

Anti-anxiety effect of aqueous and ethanolic extracts of *Salvia leriifolia* Benth. leaves in mice using elevated plus maze

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Abstract

Background: *Salvia leriifolia* (Lamiaceae) is indigenous to the east of Iran and some part of Afghanistan. It has many pharmacological effects such as antinociceptive, anti-inflammatory, anti-ischemic, anti-hyperglycemic, hypnotic, muscle relaxant, anti-peptic ulcer and anticonvulsant effects. Objective: In this research, the anti-anxiety effects of aqueous and ethanolic extracts of *S. leriifolia* Benth. leaves were studied using elevated plus maze. Method: Nine groups of male mice were used, each of which contained 10 animals. Half an hour before anti-anxiety test, the aqueous or ethanolic extracts (100, 200 and 400 mg/kg), diazepam (1 mg/kg) and saline were injected intraperitoneally to mice. The aqueous and ethanolic extracts were dissolved in saline or tween 80, respectively. In anti-anxiety test, the number of entries into open and closed arms by animals was recorded. In motor coordination (Rotarod test) experiment, the extracts were injected 30 or 60 min before the test and in locomotor activity (open field test) experiment, the extracts were injected 60 min before test. Results: In anti-anxiety test, among different doses of the aqueous or ethanolic extracts, only ethanolic extract (in dose of 100 and 200 mg/kg) significantly increased opened arms entrance ($p < 0.01$) and all doses of the ethanolic and aqueous extracts declined closed arms entrance, dose dependently ($p < 0.001$). In Rotarod and open field tests all of doses significantly decreased mice locomotion activity and motor balance ($p < 0.001$). Conclusion: The ethanolic extract of *S. leriifolia* leaves extract showed anti-anxiety activity and declined locomotion activity and motor coordination in mice.

Reaxys Database Information

Author keywords

Anti-anxiety; Elevated plus maze; Locomotion activity; Motor balance; *Salvia leriifolia* Benth. leaf

Indexed Keywords

EMTREE drug terms: anxiolytic agent; diazepam; plant extract; polysorbate 80; *salvia leriifolia* extract; sodium chloride; unclassified drug

EMTREE medical terms: animal experiment; article; controlled study; locomotion; male; maze test; medicinal plant; motor activity; motor coordination; mouse; nonhuman; open field test; plant leaf; rotarod test; *salvia leriifolia*

Species Index: Animalia; Lamiaceae; Mus; *Salvia leriifolia*

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