**Saccharomyces boulardii** ameliorates acute dextran sulfate sodium-induced intestinal inflammation

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Inflammatory bowel disease is a group of inflammatory conditions of the intestine, including mainly ulcerative colitis and Crohn's disease. Probiotics have been used to treat human gastrointestinal inflammations and infectious diarrhea. The aim of this study was to evaluate anti-inflammatory effects of *Saccharomyces boulardii* (viable and heat-inactivated), as soon as *S. boulardii* conditioned-media (SbS), in a dextran sulfate sodium (DSS)-induced colitis in mice. Animals received oral administration of *S. boulardii* (viable or inactivated), or SbS, prior to the onset of colitis induction. Clinical aspects were measured daily. At sacrifice, colon was removed and analyzed for weight/length ratio, histological scoring, and measurement of myeloperoxidase, eosinophil peroxidase, N-acetylglucosaminidase and cytokines. Treatment with viable probiotic prevented mice weight loss, colon weight/length ratio, eosinophil and macrophage influx in colon tissue, and diminished clinical score means, intestinal permeability and bacterial translocation, neutrophil influx, and inflammatory mediators (CXCL-1/KC, IL-6, IL-1β, TNF-α, and IFN-γ). When heat-inactivated probiotic was used, anti-inflammatory effects were observed, but to a lesser extent. SbS, on the other hand, did not ameliorate any clinical aspect of colitis, despite the fact it ameliorated some inflammatory parameters. In conclusion, oral administration of *S. boulardii* ameliorates the severity of colitis in mice.

**Key words:** *Saccharomyces boulardii*, inflammatory bowel disease, dextran sulfate sodium-induced colitis, intestinal permeability, cytokines.