# Surgical management of Inflammatory bowel disease

- indication of surgical intervention
- under stand the risk involved
- option and rationale of surgical treatment

* it's not only Surgical disease → many Specialists are involved

# Multi-disciplinary care

- Named personnel comprising
  - gastroenterologists,
  - colorectal surgeons
  - clinical nurse specialists,
  - dietician,
  - pathologist
  - GI radiologist
  - pharmacist,
- Access to
  - a psychologist/counsellor, rheumatologist, ophthalmologist,
  - dermatologist, obstetrician, nutrition support team, a paediatric gastroenterologist
  - gastroenterology clinical network, general practise

# Surgical management of Ulcerative colitis

disease of rectum and colon

# Risk of Surgery / UC

- 20 – 30 % of patients will require surgery
- 5-10 % present with acute sever colitis
  - Severe Bloody diarrhea
- 30 % of sever case will require emergency surgery → if No Surgery → He may die
- After acute severe ulcerative colitis 50% with incomplete remission with steroids will require colectomy within 1 year.

# Acute Sever Colitis

- 6 bloody stools/day
- Abdominal tenderness
- signs of systemic Toxicity (HR>90, T>37.8, Hb#10.5 or ESR>30
- Anemia → getting worse
- Fulminanat colitis ( stool > 10 / day , Anemia requiring transfusion , signs of systemic toxicity , abdominal distension, tenderness , fever and leukocytosis.

*Truelove and Witts' criteria , Br Med J. 1955*
*Sands BE J Gastrointestinal Surg. 2008*

- Colectomy rate about 30 %
- Rate of Colectomy did not change in last 40 years

*Turner D, et al Gastroenterol Hepatol 2007*

| | Mild | Moderate | Severe |
|---|---|---|---|
| 1. Number of evacuations/day | ≤4 | 5 | ≥6 |
| 2. Bright-red blood in stool | ± | + | + + |
| 3. Temperature (°C) | Normal | Intermediate values | Average temperature at night >37.5 °C or ≥37.8° C in 2 days within 4 days |
| 4. Pulse (bpm) | Normal | Intermediate | >90 bpm |
| 5. Hemoglobin(g/dL) | >10 | Intermediate | ≤10.5 |
| 6. *HSS (mm,1st hour) | ≤30 | Intermediate | >30 |

*HSS : Hemosedimentation speed

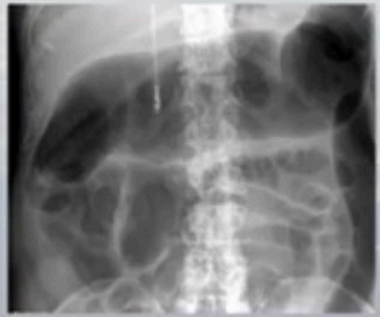
**FIGURE 2.** Classification of nonspecific ulcerative colitis (UC) according to severity of acute episode (Truelove & Witts[93])

# Rule of Surgery in Acute Presentation

Why do we do Surgery?

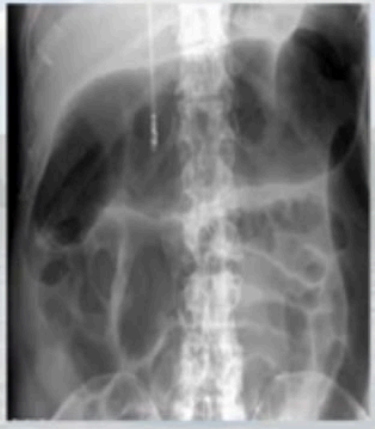
- Perforation
- Haemorrhage
- Toxic megacolon (diameter >5.5 cm, or caecum >9 cm)
  - Systemic toxicity
  - Steroids mask clinical picture. → Perforation without Pain So contraindicated
- Failed medical treatment

dilated



# Colectomy in Acute presentation

- Up to 40 % mortality for **perforation**
- 2-8 % mortality if before perforation



So we Prefer Surgery before getting acute Presentation

# Rule of Surgery in Acute Presentation . Cont.

Patient come to ER with → what do we do ?

- GI team care. Surgeon aware.
  - Routine bloods ( CBC/ U&E's / CRP/Albumin)
  - Regular abdominal exam
  - AXR → Abdominal X Ray
  - Stool for bacteriology/ C diff / CMV
  - +/- Flexible sigmoidoscopy → Not colonoscopy , But simple Sigmoidscopy
  - DVT prophylaxis

if all good ? we go to Medical treatment , if Not good ? Surgery

- IV steroids

→ Patient gets better in 5 days ? yes → good , Keep doing tests to assess Prognosis

Not getting better → He will not get better , Surgery is needed

## *Rule of Surgery in Acute Presentation . Cont.*

- A stool frequency of >8/day or CRP >45 mg/l at **3 days** appears to predict the need for surgery in 85% of cases

*Travis, S. P. Let al Gut. 38(6):905-910, June 1996.*

- Intravenous steroids are generally given for up to **5 days**. There is no benefit beyond 7-10 days

*Turner D et al Clin Gastroenterol Hepatol 2007;5:103e10.*

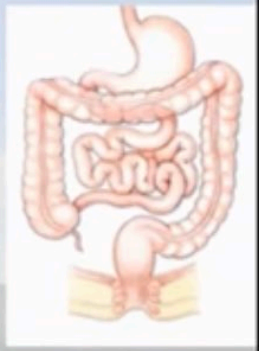
## Rule of Surgery in Acute Presentation . Cont.

- Day 1
- Day 3 : Surgery Discussed / Stoma therapist input.
- Day 5

→ Patient is emotional Prepared for Surgery

- → Consideration of **colectomy** or **rescue** therapy with either intravenous cyclosporine OR Biologic

# Surgery in Acute presentation cont.



options for Surgery? 123

1. Proctocolectomy and Ileostomy ↓ long Surgery
   - High mortality
   - Permanent stoma
   - Pelvic dissection / nerve damage / sepsis
2. Proctocolectomy and Pouch → Long Surgery

Best operation for acute colitis ↓ ↓ good for both UC and chron's

3. Subtotal Colectomy and Ileostomy → 20 mins fast Surgery

# Subtotal Colectomy and Ileostomy

- ~ 3% mortality → if No Perforation, higher if perforated
- ~ 2 -12 % rectal stump blowout.
- Close stump / Mucus fistula / SC Stump

Advantage

  - Confirm diagnosis
  - Off medication
  - Improve nutritional status → Normal eating Post op

- 6 months to next stage. → then we might do the long Surgeries

## Options after surgery for acute colitis

- Ulcerative colitis / Indeterminate
  - Completion proctectomy and Pouch
  - Completion proctectomy and end ileostomy
  - Completion proctectomy and Continent ileostomy
- Crohn's Disease ? ……

→ Not emergent

# Elective Surgery for Ulcerative Colitis

↳ why? 1 2 3 4 5

1. Medical Intractability ? Failed medical treatment
   - MDT → after we try multi disciplinary treatment
2. Chronic disease
   - Quality of life
   - Off work / Hospitalization
   - Never remission / Anemia / Amenorrhea/ ,malnutrition
3. Steroid dependence / refractory
4. Extra-alimentary manifestation
5. Malignancy → risk

- Extra intestinal Manifestations
  - Peripheral arthritis
  - Uveitis
  - Iritis

Respond to colectomy

  - Ankylosing spondylitis
  - Sacroilitis
  - Primary sclerosing cholangitis

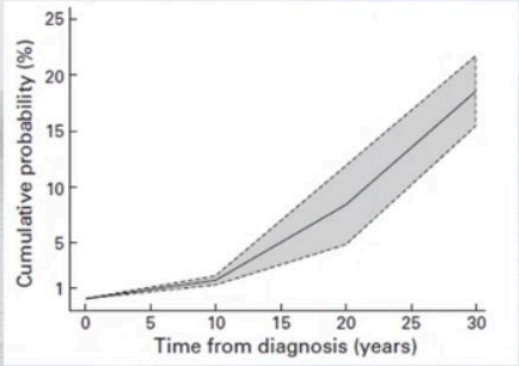
PSC

→ that's why we tell Patients before Surgery that these symptoms persists

do not respond to colectomy

# Malignancy

- 1 -2 % per year after 10 years
- PSC 9% after 10 years
  50 % after 25 years
- Surveillance
- High Grade Dysplasia (more risk) vs law grade dysplasia
- Pancolitis → ↑ risk



# Risk of malignancy in UC

increase in case of ?

1. Pancolitis
2. PSC ( primary sclerosing cholangitis )
3. Dysplasia

# Options of elective surgery

We should do it to UC Not to chron's Patients

- **Restorative proctocolectomy**
  - One or Two stages → depending on the Status of the Patient
  - Reduce steroid to minimum
- **Proctocolectomy and end Ileostomy**

Extra:
Restorative proctocolectomy (RP) is the treatment of choice in patients affected with refractory ulcerative colitis or familial adenomatous polyposis. Surgery in elective settings is often performed in 2 stages, fashioning an ileostomy which is closed 2-3-mo later?

Short-term results demonstrate excellent functional outcomes with good quality of life, while some deterioration of function is reported in the long term. Pelvic sepsis is the most serious complication of RP, leading to pouch failure or malfunction

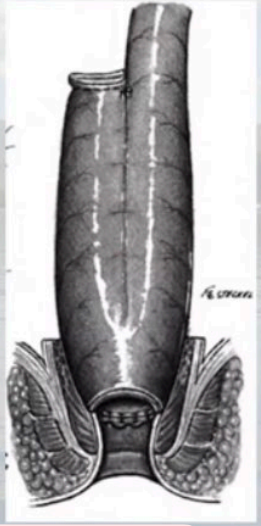
RPC

# Restorative proctocolectomy

multi - Stage → Better

Bad complications

- Elective Not emergency
- Off steroids → Not on Steroids
- One or two stages - w/o ileostomy
- Specialized Units
  - At least 10 per year BSG 2010 ( UK)
- stapled or hand-sewn pouch
- pouch configuration (W, S, J) → J Pouch most common
- hand-sewn or stapled ileo-anal anastomoses

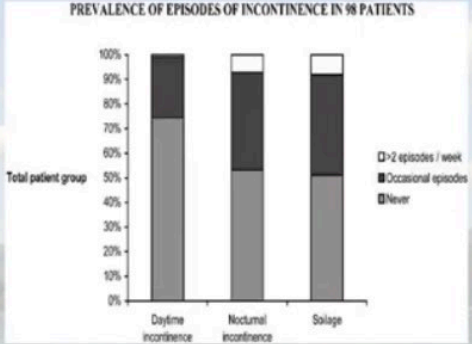


Extra:

A proctocolectomy with ileal pouch-anal anastomosis, or j-pouch surgery, is the most common surgical procedure recommended for ulcerative colitis patients when medications fail to control their symptoms.
This surgery involves constructing an ileal pouch anal-anastomosis (IPAA) or j-pouch. The surgeon will remove your colon and rectum and use the end of your small intestine, known as the ileum, to form an internal pouch, which is commonly shaped like a J.

# Life style operation

- The median frequency of defaecation/24
  - 5 day
  - 1 night → Patient will use bathroom alot
- Nocturnal seepage → Leak at night
  - 8% at 1 year
  - 15 % at 20 years
- Urgency
  - 5.1% at 1 year
  - 9.1 % at 15 years

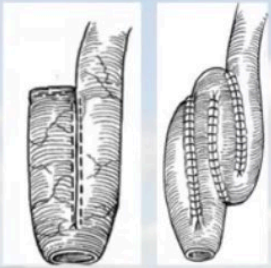


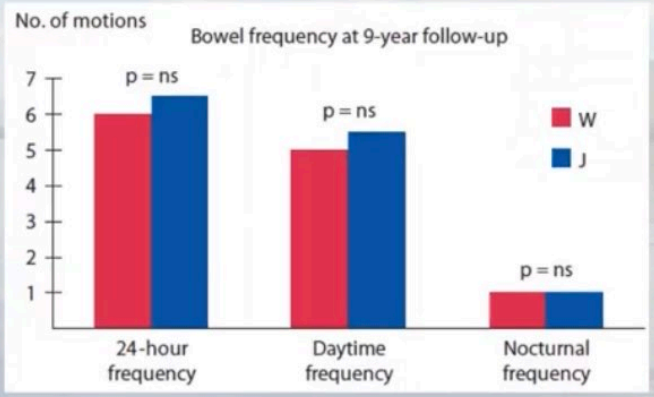

*Tekkis PP et al Colorectal Dis 2010*

- Fecundity reduced by 40 – 50 %

*Gorgun E et al Surgery 2004*

# J or W pouch






McCormick, P. H. et al Diseases of the Colon & Rectum., December 2012.

## Risk of malignancy and dysplasia in rectal cuff

- Low risk / is infrequent

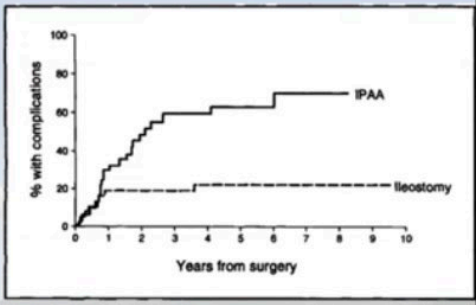
*Remzi , Dis Colon Rectum. 2003;*

*Fazio 1994*

- Cuff surveillance is not necessary
  - Unless dysplasia and cancer in original sp.

*Coul Colorectal Disease. 2007.*

# Complication after RPC




- Pouchitis up to 50 %
  - Consider CD.
  - Antibiotics/ Probiotics/ Biologic/ Ciclosporin
- Pouch vaginal fistula
  - Technical
  - Advancement flaps / redo-pouch
- Vitamin B12 and iron deficiency
- Infertility
- Stricture
- Malignancy

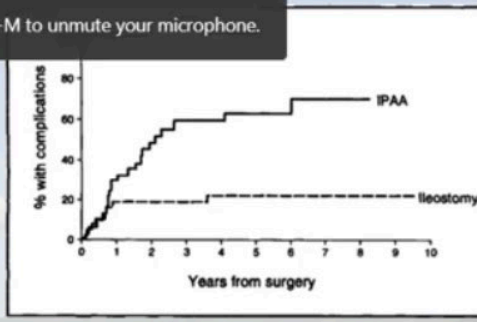
↳ much common in chron's

→ Patient maybe misdiagnosed

↳ Hard to heal

* that's why it's a major surgery

# Complication after RPC

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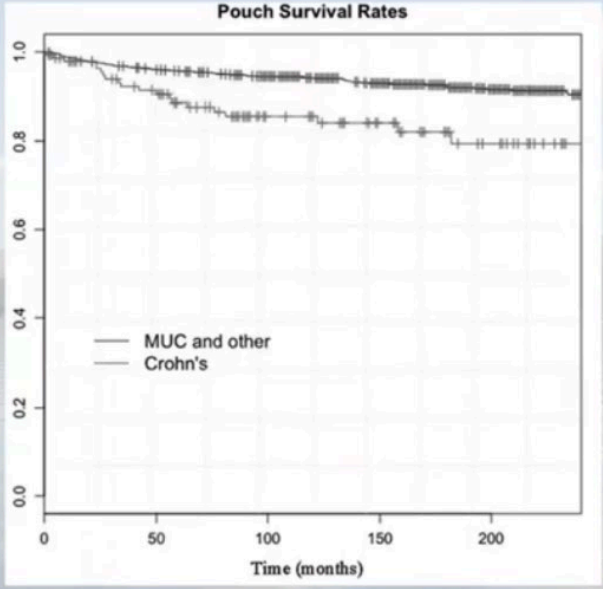
# Pouch failure

- 5.9 % at 10 years
  - Pelvic sepsis → most common
  - Anastomotic leak
  - Fistula
  - Crohn's disease
    - ↳ we try to avoid making Pouches in Chron's patients unless it's necessary




Fazio Annals of Surgery 2013

# Surgery of Ulcerative colitis

- Curative
- Risk of cancer / Dysplasia
- Dealing with complication and failure
- Re-operative / Re-do Surgery
- Attractive for minimally invasive surgery
- Controversies remains

in UC we should remove the whole colon → because disease is continuous

while in Chron's we remove Sigments → Because it skips parts

most common terminal ileum

# Surgery for Crohn's disease

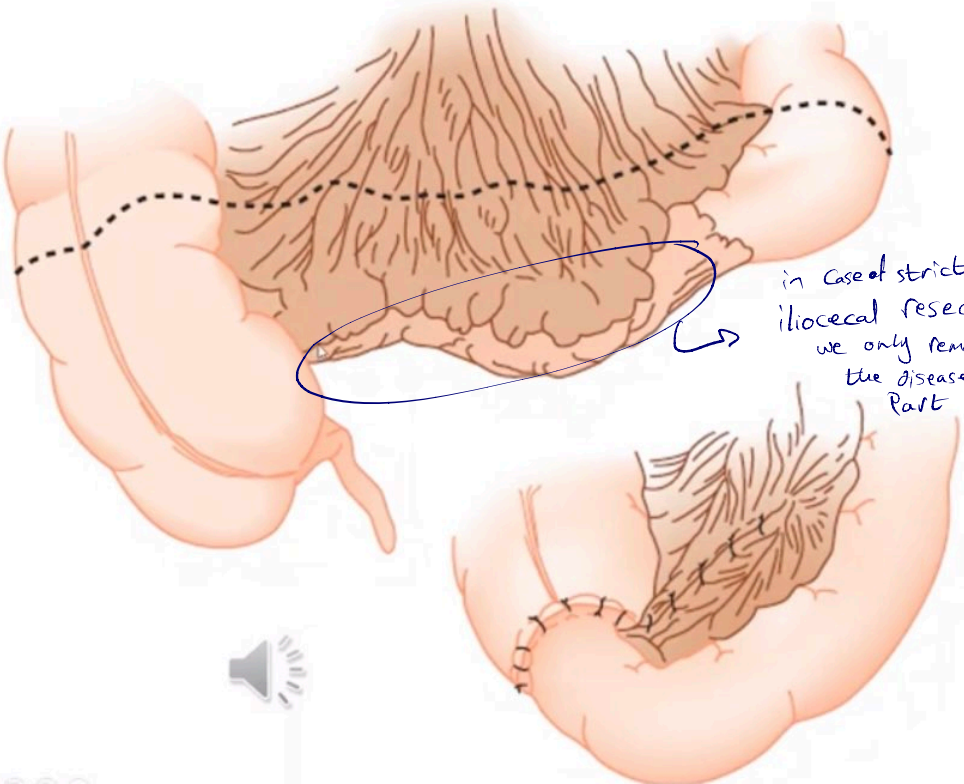
We don't do Pouch → High risk

- Indication
  - Stenosis ( stricture ) causing obstructive symptoms
    - most common complication of the disease → indication for Surgery
  - Enterocutaneous or intra-abdominal fistula
  - Intra-abdominal or retroperitoneal abscess
  - Acute or chronic bleeding
  - Free perforation

We only do Surgery if complication happens → **(Complication)** ← But in UC we do elective Surgeries

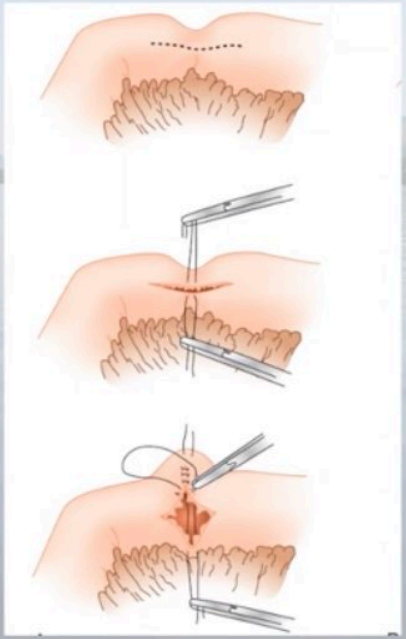
# Surgery CD cont.

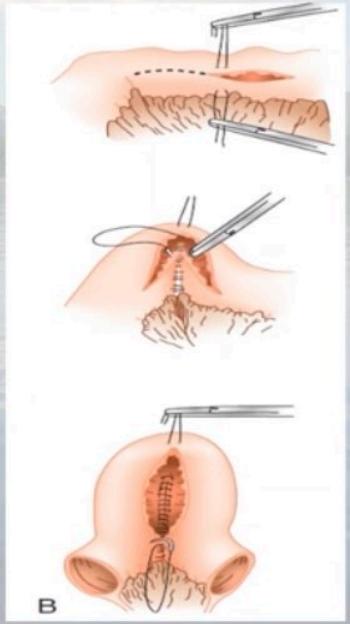
- Segmental resection
- Avoid wide resection → Not like UC
- May need stoma → Because Patients are weak
  - Malnutrition
  - Immuno-suppresion
  - Intra-abdominal sepsis
- Risk of malignancy → Low


in case of stricture we do
ileocecal resection
we only remove
the diseased
part

# Strictureplasty

in chron's → many strictures
to avoid cutting much of the bowel we do





# Smoking ....

- Tobacco abuse as a causative factor in the development of Crohn's disease has been difficult to prove yet you should advice these Patients to quit smoking

Because

- Increase the incidence of relapse and failure of maintenance therapy.

- Associated with the severity of disease in a linear dose-response relationship.