

this study, we assayed the preventive and therapeutic effects of aqueous extract from the roots of *Platycodon grandiflorum* A. DC. Changil (CK) in human microvessel endothelial cell-1 (HMEC-1) angiogenesis. CK inhibited cell migration and in the presence of CK proliferation of HMEC-1 was inhibited in a dose-dependent manner. CK also inhibited the tube formation in a dose-dependent manner. In these assays, 40% inhibition was showed in high doses of CK (800 ug/ml). These results demonstrated that prevention of angiogenesis by CK was mediated by inhibition of proliferation and migration of endothelial cells.

[PA4-15] [04/17/2003 (Thr) 14:00 - 17:00 / Hall P]

Hepatoprotective Effects of the Acteoside on Carbon tetrachloride ?Induced Liver Damage in Mice

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The protective effects of acteoside, a phenylethanoid glycoside, on carbon tetrachloride-induced hepatotoxicity and the possible mechanisms involved in this protection were investigated in mice. Pretreatment with acteoside prior to the administration of carbon tetrachloride significantly prevented the increased serum enzymatic activities of alanine and aspartate aminotransferase in a dose-dependent manner. In addition, pretreatment with acteoside also significantly prevented the elevation of hepatic malondialdehyde formation and the depletion of reduced glutathione content in the liver of carbon tetrachloride?intoxicated mice. However, hepatic reduced glutathione levels and glutathione-S-transferase activities were not affected by treatment with acteoside alone. Carbon tetrachloride?induced hepatotoxicity was also essentially prevented, as indicated by a liver histopathologic study. The effects of acteoside on the cytochrome P450 (P450) 2E1, the major isozyme involved in carbon tetrachloride bioactivation were also investigated. Treatment of mice with acteoside resulted in a significant decrease of P450 2E1-dependent p-nitrophenol and aniline hydroxylation in a dose-dependent manner. Consistent with these observations, the P450 2E1 expressions were also decreased, as determined by immunoblot analysis. Acteoside showed anti-oxidant effects in FeCl₂?ascorbate induced lipid peroxidation in mice liver homogenate and in superoxide radical scavenging activity. These results suggest that the protective effects of acteoside against carbon tetrachloride-induced hepatotoxicity possibly involve mechanisms related to its ability to block P450-mediated carbon tetrachloride bioactivation and free radical scavenging effects.

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Effects of Platycodi Radix on Hepatic Fibrosis in Rats

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Herbal medicines are increasingly being utilized to treat a wide variety of disease processes. We previously reported that aqueous extract from the roots of *Platycodon grandiflorum* A. DC (Campanulaceae), Changkil (CK), had hepatoprotective effects against acetaminophen induced