

In vivo analgesic effect of aqueous extract of *Tamarindus indica* L. fruits.

ABSTRACT

To study the effects of *Tamarindus indica* L. aqueous fruit extract on the antinociceptive activities in rodent models. Methods: The analgesic effect was evaluated using acetic acid-induced writhing, hot plate and formalin tests. Results: The extract (60–600 mg/kg) significantly ($p < 0.05$) inhibited the writhing test in a dose-dependent manner with the percentage of analgesia recorded between 51.8 and 74.1%. In addition, the extract also significantly ($p < 0.05$) increased the latency time in the hot plate test in a dose-dependent manner. Further study showed that the extract elicited inhibitory activity in both the early and late phases of the formalin test. Moreover, pretreatment with 5 mg/kg naloxone, a nonselective opioid receptor antagonist, significantly ($p < 0.05$) modified the antinociceptive effect of the extract in all tests. Conclusion: The aqueous extract of *T. indica* possesses potential antinociceptive activity at both the peripheral and central levels, which are mediated via activation of the opioidergic mechanism.

Keyword: Analgesic; Opioid system; *Tamarindus indica*.