The effect of methylsulfonylmethane on the experimental colitis in the rat.

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Abstract
Methylsulfonylmethane (MSM), naturally occurring in green plants, fruits and vegetables, has been shown to exert anti-inflammatory and antioxidant effects. MSM is an organosulfur compound and a normal oxidative metabolite of dimethyl sulfoxide. This study was carried out to investigate the effect of MSM in a rat model of experimental colitis. Colitis was induced by intracolonic instillation of 1 ml of 5% of acetic acid. Rats were treated with MSM (400 mg/kg/day, orally) for 4 days. Animals were euthanized and distal colon evaluated histologically and biochemically. Tissue samples were used to measurement of malondialdehyde (MDA), myeloperoxidase (MPO), catalase (CAT), glutathione (GSH) and proinflammatory cytokine (TNF-α and IL-1β) levels. Results showed that MSM decreased macroscopic and microscopic colonic damage scores caused by administration of acetic acid. MSM treatment also significantly reduced colonic levels of MDA, MPO and IL-1β, while increased the levels of GSH and CAT compared with acetic acid-induced colitis group. It seems that MSM as a natural product may have a protective effect in an experimental ulcerative colitis.

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PMID: 21463646 [PubMed - indexed for MEDLINE]