

Evaluation of the Anti Ulcer Activity of Ethyl Acetate Fraction of Methanol Leaf Extract of *Clerodendrum Capitatum*

Authors : M. N. Ofokansi, Onyemelukwe Chisom, Amauche Chukwuemeka, Ezema Onyinye

Abstract : The leaves of *Clerodendrumcapitatum*(Lamiaceae) is mostly used in the treatment of gastric ulcer in Nigerian folk medicine. The aim of this study was to evaluate the antiulcer activity of its crude methanol leaf extract and its ethyl acetate fraction in white albino rats. The effect of crude methanol leaf extract and its ethyl acetate fraction(250mg/kg, 500mg/kg) was evaluated using an absolute ethanol induced ulcer model. Crude methanol leaf extract and the ethyl acetate fraction was treated with distilled water and 6% Tween 80, respectively. crude methanol leaf extract was further investigated using a pylorus ligation induced ulcer model. Omeprazole was used as the standard treatment. Four groups of five albino rats of either sex were used. Parameters such as mean ulcer index and percentage ulcer protection were assessed in the ethanol-induced ulcer model, while the gastric volume, pH, and total acidity were assessed in the pyloric ligation induced ulcer model. Crude methanol leaf extract of *Clerodendrumcapitatum*(500mg/kg) showed a very highly significant reduction in mean ulcer index($p<0.001$) in the absolute ethanol-induced model. ethyl acetate fraction of crude methanol leaf extract of *Clerodendrumcapitatum*(250mg/kg,500mg/kg) showed a very highly significant dose-dependent reduction in mean ulcer indices ($p<0.001$) in the absolute ethanol-induced model. The mean ulcer indices (1.6,2.2) with dose concentration (250mg/kg, 500mg/kg) of ethyl acetate fraction increased with ulcer protection (82.85%,76.42%) respectively when compared to the control group in the absolute ethanol-induced ulcer model. Crude methanol leaf extract of *Clerodendrumcapitatum*(250mg/kg, 500mg/kg) treated animals showed a highly significant dose-dependent reduction in mean ulcer index($p<0.01$) with an increase in ulcer protection (56.77%,63.22%) respectively in pyloric ligated induced, ulcer model. Gastric parameters such as volume of gastric juice, pH, and total acidity were of no significance in the different doses of the crude methanol leaf extract when compared to the control group. The phytochemical investigation showed that the crude methanol leaf extracts Possess Saponins and Flavonoids while its ethyl acetate fraction possess only Flavonoids. The results of the study indicate that the crude methanol leaf extract and its ethyl acetate fraction is effective and has gastro protective and ulcer healing capacity. Ethyl acetate fraction is more potent than crude methanol leaf extract against ethanol-induced This result provides scientific evidence as a validation for its folkloric use in the treatment of gastric ulcer.

Keywords : gastroprotective, herbal medicine, anti-ulcer, pharmacology

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