PHARMACOGNOSY RESEARCH
DOI: 10.4103/0974-8490.72331 | pp. 313-317 | January 2010
Published by Phcog.Net

A study of the anti-inflammatory effect of the leaves of Psidium guajava Linn. on experimental animal models

Sarmistha Dutta, Swarnamoni Das
aDepartment of Pharmacology, Assam Medical College and Hospital, Dibrugarh - 786 002, Assam, India

ABSTRACT

Introduction The aim is to study the anti-inflammatory effect of the ethanolic extract of the leaves of Psidium guajava (PGE) on experimental animal models. Materials and Methods Fresh leaves were collected, air-dried, powdered, and percolated in 95% ethanol. Acute toxicity test was done according to OECD guidelines. Four groups of animals of either sex, weighing 150-200g of the species Rattus norvegicus were taken for the study (n = 6). Group A was taken as control (3% gum acacia in 10 mL/kg body weight), Group B as test group (PGE 250 mg/kg body weight), Group C as test group (PGE 500 mg/kg body weight), and Group D as standard (Aspirin 100 mg/kg body weight). The animals were studied for acute inflammation by Carrageenan-induced rat paw edema, subacute inflammation by Granuloma pouch method, and chronic inflammation by Freund's adjuvant-induced arthritis method. Statistical analysis was done by one-way analysis of variance followed by multiple comparison tests. Results In acute inflammation, there was significant inhibition of paw edema in Groups B, C, and D in comparison with Group A ($P < 0.05$). In subacute inflammation, there was significant inhibition of exudate formation in Groups B, C, and D in comparison to Group A ($P < 0.05$). In chronic inflammation, there was significant inhibition of paw edema and inhibition of weight reduction in Groups B, C, and D compared with Group A. Downregulation of arthritis index was also significant in Groups B, C, and D in comparison with Group A ($P < 0.05$). Conclusion The ethanolic extract of PGE has significant anti-inflammatory activity.

KEYWORDS

Anti-inflammatory . arthritis . carrageenan . granuloma . Psidium guajava

REFERENCES