The protective effects of PMC against chronic carbon tetrachloride-induced hepatotoxicity in vivo.

林建煌; 許準榕; Hsiao G; Lin YH; Lin CH; Chou DS; Lin WC; Sheu JR

Abstract

In this study, PMC (2,2,5,7,8-pentamethyl-6-hydroxychromane), a derivative of alpha-tocopherol, dose-dependently (1-10 mg/kg) ameliorated the increase in plasma aspartate aminotransferase (GOT) and alanine aminotransferase (GPT) levels caused by chronic repeated carbon tetrachloride (CCl4) intoxication in mice. Moreover, PMC significantly improved the CCl4-induced increase of hepatic glutathione peroxidase, reductase, and superoxide dismutase activities. PMC also restored the decrement in the glutathione content of hepatic tissues in CCl4-intoxicated mice. Furthermore, it also dose-dependently inhibited the formation of lipid peroxidative products during carbon tetrachloride treatment. Histopathological changes of hepatic lesions induced by carbon tetrachloride were significantly improved by treatment with PMC in a dose-dependent manner. These results suggest that PMC exerts effective protection in chronic chemical-induced hepatic injury in vivo.