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INVITED EDITORIAL

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Editorial: tissue findings fail to predict disease activity or prognosis in microscopic colitis: an opportunity to look at the molecular level

Microscopic colitis (MC) is a frequent cause of watery diarrhoea, the severity of which impairs health-related quality of life.[1] Its two main variants, collagenous colitis (CC) and lymphocytic colitis (LC), are believed to originate from an inappropriate immune response of the colonic mucosa after exposure to luminal noxious agents in predisposed individuals. From a clinical point of view, preliminary predictive models have been developed that aim to distinguish between MC and other causes of chronic, watery diarrhoea,[2] but ileocolonoscopy with biopsies from at least the right and left colon remains the only reliable diagnostic method for MC.[3]

The disease course of MC also remains unpredictable, with half of patients exhibiting relapsing or chronic active disease in the first year after diagnosis.[4] Therefore, identifying patients who will require continuous or repeated treatment and distinguishing them from those who achieve quiescent disease over time represents a challenge for efficient disease management. This topic has been poorly addressed in the literature, with some recent studies identifying disease severity (ie the total daily bowel movements and nocturnal defecation) at baseline as the only predictor of a chronic disease course during the first year;[4] spontaneous, as opposed to drug-induced remission, was the only variable associated with long-term inactive disease.[5]

The prognostic value that histological activity could have on the intensity of symptoms and the long-term course of the disease has been uncertain, since retrospective studies in series with limited numbers of patients have provided contradictory results.[6,7] Olsen LM et al sought to address this knowledge gap through a prospectively recruited cohort of 52 incident patients with MC,[8] with a balanced distribution between LC and CC. Disease activity was fully assessed both at baseline and after 1 year of follow-up. The histological features evaluated included total cell density in lamina propria, proportion of $CD3^+$ T-lymphocytes in the lamina propria and in the surface epithelium, thickness of the collagenous band, and the presence of neutrophils and crypt abscesses. None of these features showed a significant correlation to the number of daily stools or daily watery stools at any time, and no histological parameter at initial diagnosis predicted the clinical course of the disease at 1 year. Combining all histopathological features in a multivariable model did not significantly correlate with symptoms severity. To avoid observer variability, histopathological evaluation was automated using digital image analysis.

As a result, there is a clear need for biomarkers that allow accurate identification, prognosis, and prediction of response to therapy in MC to facilitate a more individualised approach. In one study, increased serum or faecal proteins did not identify inflammatory activity related to CC and LC.[9] In recent years, evolving evidence concerning non-coding RNAs have been linked to the pathogenesis of adult and paediatric inflammatory bowel disease,[10] with microRNAs playing a significant role in intestinal immunity. Several microRNAs and specific signatures have been identified in IBD-associated tissues, which make it possible to define severity and stratify the prognosis of the disease, and it is possible that similar approaches may identify precise markers in patients with MC as well.

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LINKED CONTENT

This article is linked to Olsen et al and papers. To view these articles, visit https://doi.org/10.1111/apt.16381 and https://doi.org/10.1111/apt.16409

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