



Chronic inflammatory bowel diseases
- studies of microbiota and its influence

av

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Akademisk avhandling

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Abstract

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Introduction: Inflammatory bowel diseases are becoming increasingly common. The underlying mechanisms are not entirely known but the gut microbiota seem to be involved in the pathogenesis.

Aim: The aim of this thesis was to characterise gut microbiota related to diagnosis, disease course and response to biological treatment, taking aspects of the source of biological material into account.

Materials and methods: Patients and healthy individuals from several different cohorts in Sweden and Europe were invited. Faecal samples and mucosal biopsies were analysed using different sequencing platforms to investigate the gut microbiota. In Study I the faecal microbiota was correlated to different inflammatory bowel diseases. In Study II we compared the microbiota in faeces to the microbiota in mucosal biopsies. In Study III we related the faecal microbiota to the outcome of biological treatment. In Study IV we investigated the diagnostic and prognostic properties of the GAmapTM Dysbiosis Test.

Results: The faecal microbiota in collagenous colitis resembles the faecal microbiota in inflammatory bowel disease. The faecal microbiota differs from the mucosal microbiota. Faecal microbiota at initiation of biological treatment among patients with Crohn's disease differ between responders and non-responders. The GAmapTM Dysbiosis Test discriminates patients with inflammatory bowel disease from healthy individuals.

Conclusion: Collagenous colitis may share microbial underpinnings with other inflammatory bowel diseases. Conclusions about mucosal interactions with the gut microbiota should be made with caution when using faecal samples to characterise the microbiota. In Crohn's disease, the faecal microbiota may be included in a model to predict the outcome of biological treatment. The GAmap Dysbiosis Test does not seem to be superior to other current diagnostic tools in clinical decision-making.

Key words: Inflammatory bowel disease, microscopic colitis, Crohn's disease, ulcerative colitis, microbiota, microbiome, biological treatment

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