We read with interest the article “Exploring Indian medicinal plants for anti ulcer activity” (Indian J Pharmacol 2006; 38: 95-99). We had studied at the Medical College, Trivandrum, properties of nimbidine, the bitter amorphous, neutral powder isolated from the oil expressed from the seed kernels of Azadirachta indica (neem) in animals as well as in humans with duodenal ulcer. It reduced the incidence and severity of histamine and cysteamine induced duodenal ulcers in guinea pigs and accelerated the healing of gastric ulcers induced by acetic acid in rats and dogs. It also significantly reduced the gastric lesions produced by aspirin and indomethacin at doses of 20-40 mg/kg, p.o. At 40 and 80 mg/kg it showed remarkable protection in chemically induced duodenal lesions in rats. Nimbidine was devoid of toxicity even at a dose of 100 mg/kg orally for 12 weeks and 1 g/kg intraperitoneally in rats.

Further, in 18 patients with endoscopy proven duodenal ulcers, nimbidine was administered in capsules, 300 mg daily (60 mg thrice daily with food and 120 mg at night) for eight weeks. All the patients became symptom-free in 2 to 4 weeks and endoscopic healing of ulcer occurred in 16 (89%) of the 18 patients within 8 weeks, results comparable to that of other modern antiulcer drugs. There were no haematological, hepatic, renal, cardiac or other side effects.

Table 1

<p>| Action of nimbidine on gastric secretions in patients with duodenal ulcer |
|-------------------------------------------------|-----------------|-----------------|</p>
<table>
<thead>
<tr>
<th>Before treatment</th>
<th>After treatment</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basal acid output (mEq/h)</td>
<td>3.5 (0.8)</td>
<td>2.7 (0.8)</td>
</tr>
<tr>
<td>Maximal acid output (mEq/h)</td>
<td>21.4 (2.6)</td>
<td>13.1 (2.6)</td>
</tr>
<tr>
<td>Pepsin (mg/ml)</td>
<td>24.7 (3.1)</td>
<td>13.3 (3.5)</td>
</tr>
<tr>
<td>Hexosamine (µg/ml)</td>
<td>556.3 (32.8)</td>
<td>454.6 (65.5)</td>
</tr>
</tbody>
</table>

*Student’s ‘t’ test. (Figures in parentheses indicate 1 standard deviation)

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References

Reply:

I appreciate the experimental and clinical work carried out by the above workers. In their study, they concluded that antiulcer effect of the extract is due to its antisecretory effect. In their paper they also mentioned that nimbidine isolated from seed kernels of Azadirachta indica is causing reversal of antiulcerogenic effect at higher doses as nimbidine itself is not pure substance but a mixture of different compounds. In our review, we cited the recent references pointing to the antisecretory activity of Azadirachta indica in addition to mucosal protective effect.

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Reference