

Antiulcer activity of methanol-chloroform extract of *Channa striatus* fillet

ABSTRACT

Channa striatus (Haruan) is Malaysian freshwater fish that is traditionally used to treat ailments related to wound and also ulcers. The aimed of the present study was to determine the mechanisms of anti-ulcer activity of chloroform: methanol extract of *C. striatus* fillet (CMCS) in rats. The antiulcer profile of CMCS, given orally in the doses of 50, 250 and 500mg/kg, was assessed using the ethanol- and indomethacin-induced gastric ulcer models. The mechanisms of antiulcer of CMCS were determined as follows; i) the antisecretory activity of CMCS was measured using the pyloric ligation rat model, and; ii) the role of nitric oxide (NO) and sulfhydryl compounds in the modulation of CMCS antiulcer activity were determined by pre-treating the rats with L-NAME or NEM, respectively, followed by the pre-treatment of rats with CMCS before subjecting the animals to the ethanol-induced gastric ulcer model. From the results obtained, CMCS exerted significant ($P < 0.05$) antiulcer activity in both models of gastric ulcer wherein the macroscopic and microscopic analysis of the stomach supported the antiulcer claim. With regard to its antisecretory effect, CMCS did not change the volume and pH, but reduce the total acidity only at the lower doses of the gastric juice. Moreover, CMCS demonstrated antiulcer activity was reversed by NEM, but not affected by L-NAME. In conclusion, CMCS shows antiulcer activity that is modulated via its cytoprotective, but not antisecretory effect, and in the presence of sulfhydryl compounds, but not NO.

Keyword: *Channa striatus*; Chloroform: methanol extract; Anti-ulcer activity; Mechanisms of action; Cytoprotective