

Benefit of Aloe vera and Matricaria recutita mixture in rat irritable bowel syndrome: Combination of antioxidant and spasmolytic effects.

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Abstract

OBJECTIVE:

To evaluate the beneficial effects of a mixture of Aloe vera (AV) and Matricaria recutita (German chamomile, GC) in an experimental model of irritable bowel syndrome (IBS).

METHODS:

IBS was induced by a 5-day restraint stress in rats including the groups of control (water), GC (300 mg/kg), loperamide (10 mg/kg), mixed AV and GC (50: 50 at doses of 150, 300 or 450 mg/kg assigned as Mix-150, Mix-300 and Mix-450, respectively) and the sham group which did not receive any restraint stress and was fed with saline. All medications were administered intragastrically by gavage for 7 days, 2 days as pre-treatment followed by 5 days during induction of IBS every day before restraining.

RESULTS:

The increased tumor necrosis factor alpha (TNF- α), myeloperoxidase (MPO) activity, and lipid peroxidation (LPO) in colonic cells in the control group were significantly decreased in the treatment groups. GC inhibited only small bowel transit while the AV/GC mixture delayed gastric emptying at the doses of 150 and 300 mg/kg. The AV/GC mixture also reduced colonic transit and small bowel transit at the dose of 150 mg/kg.

CONCLUSIONS:

The severity of stress-induced IBS was diminished by the AV/GC mixture at all doses used but not dose-dependently, via inhibiting colonic MPO activity and improving oxidative stress status. The effect of the mixture was more effective than GC alone. The present results support effectiveness of the AV and GC combination in IBS.