Protective effects of Taxifolin against acetaminophen-induced acute liver injury

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ABSTRACT
This study aims to investigate the hepatoprotective activity of taxifolin on acetaminophen-induced acute liver injury in mice. The levels of serum alanine aminotransferase (ALT) and aspartate aminotransferase (AST) were measured. The pathologic biopsies were also examined. The levels of nitric oxide (NO), malondialdehyde (MDA) and antioxidant enzymes such as superoxide dismutase (SOD), glutathione (GSH), glutathione peroxidase (GSH-Px) were measured.

The results showed that the serum ALT and AST of acetaminophen group were increased significantly compared to control group. However, the phenomenon was obviously inhibited by treatment with taxifolin. The pathological biopsies also revealed the liver damages were reduced by pretreatment with taxifolin. We also found that taxifolin significantly decreased NO and MDA and exhibited the activities of antioxidant enzymes such as SOD, GSH and GSH-Px.

These results demonstrated that taxifolin exhibited potent hepatoprotective effect against acetaminophen-induced acute liver injury and oxidative damage. The mechanism may be due to the inhibition of lipid peroxidation and promotion of the antioxidant enzyme activities.

Keywords: Hepatoprotective, Taxifolin, Acetaminophen

REFERENCES