



Protective Effects of Luteolin on Restraint Stress-induced Liver Damage in Mice

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SUMMARY. The present study was designed to investigate the protective effects of luteolin, a flavonoid, against acute immobilization-induced liver damage in mice. Mice were immobilized for a period of 6 h daily for three consecutive weeks. Luteolin (25 or 100 mg/kg, i.g.) was administered 30 min before subjecting the animals to restraint stress (RS). Our experiment showed that RS could induce liver damage, with an increase in glutamic-pyruvic transaminase (GPT) and glutamic-oxaloacetic transaminase (GOT) in the liver tissue. Furthermore, the changes of anti-oxidative capacity in liver tissue were also measured. The changes of malondialdehyde (MDA), glutathione (GSH), superoxide dismutase (SOD) and catalase activities (CAT) of stress group were significantly different from those in the control group. However, these changes in stress low and high-doses of luteolin modulation group were improved. These results demonstrated that luteolin has a protective effect against RS-induced liver damage through scavenging both free radicals activity and lipid peroxidation inhibitory effect.

KEY WORDS: Liver damage, Luteolin, Oxidative stress, Restraint stress.

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