

Protection by Tetramethylpyrazine in Acute Absolute Ethanol-induced Gastric Lesions

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摘要

Abstract

Acute oral administration of absolute ethanol (1.0 ml/kg) to fasting rats produced extensive necrosis of the gastric mucosa within 1 h. Pretreatment 30 min before administration of ethanol with oral tetramethylpyrazine (TMP) prevented this necrosis. Gross examination of the gastric mucosa of rats that received TMP showed fewer gastric lesions than that of rats who did not receive TMP. TMP pretreatment in rats exhibited superoxide scavenging activity in absolute ethanol-induced lipid peroxidation in gastric mucosal homogenates. TMP added in vitro to gastric homogenates made from control rats also showed scavenging activity. We conclude that the gastric protective mechanism of TMP could be attributed, at least in part, to its ability to inhibit lipid peroxidation and hence indirectly protect the gastric mucosa from oxidative stress.