**Short communication**

**Anti-inflammatory activity of aqueous extract of**

*Bergenia ciliata* **rhizomes**

V. Kumar, G. B. Shah, J. R. Baheti, S. S. Deshpande, N. S. Parmar*

K. B. Institute of Pharmaceutical Education & Research, Sector-23, Gh-6, Gandhinagar 382 023, Gujarat, India

Received 19 January 2002 ; Accepted 16 February 2002

**Abstract**

**Objective:** To evaluate the anti-inflammatory activity of *Bergenia ciliata* rhizomes. **Materials and method:** Aqueous extract was prepared and anti-inflammatory activity was studied on carrageenin-induced paw oedema in rats. **Results:** Aqueous extract of *Bergenia ciliata* (50 and 100 mg/kg i. p.) showed a potent and dose dependent anti-inflammatory effect, comparable to diclofenac sodium (10 mg/kg i.p.). **Conclusion:** The present results indicate the potential of aqueous extract of *Bergenia ciliata* in the treatment of pain and inflammation.

**Key Words:** *Bergenia ciliata,* anti-inflammatory activity, carrageenin

**1. Introduction**

*Bergenia ciliata* possesses a variety of uses in the traditional system of medicine. In Indian ethno medicine, locally known as pashan bheda, it is reported to have anti-urolithiatic [1], astringent and diuretic properties [2]. Ethanolic extracts of certain Bergenia species were reported to possess anti-inflammatory effect [3]. We studied anti-inflammatory potential of aqueous extract of *B. ciliata* rhizomes in comparison with diclofenac sodium on carrageenin-induced paw oedema in rats.

**2. Materials and method**

**2.1 Plant material**

*Bergenia ciliata* Blatter (Saxifragaceae) rhizomes were collected from Jammu and Kashmir in March 1999 and authenticated by our Pharmacognosy department where the voucher specimen (hb/99/04) is deposited.

**2.2 Preparation of extract**

Moderately coarse powder of air-dried rhizomes was extracted by maceration process using distilled water (yield: 21.45 %). Phytochemical screening [4,5] gave positive tests....

* Corresponding author
for tannins, catechins, saponins and flavonoids.

2.3 Anti-inflammatory activity

Albino rats (130 - 160 g) of either sex were used. They were kept in standardized environmental conditions and maintained on a standard rodent diet and water ad libitum. Acute inflammation was induced by 0.1 ml of 1% (w/v) carrageenin into the plantar aponeurosis of the right hind paw of rats [6, 7].

Aqueous extract (50 and 100 mg/kg) or diclofenac sodium (10 mg/kg) was administrated intraperitoneally 45 min before carrageenin injection. Paw volume was measured with a plethysmometer before and 3h after the carrageenin injection. The percent inhibition of paw oedema was calculated.

2.4 Statistical analysis

Results were expressed as mean ± SEM. Difference between the means were analysed by student’s t - test and the level of significance was set at P<0.05.

3. Results and discussion

A dose dependent reduction of carrageenin-induced oedema volume in rats was observed following intraperitoneal administration of the aqueous extract of B. ciliata (50 and 100 mg/kg), the effect being comparable to that of diclofenac sodium (10 mg/kg). Our results reported in table 1, suggest that the aqueous extract of Bergenia ciliata rhizomes possesses a potent anti-inflammatory activity. Further studies are needed to better characterize the important active constituents responsible for the anti-inflammatory activity.

References
