



ORIGINAL RESEARCH

Effects of *Dacryodes edulis* Leaf Extract on Pain and Inflammation

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ABSTRACT

Background: *Dacryodes edulis* leaf extract is used in traditional settings in management of many disease conditions including pain and inflammation. However, these empirical claims have not been evaluated scientifically.

Objective: The objective of this study was to determine the effect of ethanol leaf extract of *Dacryodes edulis* on pain and inflammation using rodents.

Materials and Methods: Writhing test using acetic acid for induction of pain and tail-immersion in temperature controlled water were used to study the effect on pain sensation while xylene-induced ear oedema and carrageenan-induced paw oedema were used for the effect of *Dacryodes edulis* on inflammation. Male mice divided into seven groups and three different doses of extract viz, 100mg/kg, 200mg/kg and 400mg/kg based on the results of the acute toxicity study and the mean effective dose study, ED₅₀ were used for the study. Ethical approval was obtained from the Faculty of Basic Medical Sciences, University of Calabar Animal Research Ethics Committee with number: 012PA31116.

Results: 400mg/kg extract showed significant analgesic activity having 75% inhibition of pain in the writhing test while aspirin showed 80% inhibition of pain. The extract also significantly (p<0.05) prolonged flick latency period comparable to morphine in tail immersion test. The extract caused 72% inhibition of xylene induced ear oedema compared to 91% of dexamethasone. Similarly it showed comparable activity (p<0.05) with aspirin in the carrageenan-induced paw oedema.

Conclusion: *Dacryodes edulis* leaf extract has activity against pain and inflammation. This validates its application in management of inflammation and pain in local settings.

Keywords: *Dacryodes edulis*, Analgesic, Pain, Anti-inflammatory, Male mice