Original Paper

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

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Abstract

**Background and Objective:** *Bunium percicum* 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 percicum* 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 percicum* Boiss. essential oil, respectively. Controls were received Tween 80 (2%) orally for 14 consecutive days and monitored daily. *Bunium percicum* Boiss. essential oil was administered orally at doses of 20, 40 and 80 mg/kg/bw and cimetidine (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 percicum* 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 percicum* 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 percicum* Boiss. essential oil was 12.40% and 22.05%, respectively (P<0.05).

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

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

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Received 1 May 2013  
Revised 20 Aug 2013  
Accepted 20 Aug 2013

This paper should be cited as: Jalilzadeh-Amin G, Yousefi AR, Abdollahi-Pirbazari M. [Anti ulcerogenic activity of *Bunium percicum* Boiss. essential oil in induced ulcer models in Wistar rats]. J Gorgan Uni Med Sci. 2014; 16(2): 37-44. [Article in Persian]