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Studies on antisecretory and gastric antiulcer activity of thimerosal

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Abstract

Thimerosal (TH) (ethylmercurithiosalicylate) is a mercurial compound with the ability to exert cytoprotective effect against several ulcerogens. This investigation was undertaken to study the mechanism by which TH exerts its gastro-protective effect in rats. Acid secretion studies were undertaken in pylorus-ligated shay rats with and without TH treatment. The level of nonprotein sulfhydryls (NP-SH), myeloperoxidase (MPO) and gastric wall mucus were also measured in the glandular stomach of rats following ethanol-induced gastric lesions. The results of this study showed that TH (0.3, 1.0 and 3.0 mg/kg) significantly and dose-dependently reduced gastric secretion and acidity in pylorus-ligated shay rats and protected animals against ethanol-induced gastric injury. Pretreatment of animals with TH significantly attenuated ethanol-induced depletion of NP-SH and increase in MPO in glandular mucosa. Thus, gastro-protective effect of TH may be attributed to its ability to reduce acid secretion, oxidative stress, and neutrophil activity besides its well reported effect on gastro-protective PG and NO.

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