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SCHOOL OF MEDICINE

DEPARTMENT OF PROPEDEUTICS OF INTERNAL MEDICINE AND PHYSICAL
REHABILITATION

STUDENT SCIENTIFIC COMMUNITY



MICROSCOPIC COLITIS



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02.06.2022

WHAT IS THIS?

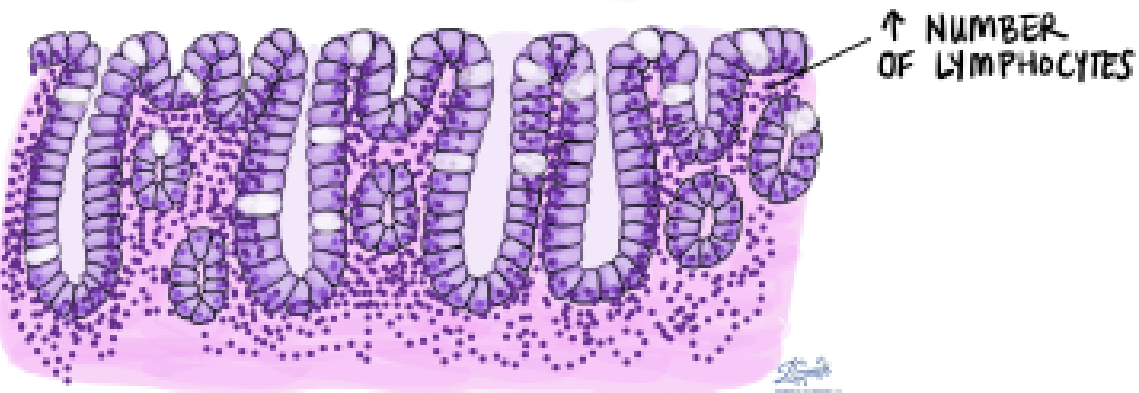
Microscopic colitis is a chronic inflammatory bowel disease characterised by normal or almost normal endoscopic appearance of the colon, chronic watery, nonbloody diarrhoea and distinct histological abnormalities, which identify two histological subtypes

Miehlke, S., Guagnozzi, D., Zabana, Y., Tontini, G. E., Kanstrup Fiehn, A. M., Wildt, S., ... & Münch, A. (2021). European guidelines on microscopic colitis: United European Gastroenterology and European Microscopic Colitis Group statements and recommendations. *UEG Journal*, 9(1), 13-37.

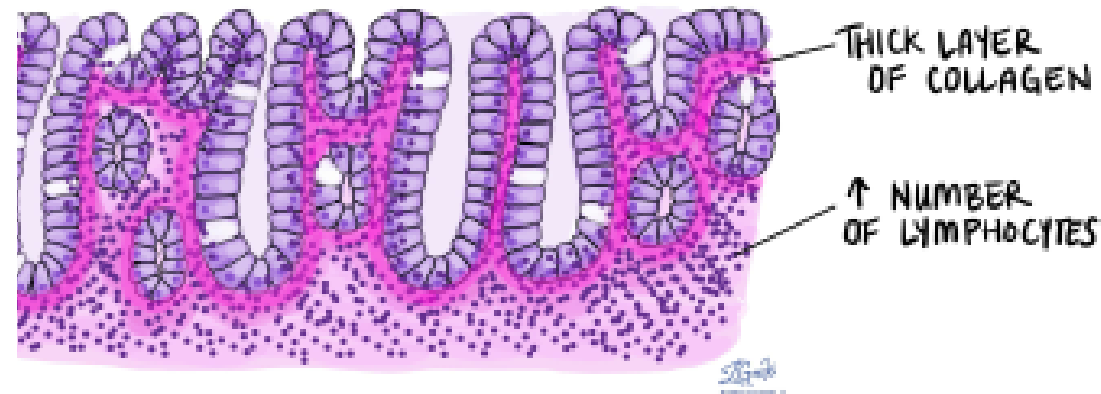
WHAT ARE THE TYPES OF MICROSCOPIC COLITIS?

- Collagenous colitis (CC)
- Lymphocytic colitis (LC)

LYMPHOCYTIC COLITIS



COLLAGENOUS COLITIS



IS IT AS RARE AS WE THINK?

- The incidence rate of MC is estimated to be 11.4 cases per 100,000 person-years
- More frequently in the elderly - the median patients' age at the time of diagnosis is over 60 years old. However, up to 25% of patients diagnosed with collagenous colitis are less than 45 years and cases of it have even been described in children
- Overall prevalence of MC is estimated to be 119 per 100,000 persons

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WHAT FACTORS INCREASE THE RISK OF MICROSCOPIC COLITIS?

- Former, but especially current smoking is associated with an increased risk for both types of the condition
- The incidence of MC is higher in women than in men - the proportion of females among MC populations have been described in the range of 52%–86%
- Chronic or frequent use of proton pump inhibitors (PPIs), nonsteroidal anti-inflammatory drugs (NSAIDs) or selective serotonin reuptake inhibitors (SSRIs) is associated with an increased risk of MC

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ANY ASSOCIATION WITH OTHER DISEASES?

- Microscopic colitis is strongly associated with autoimmune disorders, such as celiac disease, polyarthritis, and thyroid disorders. Up to 20-60% of patients with lymphocytic colitis and 17-40% of patients with collagenous colitis (CC) have an autoimmune disease. Histologic features of microscopic colitis in the colon are present in 30% of patients with celiac disease

<https://emedicine.medscape.com/article/180664-overview#a6>

WHAT CAUSES MICROSCOPIC COLITIS AND HOW DOES IT DEVELOP?

- No definitive etiology has been determined for microscopic colitis
- The pathogenesis of microscopic colitis (MC) is not clearly understood
- The etiology is likely multifactorial, potentially including luminal factors, immune dysregulation, and genetic predisposition
- It may be mediated in part by the adaptive immune system and by cytotoxic responses triggered by mucosal injury from different factors
- An association between microscopic colitis and human leukocyte antigen (HLA)-DQ, as noted in celiac disease
- Some gene polymorphisms

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CLINICAL FEATURES OF MICROSCOPIC COLITIS

Diarrhoea

- In 84-100% of patients
- persists for 6 months before diagnosis in 43%, the onset of diarrhoea is acute in one third of patients

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CLINICAL FEATURES OF MICROSCOPIC COLITIS

Common concomitant symptoms:

- faecal urgency (55%)
- nocturnal stools (35.3%)
- faecal incontinence (26.3%)

Less frequent complaints:

- abdominal pain
- weight loss
- bloating

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PHYSICAL EXAMINATION

- Physical examination usually does not reveal any specific abnormalities.
- Severely affected individuals may show signs of dehydration, malnutrition, and weight loss.

HOW CAN WE MEASURE DISEASE ACTIVITY AND CLINICAL REMISSION IN MICROSCOPIC COLITIS?

- No formally validated metric of disease activity
- Disease activity and clinical remission in MC should be assessed by the Hjortswang criteria (clinical remission: mean of less than 3 stools/day and a mean less than 1 water stool/day during a 1-week registration)

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WHEN SHOULD WE THINK OF MICROSCOPIC COLITIS?

- In patients fulfilling the criteria for functional bowel disease, especially in presence of MC risk factors and/or in absence of irritable bowel syndrome (IBS)-therapy response
- In chronic diarrhea, especially in the elderly population
- In patients diagnosed with celiac disease who have diarrhea that fails to respond to a gluten-free diet

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IF WE SUSPECT MICROSCOPIC COLITIS WE NEED...

- complete blood cell count
- metabolic profile
- thyroid profile
- stool studies
- celiac serologies

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ABNORMALITIES IN MICROSCOPIC COLITIS

- anemia
- hypokalemia
- hypoalbuminemia
- elevation of the erythrocyte sedimentation rate
- or a combination of these findings may be present.

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ABNORMALITIES IN MICROSCOPIC COLITIS

Approximately 50% of patients with collagenous colitis (CC) and those with lymphocytic colitis (LC) may have

- circulating autoantibodies, especially rheumatoid factor (RF)
- antinuclear
- antimitochondrial
- antineutrophilic cytoplasmic antibodies
- and antiparietal cell, antithyroglobulin, and antimicrosomal antibodies.

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ABNORMALITIES IN MICROSCOPIC COLITIS

- Increased levels of the stool inflammatory markers (eg, fecal calprotectin) have been detected in stool
- If leukocytes and elevated fecal calprotectin in stool → test for enteric bacterial pathogens, ova and parasites, and Clostridium difficile
- Ruling out bile acid malabsorption and steatorrhea: prolonged (24-h to 72-h) stool collection occasionally may demonstrate steatorrhea in MC. A finding of greater than 7 g of fecal fat excretion per 24 hours in an individual ingesting 100 g of fat per day is usually indicative of fat malabsorption

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ABNORMALITIES IN MICROSCOPIC COLITIS

Plain abdominal radiographs, barium enemas, and computed tomography (CT) scans

- typically normal or nonspecific
- no evidence of colonic mucosal damage or wall abnormality in persons with microscopic colitis

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WHAT IS NEEDED FOR CONFIRMATION OF MICROSCOPIC COLITIS?

! Biopsies obtained by sigmoidoscopy or colonoscopy are necessary to diagnose lymphocytic colitis or collagenous colitis

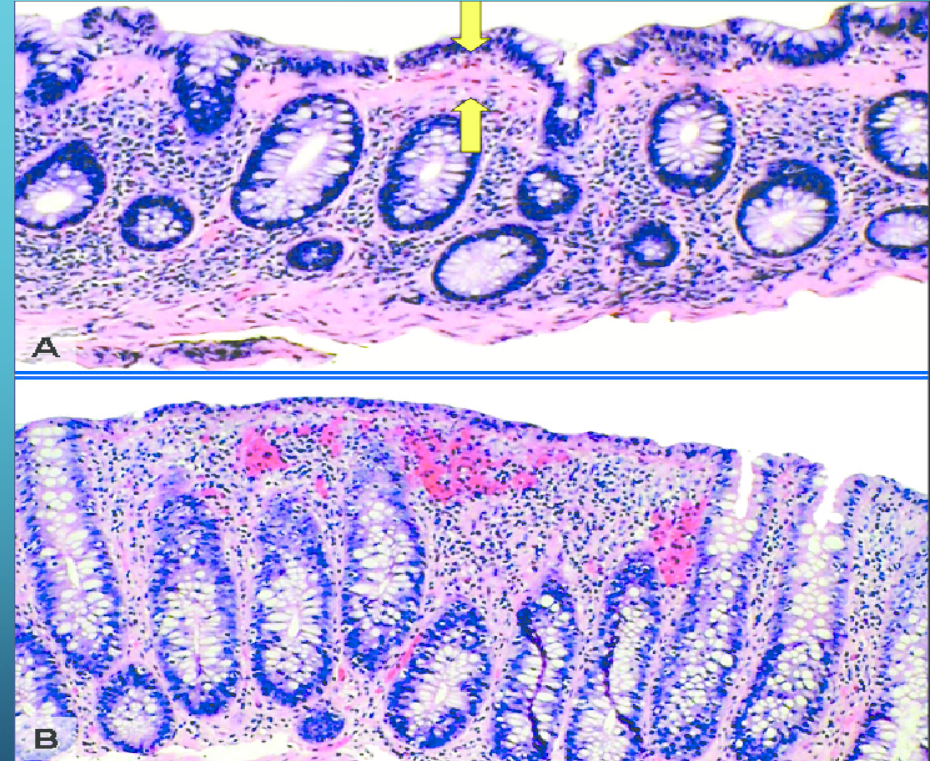
- Multiple biopsies should be taken from different segments of the right and left side of the colon
- Approximately 95% of patients with microscopic colitis will have diagnostic left colon biopsies
- COLONOSCOPY IS NOT ENOUGH FOR THE DIAGNOSIS -mucosa appears normal endoscopically or occasionally mild mucosal edema can be seen

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HISTOLOGY REALLY MATTERS!

A Collagenous colitis (CC) demonstrates a thick colonic subepithelial collagenous deposit ($\geq 10 \mu\text{m}$) and an increased inflammatory infiltrate in the lamina propria

B Lymphocytic colitis (LC) reveals a pronounced intraepithelial lymphocytic (IEL) inflammation (≥ 20 per 100 surface epithelial cells) and an increased inflammatory infiltrate in the lamina propria but in the absence of a thickened collagen band ($< 10 \mu\text{m}$).



https://www.researchgate.net/figure/Histological-features-of-microscopic-colitis-A-Collagenous-colitis-is-associated-with_fig1_38044574

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HOW DO WE TREAT MICROSCOPIC COLITIS?

- For induction of remission in collagenous colitis (CC) or lymphocytic colitis (LC): Oral budesonide
- Mesalazine therapy is not recommended for induction of remission in patients with microscopic colitis
- Bismuth subsalicylate, loperamide, antibiotics are not recommended. However, loperamide can be used in mild cases
- Probiotics, prednisolone or other corticosteroids than budesonide, methotrexate are not recommended
- Recommended treatment includes thiopurines, anti-tumor necrosis factor (anti-TNF) drugs, or vedolizumab in patients with budesonide-refractory microscopic colitis

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THANK YOU FOR YOUR ATTENTION