Antioxidant Activity of Ganoderma lucidum in Acute Ethanol-induced Heart Toxicity

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摘要

Abstract

The hot water extract of the mushroom Ganoderma lucidum was shown to have antioxidative effect against heart toxicity. Investigations into the mechanisms of action, level of lipid peroxidation level in vivo, and superoxide scavenging activity were also conducted. The mice were divided into six groups with ten animals in each group. Ganoderma lucidum, at doses of 10, 25 and 50 mg[sol]kg (p.o.) was administered. Superoxide anions were assayed by UV spectrophotometer using the cytochrome C reduction method. The results of this study showed that Ganoderma lucidum exhibited a dose-dependent antioxidative effect on lipid peroxidation and superoxide scavenging activity in mouse heart homogenate. Additionally, this result indicated that heart damage induced by ethanol shows a higher malonic dialdehyde level compared with heart homogenate treated with Ganoderma lucidum. It is concluded that the antioxidative activity may therefore contribute to the cardioprotective effect of Ganoderma lucidum, and may therefore protect the heart from superoxide induced damage.