The effect of lyophilized extract of Ecballium elaterium fruit on experimental colitis in rats

Abstract

***Background&Objective**: Ecballium elaterium (L.) A. Rich (Cucurbitaceae), also known as the "squirting cucumber," is a wild medicinal plant found abundantly in Moghan, Ardabil province, Iran.The roots and juice of its fruits were used traditionally against a wide range of diseases and symptoms, since it was known for its anti-infammatory and analgesic effects.*

This study was designated to investigate anti-inflammatory effect of lyophilized extract of ecballium elaterium fruit on the experimental colitis in rats.

***Materials and Methods:** Rats were grouped (*n = *6) and fasted for 24 h before colitis induction. Colitis was induced by intracolonic instillation of 1 ml of 5% of acetic acid. Rats were treated with lyophilized extract of E. elaterium fruit (25 mg/kg/day, ip) for 4 days. Animals were euthanized and distal colon evaluated histologically and biochemically. water consumption and food intake were observed during the four days. Tissue samples were used to measurement of glutathione (GSH) and proinflammatory cytokine (TNF-α) levels.*

***Results:** Increased water consumption were observed during the four days in treatment groups compared with colitis control group.Results showed that lyophilized extract of ecballium elaterium fruit decreased macroscopic colonic damage scores caused by administration of acetic acid. Lyophilized extract of ecballium elaterium fruit also significantly reduced colonic levels of TNF-α, while increased the levels of GSH compared with colitis control group.*

***Conclusions:**The result suggest that E. elaterium extract may have the potential anti-inflammatory effect on experimentally induced colitis.*

***Keywords:** Ecballium elaterium, Inflammation, Rats, Ulcerative colitis*