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Antinociceptive activity of aqueous leaf extract of *Tetracera sarmentosa* L. in rats

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The aim of this study was to examine the antinociceptive potential of the aqueous leaf extract of *Tetracera sarmentosa* (Family : Dilleniaceae Sinhala: korasa), which is used for bone fracture treatment in the traditional system of medicine in Sri Lanka and suggests that it may have pain relieving properties as well.
The water extract was prepared by refluxing the macerated leaves(350 g) in distilled water(5200 ml) for 20 hours. Different doses of the extract (500, 750, 1000, 2000 mg kg^{-1}) were orally administered to male rats (n=6(treatment)-8(control) per group) or vehicle (1 ml 1% w/v gum acacia) and the analgesic potential evaluated using three models of nociception (hot plate, tail flick and formalin test).

The 500 mg kg^{-1} dose showed significant ($p \leq 0.05$) prolongation of the reaction time in the hot plate test in the 4th hour , 750 mg kg^{-1} dose in the 3rd and 4th hours and the 1000 mg kg^{-1} dose in the 1st- 4th hours post treatment respectively. In contrast, none of the doses of the extract prolonged the reaction time in the tail flick test. In the formalin test, 1000 mg kg^{-1} significantly reduced licking duration and the number of lickings in the 1st phase(0-5 mins) and all the four parameters (number of lickings, number of number of liftings of the formalin injected hind paw, lifting duration and time spent on licking) in the 2nd phase (20-6- mins). Further, the prolongation of the reaction time in the hot plate test induced by aqueous leaf extract (ALE) was not suppressed by metochlopramide and atropine. Further, the ALE did not have any sedative action (in terms of rat hole board test) and motor deficiencies (in terms of bar holding and bridge test)

The results indicate that the ALE has a genuine mild to moderate oral antinociceptive action which is mediated supraspinally and peripherally through a noncholinergic, nondopaminergic and non sedative mechanisms. Furthermore, the results show that the ALE is also effective against inflammatory pain as well.

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