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Original Article

Evaluation of anti-inflammatory and antioxidant activity of *Ichnocarpus frutescens* root

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Abstract:

ABSTRACT

Background and the purpose of the study: *Ichnocarpus frutescens* has been widely used in the traditional medicine for the treatment of a variety of diseases. In the present study anti-inflammatory and antioxidant property of roots of this plant was investigated.

Methods: The anti-inflammatory activity of methanolic extract of *Ichnocarpus frutescens* (MEIF) was evaluated by carrageenan, and cotton pellet induced granuloma tests to determine its effects on acute and chronic phase of inflammation models in rats.

Results and major conclusion: Preliminary Phytochemical analysis of methanolic extracts showed presence of terpenoids, flavonoids, and sterols. Maximum inhibition (54.63 %) was obtained at the dose of 100 mg/kg after 3 hrs of drug treatment in carrageenan induced paw oedema, whereas indomethacin produced 57.65 % of inhibition. In the chronic model, 300 mg/kg of MEIF like indomethacin and dexamethasone standard drug decreased formation of granuloma tissue by 22.64, 29.63 % and 34.84 % respectively. The successive methanol re-extract of *Ichnocarpus frutescens* root (MEIF) exhibited strong scavenging effects on 2, 2-diphenyl-2-picryl hydroxyl (DPPH) free radical, nitric oxide, super oxide anion, hydroxyl radical and inhibition of lipid peroxidation. These results clearly indicate strong anti-inflammatory and antioxidant properties of *Ichnocarpus frutescens* root.

Keywords:

Ichnocarpus frutescens; Anti-inflammatory; Carrageenan; Cotton pellet induced granuloma

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