The European Microscopic Colitis Group (EMCG)

In comparison with other inflammatory bowel diseases (IBD), our knowledge about MC remains limited. More research is needed to investigate the aetiology and pathophysiology of MC, but above all more clinical studies are needed to improve the medical care of MC patients.

To address these apparent shortcomings, physicians dedicated to the understanding of MC met in September 2010 in Stockholm, Sweden, to found the European Microscopic Colitis Group (EMCG). The primary objective of the EMCG is to create awareness of MC among patients, general practitioners, gastroenterologists, surgeons and pathologists regarding all aspects of MC, and to eliminate misconceptions. Another aim is to promote collaboration among the EMCG members in clinical trials and basic science.

Evidence-based guidelines from the EMCG have recently been published (Münch et al., 2012, Microscopic colitis: Current status, present and future challenges: Statements of the European Microscopic Colitis Group. J Crohns Colitis. [Epub ahead of print]). Current members of the EMCG are

Andreas Münch, Linköping, Sweden
Daniela Aust, Dresden, Germany
Johan Bohr, Örebro, Sweden
Ole Kristian Bonderup, Silkeborg, Denmark
Fernando Fernández Bañares, Barcelona, Spain
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An initiative of the

EMCG
European Microscopic Colitis Group

Keep microscopic colitis in mind!

Information for gastroenterologists and pathologists

D. Aust (Dresden), **S. Miehlke** (Hamburg)

- Microscopic colitis is a chronic inflammatory bowel disease whose incidence is increasing.
- The guiding symptom is watery, non-bloody diarrhoea which occurs almost daily.
- It mainly affects women in the second half of their lives.
- The endoscopic findings are generally unremarkable.
- Histological findings based on stepped biopsies of the colon (two each from the ascending, transverse and descending/sigmoid colon) are crucial in making a reliable diagnosis.
- It is vital to differentiate this disease diagnostically from irritable bowel syndrome.

Requirements of gastroenterologists:

- Stepped biopsies from the different colon sections in separate labelled vessels
- Accompanying information about clinical symptoms and medication

Differential diagnosis irritable bowel syndrome – microscopic colitis

	Irritable bowel syndrome	**Microscopic colitis**
First occurrence of disease	Commonly younger than 50 years of age	Commonly older than 50 years of age
Stool consistency	Soft – **variable** – hard	Watery/soft
Abdominal pain/discomfort	Obligatory	Variable
Nocturnal diarrhoea	Very rare	Possible
Feeling of incomplete bowel evacuation	Common	No
Weight loss	Rare	Common
Faecal incontinence	Rare	Common
Feeling of fullness/bloating	Common	Rare
Accompanying autoimmune disease	No	Yes

Therapy

Budesonide is the therapy of choice once the diagnosis has been confirmed.

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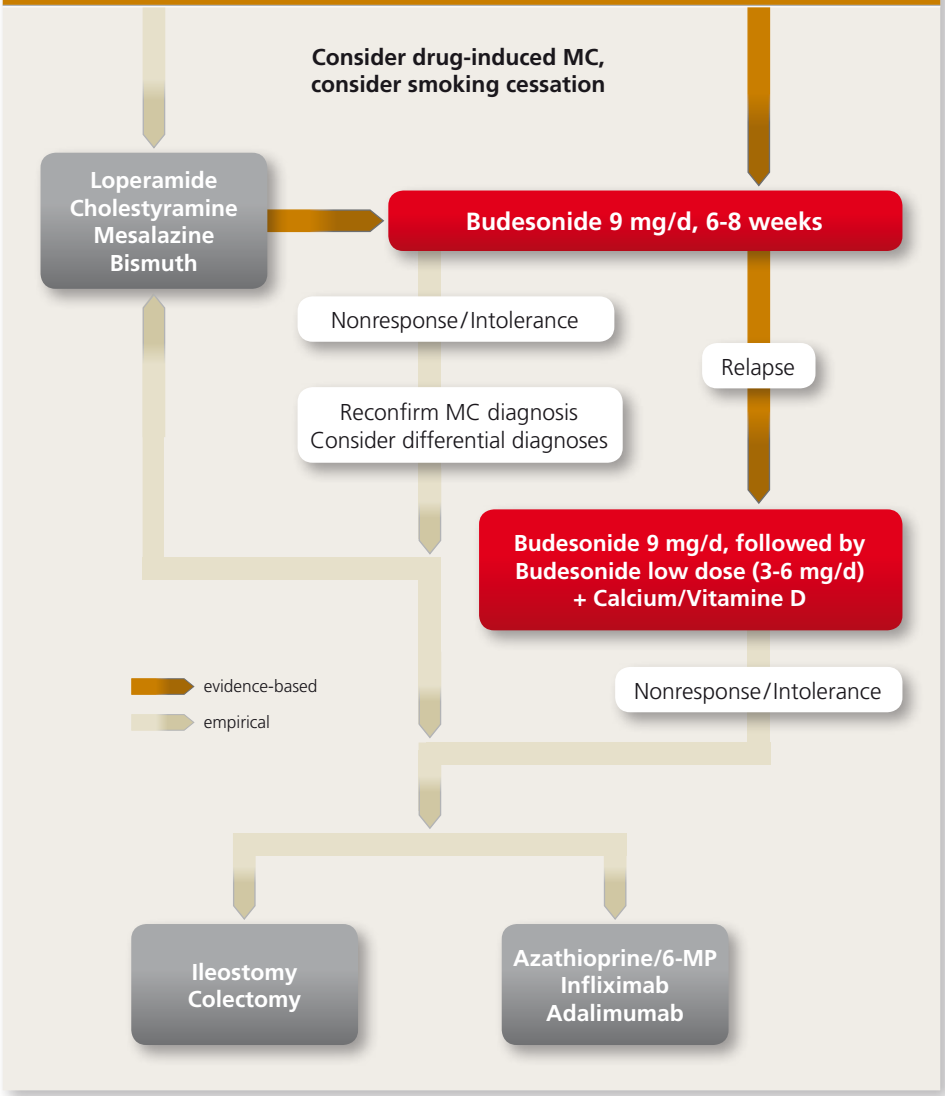
Active microscopic colitis – EMCG therapy algorithm

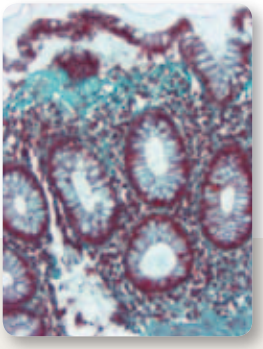


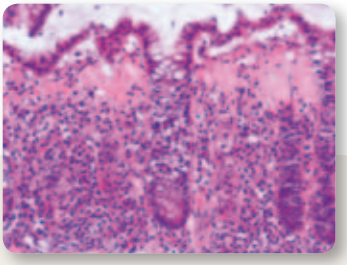
A. Münch et al., J Crohn's Colitis (2012), doi:10.1016/j. crohns.2012.05.014

Histology: 2 distinct subtypes of micro

Collagenous colitis

- **Main criterion: thickened subepithelial collagen band (>10 µm),** with no spreading of the collagen band into the remaining lamina propria.
- **Additional criteria:**
  - Slightly increased IEL (>10-20%)
  - Regressive changes in the surface epithelium, partial detachment from the basal lamina
  - Increased lymphoplasmacellular infiltrate of the lamina propria, often with marked eosinophilia
  - Normal crypt architecture, occasionally mild crypt distortion
- **Pitfalls:**
  - Thickening of the collagen band may be patchy
  - CC may be restricted to the proximal colon
  - Tangential sectioning of tissue may mimic a thickened collagen table (→ well oriented biopsies are essential for a correct diagnosis)
  - Uniform elevation of epithelial nuclei may cause the basal cytoplasm to appear as a uniform pink band, mimicking collagen on H&E (→ **use special stain:** Goldner, van Gieson, Masson-Trichrom)





Collagenous colitis with thickened subepithelial collagen band and detached regressively changed surface epithelium (Goldner and HE stain, 20x).

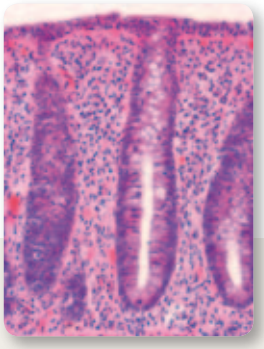
Is immunohistochemistry necessary for diagnosing this disease?

- **Not in day to day practice**
  - The number of intraepithelial lymphocytes (IELs) can be determined in the HE stain
  - The thickness of the collagen band can be determined in special stains (Goldner, van Gieson, Masson-Trichrom)
- **Yes in borderline cases and in clinical studies**
  - CD3 counts for lymphocytic colitis
  - Tenascin for collagenous colitis

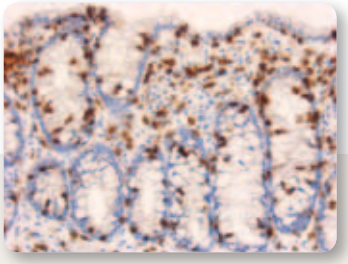
scopic colitis

Lymphocytic colitis

- **Main criterion: increased number of intraepithelial lymphocytes (>20 IEL/100 epithelia).**
- **Additional criteria:**
  - Degenerative changes in the surface epithelium
  - Increased number of lymphocytes and plasma cells in the lamina propria
  - Granulocytic infiltrate may be present
  - Normal crypt architecture
  - Normal subepithelial collagen
- **Pitfalls:**
  - Lymphoplasmacellular infiltrate of the lamina propria varies from section to section of the colorectum (caecum > rectum)
  - Changes can be focal
  - Right side of the colon may be more affected.
  - Surface epithelium overlying lymphoid follicles must be excluded from evaluation



Lymphocytic colitis with a marked increase in intraepithelial lymphocytes and regressive changes in the surface epithelium (HE, 20x).



Immunohistological representation of intraepithelial lymphocytes (CD3, 20x)

What are MCi/MCnos?

- MC**i**: **i**ncomplete findings of microscopic colitis
- MC**nos**: microscopic colitis, **n**ot **o**therwise **s**pecified
- Clinical symptoms of watery, non-bloody diarrhoea
- Histological criteria of the lymphocytic (paucicellular) or collagenous colitis have not been fully met
- Diagnostic criteria as well as nomenclature have not yet been standardised. These must first be formulated and confirmed in studies

→ **Make appropriate comment in borderline cases!**