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Hepatoprotective effect of electrolyzed reduced water against carbon tetrachloride-induced liver damage in mice.

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The study investigated the protective effect of electrolyzed reduced water (ERW) against carbon tetrachloride (CCl₄)-induced liver damage. Male ICR mice were randomly divided into control, CCl₄, CCl₄+silymarin, and CCl₄+ERW groups. CCl₄-induced liver lesions include leukocytes infiltration, hepatocyte necrosis, ballooning degeneration, mitosis, calcification, fibrosis and an increase of serum alanine aminotransferase (ALT), and aminotransferase (AST) activity. In addition, CCl₄ also significantly decreased the activities of superoxide dismutase (SOD) and glutathione peroxidase (GSH-Px). By contrast, ERW or silymarin supplement significantly ameliorated the CCl₄-induced liver lesions, lowered the serum levels of hepatic enzyme markers (ALT and AST) and increased the activities of SOD, catalase, and GSH-Px in liver. Therefore, the results of this study show that ERW can be proposed to protect the liver against CCl₄-induced oxidative damage in mice, and the hepatoprotective effect might be correlated with its antioxidant and free-radical scavenging effect. PMID:19477216

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