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Anti-inflammatory activity of *Acronychia pedunculata* leaves

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Acronychia pedunculata ("Ankenda" in Sinhala, Family: Rutaceae) is a small evergreen tree widely distributed in rainforests of Sri Lanka. The leaves, stems, roots and fruits have been used for centuries in folk medicine for the treatment of various diseases such as sores, asthma, cough, diarrhoea, rheumatism, swellings, pain and itchy skin, the disorders associated with inflammatory process. This indicates that the possibility of this plant may contain compounds with anti-inflammatory properties. There is no published information available on in-vivo studies to investigate the anti-inflammatory activity of leaves of *A. pedunculata.* Hence, a present study was focused on investigating the anti-inflammatory activity of 70% ethanol extract of *A. pedunculata* (EEAP).

Carrageenan induced rat hind paw oedema test was used as an experimental model for evaluation of acute anti-inflammatory effect. Healthy adult male, Wistar rats weighing 150-200 g were used for the experiment. The negative and positive control groups were orally administered 1.0 mL of 0.5 % carboxymethyl cellulose (CMC) and 5mg/kg body weight of indomethacin in 1 mL of 0.5% CMC respectively. The test groups were received 50, 100, 200, 300 and 500 mg/kg body weight of the 70% EEAP in 1 mL of 0.5% CMC.

The results showed that the treatment with 100, 200, 300 and 500 mg/kg b.w of EEAP were significantly reduced ($p < 0.05$) paw oedema when compared to negative control. But, the differences among doses of 200, 300 and 500 mg/kg b.w. were insignificant ($p > 0.05$). Hence, the dose of 200 mg/kg of EEAP was selected as an effective dose. The maximum percentage inhibition of rat paw oedema were found to be 77.8 % for dose of 200 mg / kg b.w. at 5th hour while it was 88.9 % for indomethacin which is a positive control.

In conclusion, these preliminary observations provided some valuable evidence for the anti-inflammatory properties of leaves of *A. pedunculata* as it is claimed in folk medicine. Further studies will be undertaken to uncover some of the possible mechanisms of these actions.

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