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...
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.

### Table 1

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Dose (mg / kg, i.p.)</th>
<th>Oedema volume (ml)</th>
<th>Inhibition (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control (saline)</td>
<td>2.0 ml</td>
<td>0.60 ±0.03</td>
<td>_</td>
</tr>
<tr>
<td>Diclofenac sodium</td>
<td>10</td>
<td>0.18 ±0.03*</td>
<td>70.00</td>
</tr>
<tr>
<td>Aqueous extract</td>
<td>50</td>
<td>0.19 ±0.02*</td>
<td>68.33</td>
</tr>
<tr>
<td></td>
<td>100</td>
<td>0.13 ±0.01*</td>
<td>78.33</td>
</tr>
</tbody>
</table>

Values are mean ± S.E.M; n=6 ; *P<0.001 vs. control; Student’s *t* -test .

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


