

Original Paper

Anti ulcerogenic activity of *Bunium persicum* Boiss. essential oil in induced ulcer models in Wistar rats

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Abstract

Background and Objective: *Bunium persicum* is often used in Iranian traditional medicine for the treatment of gastrointestinal disorders particularly gastric ulcer. This study was done to evaluate the antiulcerogenic effect of *Bunium persicum* Boiss. essential oil against indomethacin and ethanol – induced ulcer models in Wistar rats.

Methods: This experimental study was carried out on rats weighing 200-220 g in veterinary college of Urmia University, Iran. LD₅₀ was calculated based on Lorke's method. To evaluate the short term oral toxicity, animals were allocated into four group of six each. In groups 1-3 animals were received orally 250, 125, 80 mg/kg/bw of *Bunium persicum* Boiss. essential oil, respectively. Controls were received Tween 80 (2%) orally for 14 consecutive days and monitored daily. *Bunium persicum* Boiss. essential oil was administered orally at doses of 20, 40 and 80 mg/kg/bw and cimetidin (10 mg/kg/bw) and omopirazol (30 mg/kg/bw) in indomethacin and ethanol-induced ulcer models.

Results: The LD₅₀ was 375 mg/kg/bw. Daily single oral doses of *Bunium persicum* Boiss. essential oil tolerated behaviorally after 14 days without any alterations in body and organs weight, food, water consumption and serum total protein, alanine and aspartate aminotransferase activity. The preventive index in doses of 40 and 80 mg/kg/BW of *Bunium persicum* Boiss. essential oil was 37.98% and 59.21%, respectively in the indomethacin -induced ulcer model (P<0.05). In the model of ethanol -induced ulcer, the preventive index in doses of 40 and 80 mg/kg of *Bunium persicum* Boiss. essential oil was 12.40% and 22.05%, respectively (P<0.05).

Conclusion: The essential oil of *Bunium persicum* Boiss is completely “safe” and at the doses of 40 and 80mg/kg/bw significantly prevent gastric ulcers in animal model.

Keywords: *Bunium persicum* Boiss., Gastric ulcer, Indomethacin, Ethanol

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