoea	

What is pouchitis?

- Inflammation in the ileal pouch
- Can develops in 1/2 of cases
- Intensity fluctuates
- Symptoms include:
  - frequency, urgency and liquid stool

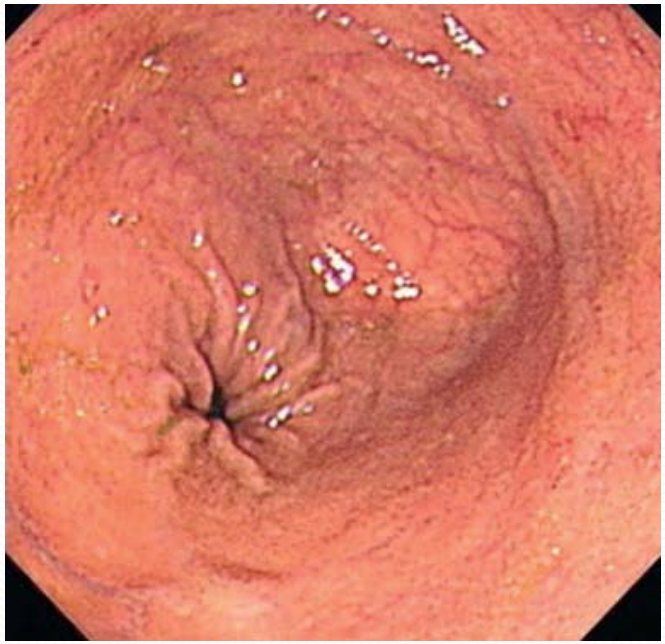
ECCO guidelines

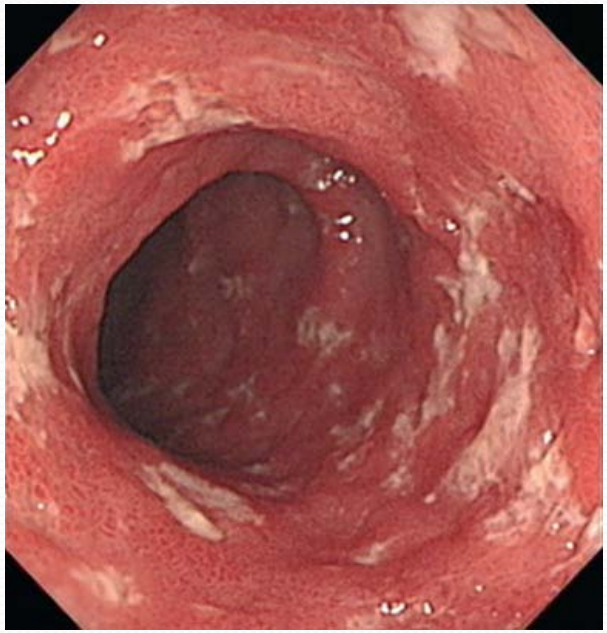
How is it diagnosed?

- Symptoms
- Examination
- Pouchoscopy- Examination of the pouch with endoscope
  - Biopsies of the lining of the pouch

ECCO guidelines

What is pouchitis?





What is the classification of pouchitis?

- Acute< 2 wks Chronic >4 weeks
- Frequency
  - infrequent 1/yr
  - relapsing 1-3 episodes/yr
  - continuous
- Antibiotics responsive or unresponsive

ECCO guidelines

Risk factors for pouchitis

- Ulcerative colitis not FAP
- Primary sclerosing cholangitis
  - (an autoimmune bile duct condition)
- Nsaid (anti-inflammatory medication)
- Genetic: il-1 ra. Card 15, tnf genes- experimental only
- Immunological tests - p anca
- Extensive disease

Treatment

- Rule out other causes eg anti-inflammatories, infection
- Majority of patients respond to a two week course of antibiotics
- Pouchitis can recur in ½ of patients
  - May require a combination of 2 antibiotics for one month

Chronic Pouchitis

- 1 in 10 people may develop this
- Require long-term continuous antibiotics
- Some people develop refractory pouchitis
  - do not respond to antibiotics.

Chronic Pouchitis

- Other options:
  - Steroids eg budesonide
  - Immunosuppressive medications
    - Azathioprine
    - infliximab
  - Very rarely may need to remove the pouch.

What is the cause of pouchitis?

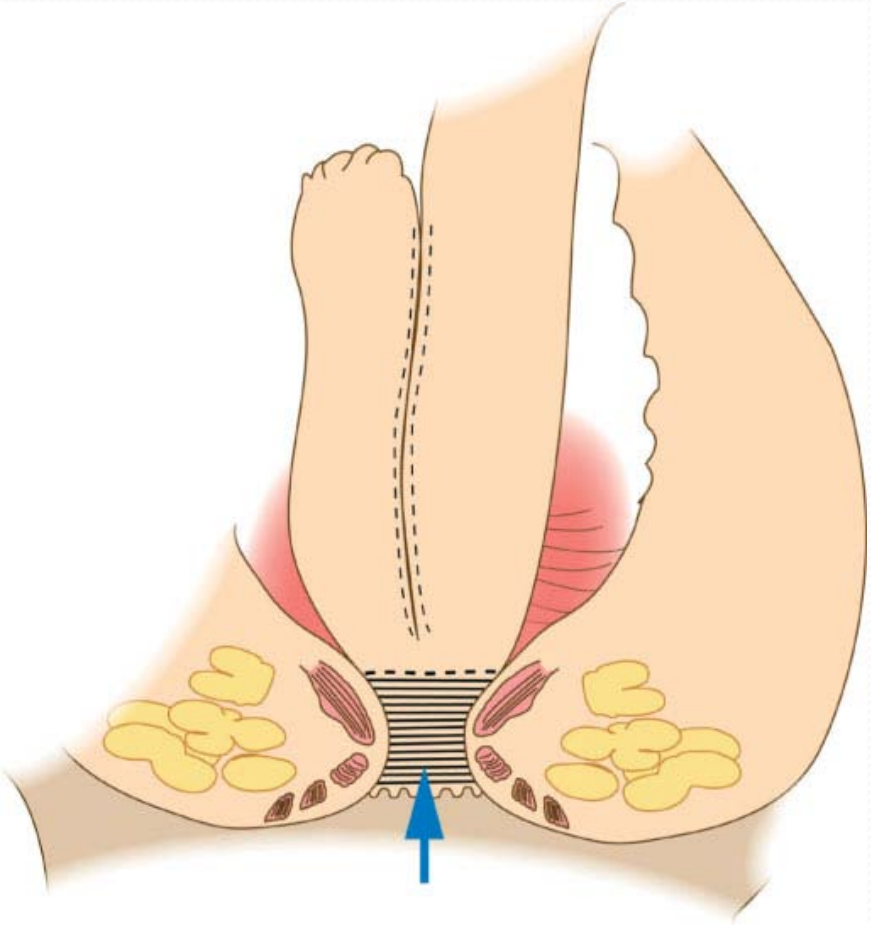
- Cause and process unclear
- Occurs almost exclusively in ulcerative colitis patients
- Generally responds to antibiotics

Shen et al am j gastroenetrol 2005

What is the cause of pouchitis?

- Suggests an infectious cause in genetically susceptible people
  - Change in the type of bacteria that inhabits the intestine

Cuffitis



Inflammation of the remaining rectal tissue
“rectal cuff”

Cuffitis

- Inflammation of the connection between intestinal tissue and the rectum

- Treated with the same medications used to treat ulcerative colitis
  - Eg mesalasine suppository

What about VSL3?

- Probitoics may be effective in preventing pouchitis
- Vsl3 given at a dose 6g/day
- Contains lactobacillus, 3 bifidobacterium sp, streptococcus salivarius, thermophiulus

VSL3 to maintain control

- 9 month trial of 40 people
  - Whohad all responded to 1 month of antibiotics

- Probiotic group 3/20 pouchitis

- Placebo group 20/20 pouchitis

- In the 17 who did not develop pouchtitis,
  - all relapsed within 4 months of stopping vsl3

VSL3 to prevent pouchitis

- 40 patients started on VSL3 after pouch formation were followed for 12 months

- VSL3 2/20 developed pouchitis

- Placebo 8/20 developed pouchitis

How does VSL3 work?

- Vsl3
  - Increased range or spectrum of bacterial population in intestine
  - May reduce the fungal spectrum in the intestine

IRRITABLE POUCH SYNDROME

- Newly described functional disorder

- Exclude other causes 1st
  - Mechanical, inflammatory, other non pouch causes of diarrhoea

IRRITABLE POUCH SYNDROME

- Compared symptoms after distending
  - Pouches in UC patients
  - Rectum in health volunteers
- Pouch patients
  - lower volume threshold for stool sensation
  - poorer ability to stretch
  - more frequent abdominal pain

Irritable Pouch Syndrome

- Can perceive gas, urge to defecate and pain at lower thresholds than others
  - That is called “Visceral hypersensitivity”
  - Overlap with Irritable bowel syndrome

Shen et al 2005

Irritable pouch syndrome Treatment

- Management
  - Anti diarrhoeals- Codeine, Loperamide
  - Anti spasmodic- mebeverine
  - Neuropathic (agents affecting nerves)- amitryptilline
  - Diet- wheat or dairy restriction, reduction caffeine, alcohol
  - Psychological- anxiety, stress, depression
- Timing of meals: not eating late in the evening
- Biofeedback may encourage a better bowel regimen

Bile acid malabsoprtion

- Has been associated with pouch dysfunction
- Reduced absoprtion of bile salts in the ileum
  - Due to bacteria population change and change to intestinal lining
- Not able to absorb fat
- Loose, pale, oily stool

Long term outcome of Pouches

- Most patients have an excellent outcome
  - Low failure rate at 20 yrs
  - Long term stool frequency is stable over 20 yrs
  - minor decline in continence with time

- Have the same quality of life as that of general population

European evidence-based Consensus on the management of ulcerative colitis: Special situations

Livia Biancone, Pierre Michetti, **Simon Travis**.,1, Johanna C. Escher,Gabriele Moser, Alastair Forbes, Jörg C Hoffmann, Axel Dignass,Paolo Gionchetti, Günter Jantschek, Ralf Kiesslich, Sanja Kolacek,Rod Mitchell, Julian Panes, Johan Soderholm, Boris Vucelic, Eduard Stange.,1

European Crohn's and Colitis Organisation

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Questions?