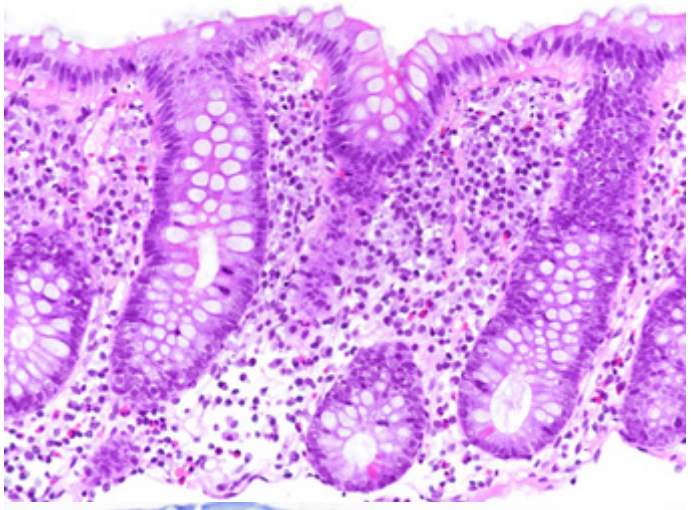
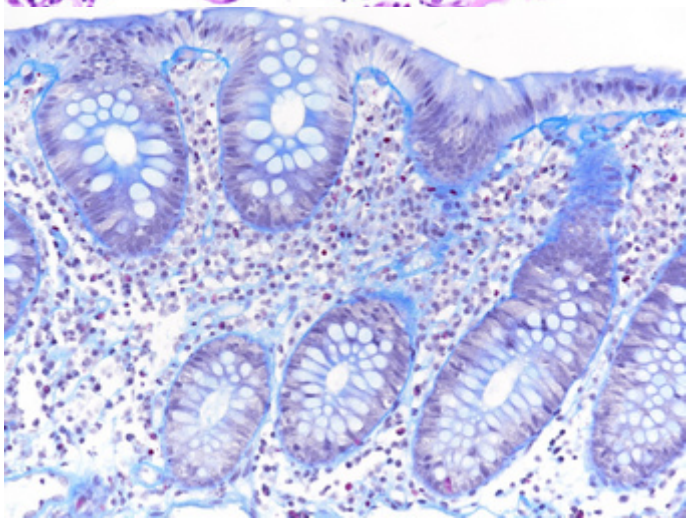
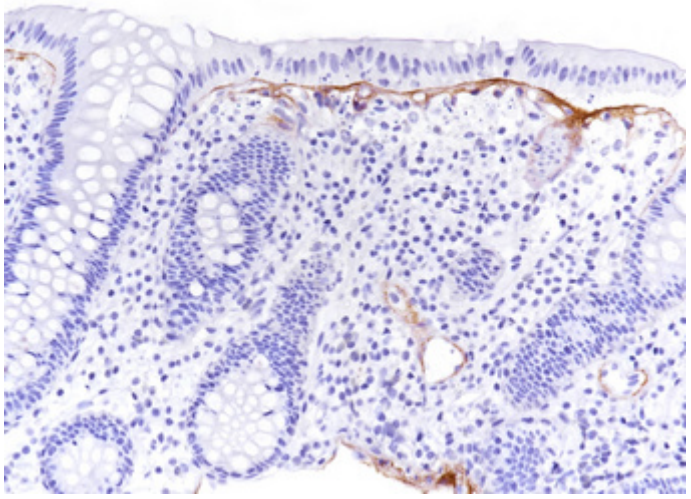
March 2017

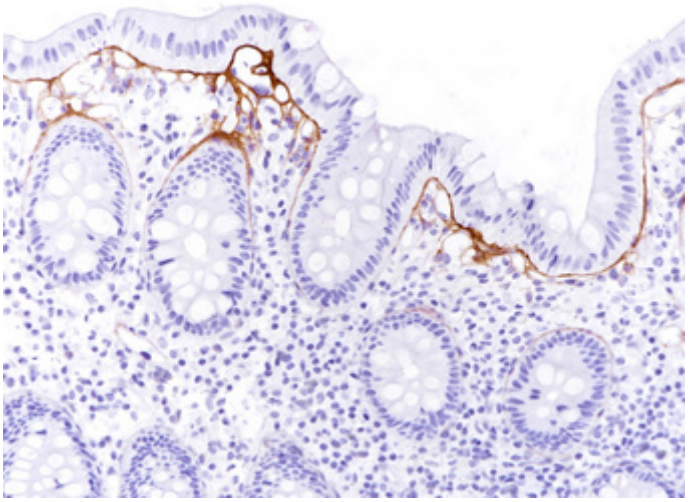
Colonic biopsies from a 45-year-old female with watery diarrhoea.

What is your diagnosis?









Diagnosis:

Collagenous colitis incomplete.

Comment:

A 45-year old woman presented with 2½ months of non-bloody, watery diarrhoea. Stool samples were without signs of bacterial or parasitic infection. Colonoscopy was macroscopically normal. Her diarrhoea responded to treatment with budesonide.

Histology shows preserved mucosal architecture and increased transmucosal mononuclear inflammation within the lamina propria. Underneath the surface epithelium, a slightly thickened collagenous band is seen, measuring between 5 and 10µ (Panel A, HE-stain; Panel B, Masson-Trichrome). Immunohistochemical staining using antibodies directed against Tenascin are positive, highlighting the subepithelial collagen deposits (Panels C and D).

The diagnosis of microscopic colitis incomplete (MCi) comprises patients with chronic watery diarrhoea, a normal or near normal colonoscopy and colonic biopsies with increased mononuclear inflammation of the lamina propria; however, the histopathological criteria of lymphocytic colitis (LC) or collagenous colitis (CC) are not quite fulfilled. Hence, the collagenous layer of CCi measures between 5-10 µm and the intraepitelial lymphocytic cell count of lymphocytic colitis incomplete (LCi) is between 10-20 lymphocytes per 100 surface epithelial cells (1,2).

In cases of CCi, connective tissue stains (van Gieson, Goldner, Masson-Trichrome) should be used for better visualization. In this present case Masson-Trichrome and Tenascin have been applied. Tenascin is a glycoprotein that is found associated with the thickened subepithelial collagen layer. Thus, the antibody does not highlight the collagen itself. As a result, Tenascin immunostaining cannot be used for measuring the thickness of the collagen layer.

The histologic changes must always be correlated to the clinical information in order to make the diagnosis of MC. In particular for MCi cases, this close collaboration between clinician and pathologist is crucial to avoid overdiagnosis (and consequently overtreatment).

For further reading:

- Münch A, Aust D, Bohr, J et al. Microscopic Colitis: Current Status, present and future challenges. Statements of the European Microscopic Colitis Group. J Crohns Colitis. 2012; 6: 932–945
- Langner C, Working Group of Digestive Diseases of the European Society of Pathology (ESP) and the European Microscopic Colitis Group (EMCG). Histology of microscopic colitis-review with a practical approach for pathologists. Histopathology. 2015; 66: 613-626

- Bjørnbak C, Engel PJ, Nielsen PL, Munck LK. Microscopic colitis: clinical findings, topography and persistence of histopathological subgroups. Aliment Pharmacol Ther. 2011; 34: 1225–1234
- Rasmussen J, Engel PJ, Wildt S, Fiehn AM, Munck LK. The Temporal Evolution of Histological Abnormalities in Microscopic Colitis. J Crohns Colitis 2016; 10: 262–268

Presented by:

Dr. Peter Johan Heiberg Engel, Copenhagen, Denmark, and Dr. Cord Langner, Graz, Austria.