

A Mediterranean Diet Pattern Improves Intestinal Inflammation Concomitant with Reshaping of the Bacteriome in Ulcerative Colitis: A Randomised Controlled Trial

Randomized, controlled trial. Adult patients with **quiescent** ulcerative colitis. Patients were randomized to MDP (Mediterranean Diet Pattern) vs CHD (Canadian Habitual Diet Pattern) for 12 weeks. (Over 70% of patients entered the study with F.calprotectin<100)

Primary endpoints: SCCAI score reduction by week 12. (>1.5 reduction was considered significant)

Results: N=28

- At week 12 SCCAI reduction: 27% MDP vs 23% CHD, p=ns.
- Loss of response w12; 13% MDP vs 31% CHD, p = 0.003.
- Improved response was more frequent in MDP than HD, p=0.01.
- At week 12 FC <100, 87% MDP vs 25% CHD, p<0.001.
- In MDP higher levels of total short chain fatty acids in stools p=0.01, acetic acid p=0.03 & butyric acid p=0.03 vs CHD. MDP induced microbial changes associated with protective role in UC.

Conclusion:

An MDP induces gut microbiome alterations associated with the maintenance of clinical remission and reduced FC in patients with quiescent UC. The data support that the MDP is a sustainable diet pattern that could be recommended as a maintenance diet and adjunctive therapy for UC patients in clinical remission.

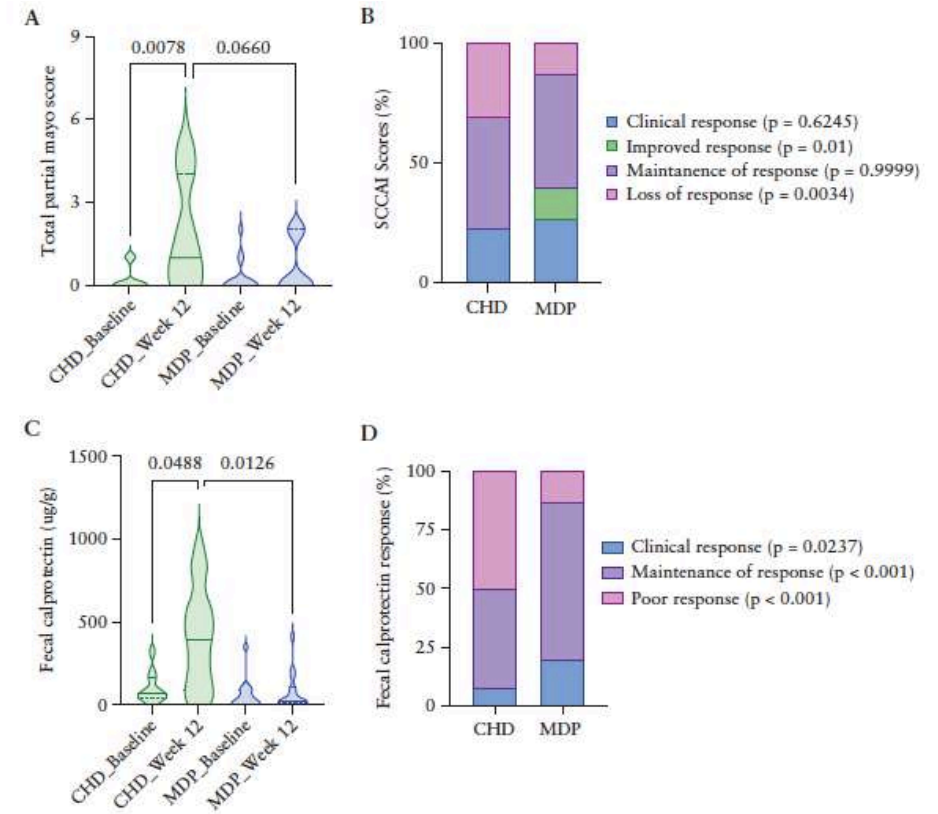


Figure 1. The MDP reduces faecal calprotectin and disease activity in UC patients. [A] Partial Mayo Score at baseline and week 12. [B] Disease activity response rates measured by the SCCAI at Week 12. [C] Faecal calprotectin values [ug/g] at baseline and week 12. [D] Faecal calprotectin response by diet, with response defined as a 50% in faecal calprotectin levels from baseline, maintenance of response defined as no change, and loss of response defined as an increase in baseline values. The Wilcoxon matched-pairs signed-rank test and Mann-Whitney test were performed for [B] and [F]. Fisher's exact test was performed for [C], p <0.05. MDP, Mediterranean Diet Pattern; UC, ulcerative colitis; SCCAI, Simple Clinical Colitis Activity Index

