Anti-spasmodic and anti-nociceptive effects of Teucrium polium aqueous extract

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Abstract

Background: Teucrium polium has been known as an important traditional medicinal plant and is used for different therapeutic purposes such as gastrointestinal disorders. Therefore, the anti-spasmodic and anti-nociceptive activities of aqueous extract of Teucrium polium were examined.

Methods: Anti-spasmodic effect of different concentrations (47-470 mg/l) of Teucrium polium aqueous extract was assessed on acetylcholine (220 nM) precontracted guinea pig isolated ileum. The anti-cholinergic effect of the plant was also examined by hot-plate test on mice and compared with the effect of morphine (10 mg/kg) as positive control. Results: Maximum inhibition response induced by Teucrium polium extract on contraction induced by acetylcholine (220 nM) was 93.5%. In the absence and presence of Teucrium polium extract (470 mg/l) and atropine (10 nM). Anti-nociceptive effect of different doses (30-240 mg/kg) of Teucrium polium aqueous extract was determined by hot-plate test on mice and compared with the effect of morphine (10 mg/kg) as positive control. Maximum inhibition response induced by Teucrium polium extract on contraction induced by acetylcholine (220 nM) was 93.5%. There was also a parallel rightward shift in the log concentration-response curve of acetylcholine in the presence of atropine, but a nonparallel shift in the presence of Teucrium polium extract. The Teucrium polium extract increased reaction time dose dependently (P<0.01 for all doses). However the anti-nociceptive effect of extract was significantly less than that of morphine (P<0.001). Conclusion: These results show that Teucrium polium aqueous extract have anti-nociceptive and anti-spasmodic effects and may have some clinical benefits for gastrointestinal disorders.

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Anti-nociceptive; Anti-spasmodic; Aqueous extract; Lamiaceae; Teucrium polium

Indexed Keywords

EMTREE drug terms: acetylcholine; atropine; morphine; Teucrium polium extract

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