Anti-inflammatory effects of Labisia pumila (Blume) F. Vill-Naves aqueous extract

ABSTRACT

This study was carried out to evaluate the anti-inflammatory effects of three concentrations of Labisia pumila (Blume) F. Vill-Naves aqueous leaf extract in rats. The effects of these extracts as anti-inflammatory agents were determined using two experiments namely formalin-induced paw licking and carrageenan-induced paw oedema test. The exposure of inflammation to various treatments resulted in significant differences between treatments in formalin-induced paw licking in rats experiment whereas in phase 2, 50 mg kg⁻¹ of L. pumila extract showed the most significant inhibition of 82.12%, followed by 10 mg kg⁻¹ with 76.00% and 25 mg kg⁻¹ with 57.80%. Similarly, different treatments showed significant effects at p<0.05 in the carrageenan inducing paw oedema experiment. All treatments were able to suppress the oedema formation induced by carrageenan as compared with the control. It is evident that the anti-inflammatory effect of every concentration of L. pumila extract started as early as the first hour of carrageenan injection and showed the maximum inhibition during the fifth hour. Again, 50 mg kg⁻¹ of L. pumila extract was found to be the best treatment that could reduce inflammation with highest inhibition of 64.59% followed by 25 mg kg⁻¹ with 56.99% and 10 mg kg⁻¹ with 5.55%. The result of this study has shown that these extracts of L. pumila can be effective for anti-inflammation purposes which supports and justifies traditional uses of this plant.

Keyword: Anti-inflammation; Carrageenan induce paw oedema test; Formalin-induced paw licking test; Labisia pumila; Medicinal plants