

ABSTRACT

The complex etiopathogenesis of idiopathic inflammatory bowel diseases (IBD) remains unclear, with one of the main suspected causes being the dysregulation of mucosal immunity in response to specific components of the gut microbiome. This dissertation investigates the potential of faecal microbiota transplantation (FMT) as an innovative therapeutic intervention aimed at modifying the microbiome and influencing the course of IBD. FMT, involving the transfer of stool from a healthy donor to the patient, has proven highly effective in the treatment of recurrent *Clostridioides difficile* colitis, where it is already considered a standard therapeutic procedure. However, in relation to IBD, FMT remains an experimental method, predominantly used in clinical studies. Current systematic reviews indicate that the effect of FMT on ulcerative colitis (UC) is variable, both in terms of achieving remission and clinical response. Recent randomized controlled trials for UC, in accordance with our presented data, show a mild to moderate effect of FMT in this indication. The effectiveness of FMT is influenced by a range of factors, particularly the correct selection of donor or donors, the diversity of their microbiome, methods of application, and frequency of administration. In the case of Crohn's disease, the data are still very limited, but suggest a minimal effect of FMT in this indication. FMT is considered a safe method with minimal adverse effects, provided strict criteria for donor selection and examination are adhered to.

Based on the current results, it can be concluded that FMT represents a promising and safe therapeutic approach for the treatment of UC. However, further extensive, well-designed studies are necessary to provide definitive conclusions, focusing on the method's effectiveness in various indications, its ability to induce remission in IBD, the number of FMT applications needed to achieve this goal, long-term safety, and optimal methods of application.