

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