

THE EFFECT OF VEDOLIZUMAB ON THE COMPOSITION OF COLONIC MICROBIOTA IN PATIENTS WITH INFLAMMATORY BOWEL DISEASE.

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Background:

The complex interaction between gut microbiota, intestinal epithelium integrity and host immune system appears to be the most involved mechanism in Inflammatory Bowel Diseases (IBD) pathogenesis. In this preliminary study, the effect of Vedolizumab (VDZ) treatment on gut microbiota composition was evaluated in IBD patients with moderate-severe disease activity.

Methods and Results:

18 IBD patients (CD: 22%; UC: 78%), undergoing VDZ treatment, were enrolled. During a colonoscopy performed before (T0), after 24 weeks (T1) and after 52 weeks (T2) of VDZ, colonic biopsies were collected for microbiota analysis. At the same time-points, faecal samples were collected for microbiota analysis performed by 16S rRNA sequencing. In biopsy samples: α -diversity showed a significant increase over time after VDZ *vs.* baseline [$p=0.021$]; increase in SCFA-producing bacteria at T2 *vs.* baseline and a gradual reduction of pro-inflammatory *Proteobacteria* at T1 and T2, were observed. In faecal samples: phylum and bacterial families showed a similar trend.

Conclusions and Significance:

Overall, treatment with Vedolizumab showed an important reduction in the local pro-inflammatory microbial state, an effect associated with an improvement in clinical conditions. Further investigation will be necessary to determine whether these modifications could contribute to the maintenance of remission in IBD patients following VDZ treatment.

Keywords:

IBD; Vedolizumab; biopsy and faecal samples; gut microbiota; 16S rRNA sequencing.

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References:

N.A.

Thematic Area:

- Microbiome: from Research to Clinics

Infrastructures:

N.A.