

Protective Effect of Tetramethylpyrazine on Absolute Ethanol-induced Renal Toxicity—in

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摘要

Abstract

Acute administration of absolute ethanol (10 ml/kg) per os to fasted mice produced extensive renal failure as measured by a rise in blood urea nitrogen and creatinine. Pretreatment with oral administration of tetramethylpyrazine (TMP) prevented such failure. The maximal effect against absolute ethanol-induced renal failure could be observed 1 h after TMP administration. In order to further investigate the renal protective mechanism of TMP, experiments on lipid peroxidation and superoxide scavenging activity were conducted. Renal homogenates made from mice treated with ethanol showed that TMP pretreatment had an antioxidant effect. Mice in acute renal failure had higher malonic dialdehyde concentrations than those pretreated with TMP. The renal protective mechanism of TMP was attributed, in part, to its prominent superoxide scavenging effect, which protects the kidney from superoxide-induced renal damage.