STRUCTURAL CHANGES IN THE MICROBIOME IN RATS WITH DSS-INDUCED COLITIS

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Microflora plays a critical role in the initiation and development of inflammatory bowel disease (IBD). There are many facts accumulated about the effect of intestinal dysbiosis on the pathogenesis of Crohn's disease and ulcerative colitis (UC). A biological preparation based on intestinal bacteria can modulate the intestinal normoflora in IBD. We evaluated the effect of the biological drug on rat intestinal microbiome in DSS-induced colitis.Rats were divided into 4 groups: without a colitis model (n = 7); with a colitis model received (n=6); experimental group animals (with a colitis model) received a 10% DSS solution for 7 days, and biology product intragastrically at a dose of 500 mg/kg body weight once per day for 7 days (n = 7); comparison group animals (with a colitis model) received a 10% DSS solution for 7 days and as a treatment the 5-ASA (5-aminosalicylic acid) intragastrically at a dose of 100 mg / kg of animal body weight once for 7 days (n = 6). In our work, we found a decrease in bactericides after 7 days of 10% DSS. An increased in the biodiversity index in the control group is associated with an increase in the following genera: Murimonas, Victivallales, Anaerofustis and etc. Wang W. et. al. shows a decrease in the number of Lactobacillus and Bifidobacteria were significantly reduced in DSS-induced colitis. In our study, the use of biological product show to the partial restoration of certain types of intestinal bacteria such as gram-positive Clostridium XVIII, Faecalibacterium, gram-negative Microbacter, Phascolarctobacterium producing SCFAs, etc.