Antioxidative natural product protect against econazole-induced liver injuries

林松洲;劉吉豐;林佳賢;林俊清;林永和;陳金發;林昭光;林松洲

Liu CF;Lin CH;Lin CC;Lin YH;Chen CF;Lin CK;Lin SC

摘要

Abstract

The study objective of this research is in order to investigate the hepatoprotective and therapeutic effects of propolis ethanol extract (PEE) on acute econazole-induced liver injury. Positive control of various concentrations of PEE on liver function and the dose-response relationship of liver injury induced by various doses of econazole were firstly observed from biochemical assay of serum level of aspartate transaminase (SGOT) and serum alanine transaminase (SGPT) and histopathological microscopic examination. The hepatoprotective effects of various concentration of PEE on liver damage induced by hepatotoxic dose (300 mg/kg) of econazole were observed by the obvious decrement of SGOT and SGPT level and further confirmed by hepatohistological microscopic examination. The inhibitory effects of PEE on FeCl(2)-induced (in vitro) or econazole-induced (in vivo) lipid peroxidation were investigated from the measurement of the formed malonic dialdehyde (MDA) level in the rat liver homogenate. The IC(50) (microM) of various concentrations of PEE in the superoxide scavenging activity in econazole (300 mg/kg)-damaged rat liver homogenate were assessed by cytochrome c reduction method and compared with that of (+)-alpha-tocopherol. It could be postulated that the hepatoprotective effect of PEE may be, at least in part, due to their inhibitory ability on membrane lipid peroxidation and free radical formation or due to their free radical scavenging ability