Study of Antiulcer and Gastroprotective Effect of Musa Pulp ABB spp.

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Introduction: In previous studies we have demonstrated experimentally that the green fruit of the Musa spp ABB, variety Burro CEMSA, is effective as a gastroprotective agent in a model of induction of ulcers by absolute alcohol and indomethacin. Objective: To evaluate in a model of chronic ulcer the antiulcer effect and the possible mechanisms by which the pulp of this fruit produces gastroprotection.

Materials and methods: Male Wistar rats of 190 ± 10 g were used. The pulp of the green fruit was sliced, dried at 50 ºC for 72 hours, ground and sieved. The antiulcer effect of pulp suspensions was performed with the model of chronic ulcer by acetic acid, used 5 experimental groups of 8 rats each, group 1 negative control, group 2 positive control (ranitidine 50 mg / kg, weight alive), group 3. 4 and 5 that was given the suspension of the pulp at 125; 250; 500 mg / kg live weight. The substances to be tested were applied 72 hours after inducing the ulcer for a period of 7 days. For the determination of the mechanisms, five experimental groups of 10 animals each were formed: the negative control, the positive control and three groups to which the banana pulp was supplied in a dose of 125, 250 and 500 mg / kg of live weight, for three days, before inducing the ulcers with indomethacin: at 40 mg / kg of live weight, the activity of the myeloperoxidase, the superoxide dismutase and the levels of prostaglandins in the gastric mucosa were determined. **Results:** Treatment with the suspensions of the pulp in the chronic ulcer model reduced in a very highly significant way the damaged area in all the treated groups and this reduction was greater than that produced by ranitidine. A highly significant decrease in lesion intensity was obtained with the use of all preparations of the banana pulp in the indomethacin ulcer induction model; there was a significant decrease in myeloperoxidase only with the highest dose tested and a significant increase of

superoxide dismutase and prostaglandins content in the gastric mucosa with all the doses used.

Conclusions: We conclude that the pulp preparations provoked an intense anti-ulcer and gastroprotective action. The mechanism of action is mediated by an antioxidant effect and mucosal protection, caused by the increase of prostaglandin levels. The study has been conducted in conformance with the Ethical Principles for the use of animals in research and education.

Keywords: Antiulcer Effect, Gastroprotective Effect, Wistar rats