UZ LEUVEN

SD, male 40 yrs. old. (680718M467.)

**-2002: Rectal blood loss, UC? (no definite diagnosis) rectal mesalazine**

**-June 2008: Recurrence of rectal blood loss and urgency**

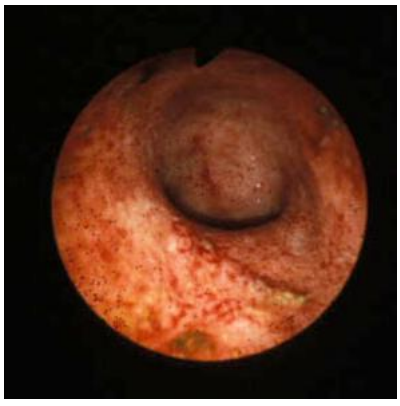
**Total colonoscopy: ulcerative rectitis, Mayo 2, otherwise normal**
**Biopsies suggestive of ulcerative colitis**
**Treated with oral mesalazine, no response**
**Rectal mesalazine added (4 g enema)**

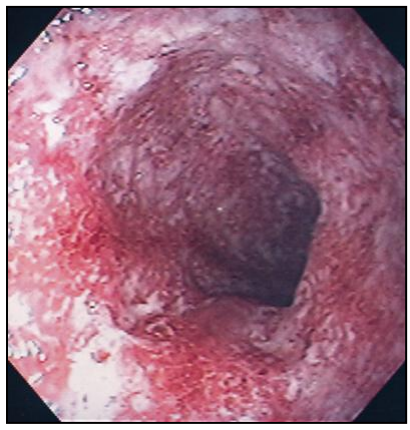
**-Oct 2008: Hospital admission**
**Abdominal pain, diarrhea (10x/d, 2x/night), fever (38°C), rectal blood loss**

**Sigmoidoscopy: active rectitis, up from 10 cm normal vascular pattern, islands of mucopus, pseudomembranes**

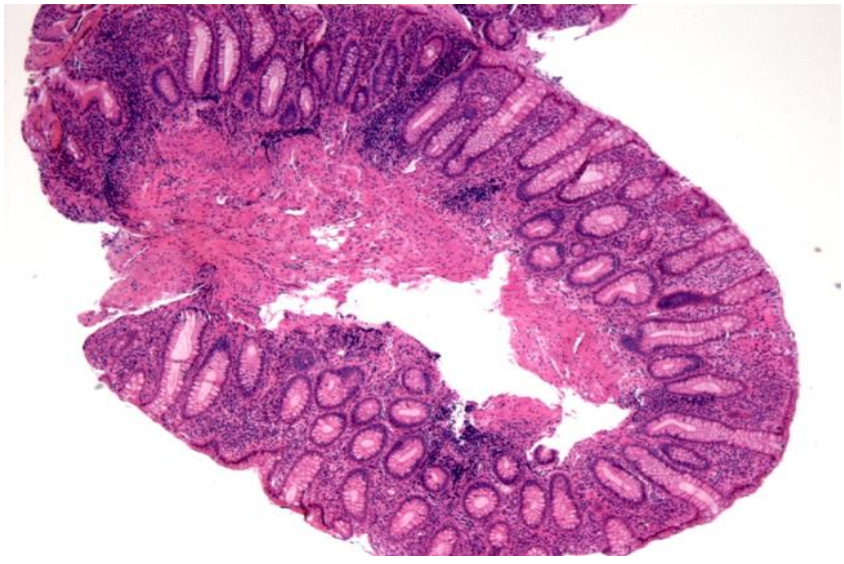
**Stool enteropathogens on day of admission**
**-C diff toxine A/B negative, parasites negative**
**-other pathogens: no reply yet**

# Colonoscopy





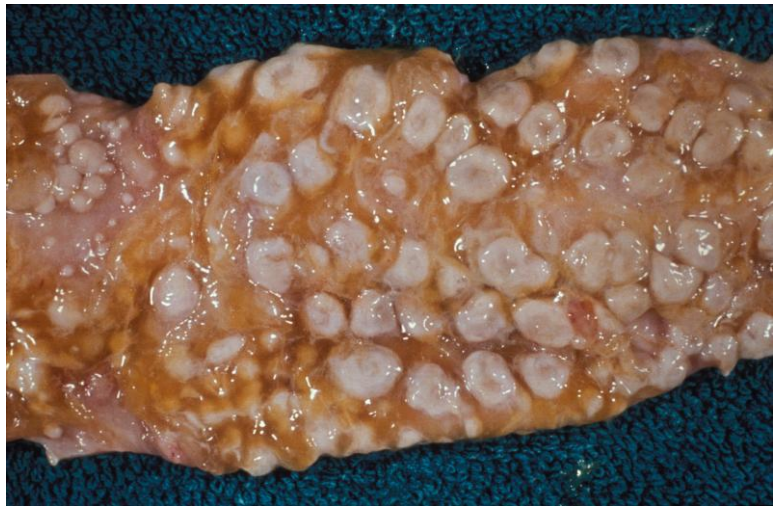
B-1495372 Biopsy



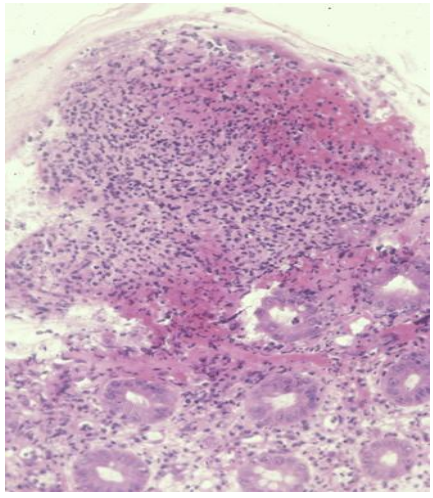
## What is your diagnosis?

- Normal biopsy
- Non-specific colitis
- Infectious colitis
- Ulcerative colitis

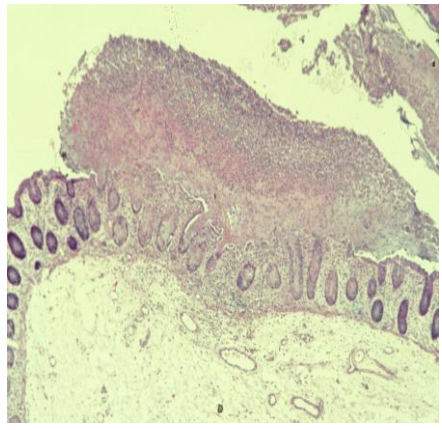
# Pseudomembranous colitis
# Clostridium difficile colitis

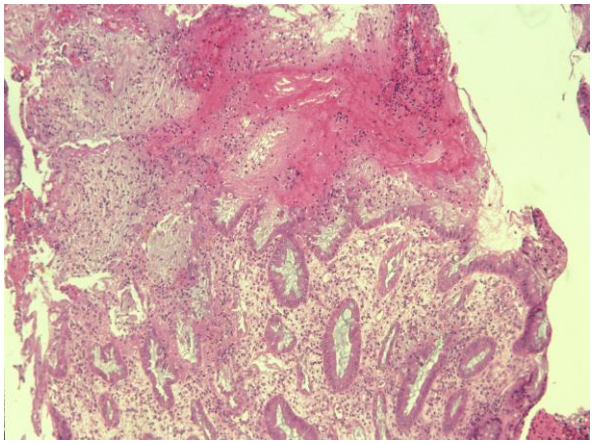


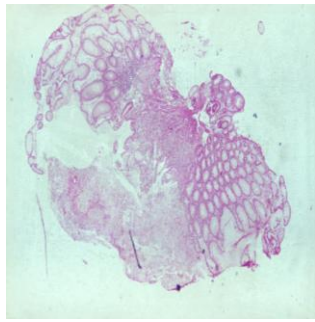
## Type I



## Type II







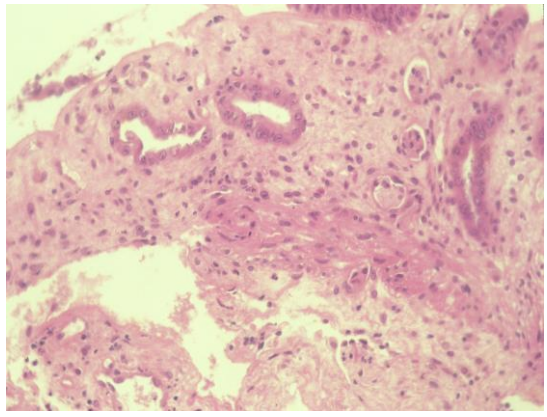
**Clostridium difficile colitis – Antibiotic associated colitis**

## Microscopic patterns

- Normal
- Oedema
- Active – infectious type colitis
- Pseudomembranous colitis (97% C diff +)
  - Type I summit lesion
  - Type II Focal crypt lesion
  - Type III confluent mucosal necrosis

  – Fulminant type

# Pseudomembranous colitis
# DD Ischemia

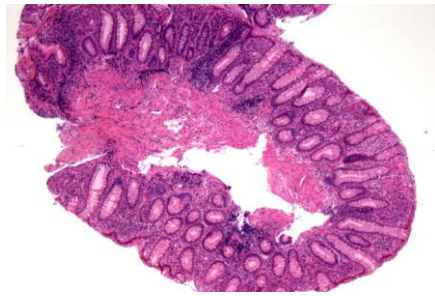


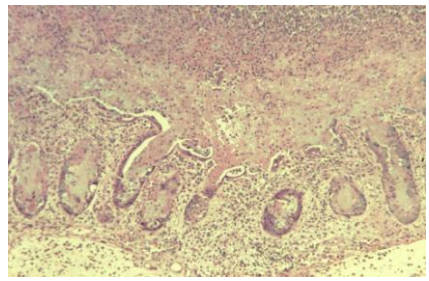
Borriello e.a. JJ Med Microbiol 1987; 24: 53

- Antibiotic-associated diarrhea
  - Diarrhea related to a recent course of antibiotics but with no microscopic evidence of mucosal disease
  - **C. difficile positive in 6% of patients**
- Antibiotic-associated colitis
  - Diarrhea with histological evidence of colitis that is not pseudomembranous
  - **C. difficile positive in 38% of cases**

**Present biopsy**

- **Mild architectural abnormalities**
- **No hyalinization**
- **Limited active inflammation (duration of disease)**
- **No summit lesions**
- **Increased cellulalirity with mild basal accumulation**





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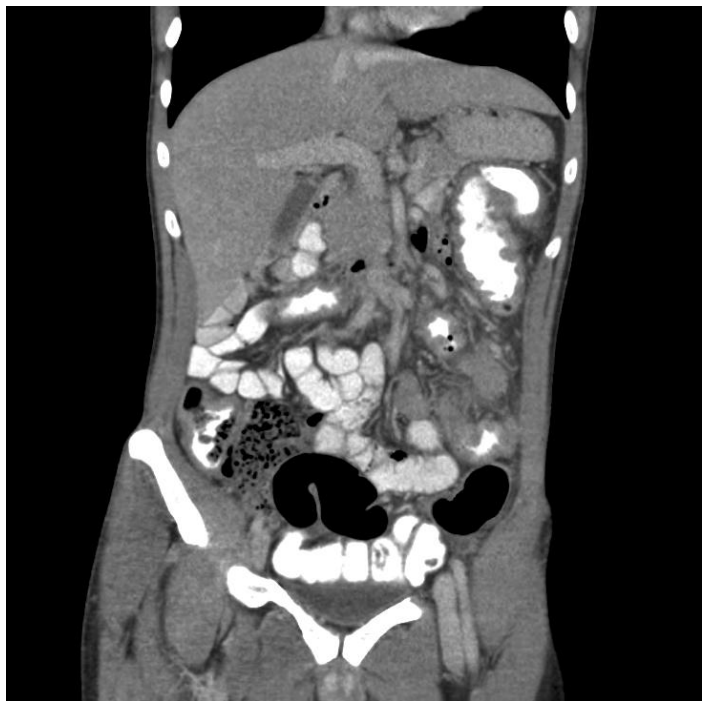
SD, male 40 yrs. old.

**Levofloxacine 500 mg bid and Metronidazole 500 mg tid started**
**IV fluids/electrolytes, bowel rest**

**Day 3: no improvement , CRP 144 mg/L (60 mg/L on admission)**

**Second stool sample (repeated on day 1): *C diff* toxine A/B positive**

**CT abdomen: Pancolitis with max. luminal diameter of 6 cm.**



## What is your diagnosis?

- C. difficile colitis
- Ischaemia
- IBD
- IBD and C. difficile

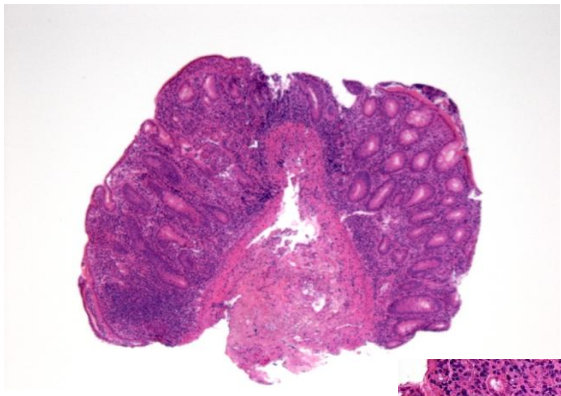
What is your preferred management at this stage?

1. Increase IV metronidazole to 4x 500 mg/d
2. Add oral vancomycine 125 mg 4x/d
3. Start IV steroids
4. Add vancomycine and start IV steroids
5. Refer for colectomy
6. Start cyclosporine 2 mg/kg.d IV
7. Start Infliximab 5 mg/kg IV
8. Other

## SD, male 40 yrs. old.

**Oral Vancomycine added**
**Day 6: only partial improvement clinically**
**TPN started**
**Fever down to 37.5 °C**
**Persistent 4 nightly stools, lost 11 kg since onset of symptoms**
**Persistent rectal blood loss and abdominal tenderness**
**No increase in colonic dilatation**

**New sigmoidoscopy: Severe ulcerative colitis,**
**Mayo 3, no upper margin**



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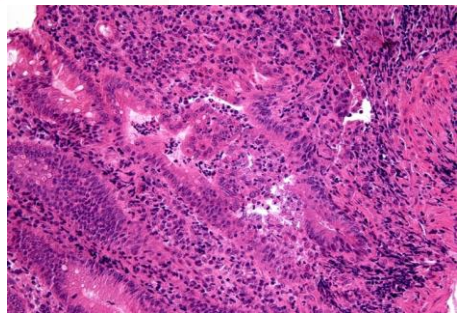

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What is your preferred management at this stage?

1. Add systemic steroids
2. Document clearance of C diff toxine and start systemic steroids
3. Start infliximab 5 mg/kg IV
4. Start cyclosporine 2 mg/kg IV
5. Refer for colectomy
6. Other

## SD, male 40 yrs. old.

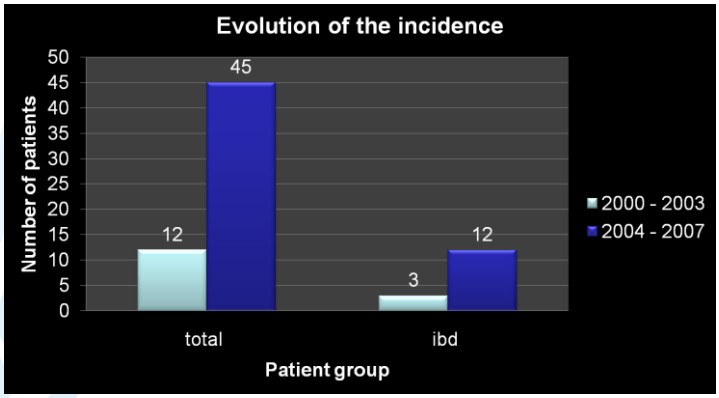
**- Started on IV steroids, methylprednisolone 40 mg/d**
**Gradually improving. *C diff toxine* neg**
**Discharged on Day 5 with oral steroids: Methylprednisolone 32 mg**

**- Readmitted one week later with recurrence of severe colitis**
**Lost 4 more kgs. of body weight**
***C diff toxine* neg**

**- Admitted to the hospital**
**Sigmoidoscopy: Mayo 3, severe colitis, no upper margin**

- Increasing incidence of clostridium difficile-associated diarrhea in inflammatory bowel disease. P. Bossuyt et al. JCC 2009.
- Retrospective single referral center cohort on the incidence of CDAD in IBD and non-IBD patients
- Electronic hospital database of the laboratory of microbiology
- Recruitment period: January 2000 → December 2007
  - Two periods of equal duration
    - 01/2000 - 12/2003
    - 01/2004 - 12/2007
- Endpoint
  - Incidence of CDAD
    - In all patients
    - In IBD patients
  - Predisposing risk factors
  - Outcome IBD versus non-IBD patients

# Results: incidence




# Results: risk factors and outcome

- IBD patients significantly younger (p= 0.001)
- IBD patients acquired infection more in outpatient setting (p= 0.14)
- IBD patients took
  - less AB in the prior 3 months (p= 0.047)
  - more immunomodulators (p< 0.001)
  - Acid suppression no difference
- IBD patients had less co-morbidity (p= ns)

- No pseudomembranes were seen in IBD patients
- Hospital stay in IBD was shorter (p< 0.001)

# IBD and C difficile colitis

Absence of pseudomembranes in Clostridium difficile-associated diarrhea in patients using immunosuppression agents.

– Nomura K e.a. Scan J Gastroenterol 2009; 44: 74-8

- **S Benhorin, M Margalit, P Bossuyt et al**. The impact of concomitant treatment with immuno-modulators and antibiotics on the outcome of C *difficile*-associated inflammatory bowel disease exacerbation: an ECCO multi-center retrospective study JCC 2009, 3(1); s62
  - 155 pt
    - 104 AB+IM
    - 51 AB
  - Outcome: death or colectomy 3 months
    - AB+IM 12/104 (12%)
    - AB 0/51