Antinocieptive and anti-inflammatory effects of Toddalia asiatica (L) Lam. (Rutaceae) root extract in Swiss albino mice.

Abstract:

INTRODUCTION: Toddalia asiatica is a commonly used medicinal plant in East Africa for the management of pain and inflammatory conditions. The present study investigated the antinociceptive and the anti-inflammatory effects of T. asiatica in Swiss albino mice. METHODS: The antinociceptive and the anti-inflammatory effects of T. asiatica were investigated using formalin-induced pain test and the carrageenin-induced oedema paw. The extract solvent (vehicle), aspirin and indomethacin were employed as negative and positive controls respectively. Eight mice were used in each experiment. RESULTS: In the early phase of the formalin test, the 100mg/kg dose showed no significant antinociceptive activity while the 200mg/kg showed significant ($p < 0.01$) antinociceptive activity. The 100 mg/kg dose showed highly significant antinociceptive activity ($p < 0.001$) in the late phase of the formalin test while the 200mg/kg dose showed no significant antinociceptive activity. A reduction in carragenin induced acute inflammation paw oedema was significant ($p < 0.01$) following administration of 100mg/kg dose but not with the 200mg/kg dose. CONCLUSION: The present study therefore lends support to the anecdotal evidence for use of T. asiatica in the management of painful and inflammatory conditions.