البحث الخامس

Gastroprotective and Antioxidative Effects of Ammi Visnaga Extract against Ethanol induced Gastric Mucosal Ulceration in Male Albino Rats.

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Abstract

Background: Alcohol abuse contributes to the pathology of gastric ulcers. The tissues contain antioxidants, but the activity declines when exposed to reactive oxygen species. The *Ammi visnaga extract* has substantial scavenging effects and is rich in phenols and flavonoids. We estimated the gastro-protective and antioxidative effects of *A. visnaga extract* on rats' gastric mucosal lesions after exposure to ethanol.

Methods: Forty adult male albino rats were divided into four groups of ten each. Group 1 (standard control), group 2 received omeprazole 20 mg/kg+1 mL ethanol, group 3 (ulcer model) received 1 mL ethanol 80% only, and group 4 received 1200 mg/kg/day *A. Visnaga extract*+1 mL ethanol 80%. The gastric pH, percentage of ulcer area, gastric mucus secretion, oxidative and antioxidant markers, and histopathology were examined in each group.

Results: Pre-treatment with omeprazole and *A. visnaga extract* improved the gastric acidity, the ulcerated areas, and the gastric mucus secretion compared to the rats in group 3. Compared to group 3, rats treated with omeprazole and *A. visnaga extract* showed major improvements in the tissue glutathione, superoxide dismutase, and catalase levels. The histopathology examinations showed ulceration of the glandular mucosa in group 3, accompanied by multifocal inflammatory cell infiltrations. The omeprazole treatment completely protected the gastric mucosa in group 2. Significant improvement was also observed in rats pretreated with *A. visnaga extract* (group 4).

Conclusion: The gastro-protective effects of A. visnaga extract included the inhibition of tissue oxidative stress and increased the antioxidant properties.

Keywords: *Ammi visnaga extract*, Antioxidants, Ethanol, Gastro-protective effects, GI ulcers.