

عنوان مقاله:

Effects of Thymol on Co-amoxiclav-Induced Hepatotoxicity in Rats

محل انتشار:

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خلاصه مقاله:

Background and Aims: Hepatotoxicity induced by Co-amoxiclav has been indicated in multiple studies. Thymol is the main constituent of the Thymus vulgaris essential oil that has antioxidant properties. Even though thymol can exhibit antioxidant activity in vivo models, there is a lack of evidence about the thymol's effectiveness in drug-induced liver injury. Thus, the present study was conducted to explore the thymol anti-hepatotoxic effects. **Materials and Methods:** Thirty male rats were randomly divided into five groups of six. The control group received corn oil (0.25 ml/100 g body weight). CoA group was given only co-amoxiclav in doses of 10 mg/kg daily by gastric tube. CoA+T50, CoA+T150, and CoA+T300 groups orally received Co-amoxiclav at the same dose as the second group along with thymol at a daily dose of 50, 150, and 300 mg/kg for 7 consecutive days. At the termination of the treatment, all animals fasted overnight, and then blood samples were collected to determine alanine transaminase, aspartate transaminase, alkaline phosphatase, glutathione S-transferases, and bilirubin. **Results:** Administration of thymol at the dose of 300 mg/kg with co-amoxiclav resulted in a significant decrease in direct and total bilirubin levels. Findings also revealed that the concomitant administration of thymol at the 150 mg/kg dose caused a significant reduction in the total bilirubin level. Additionally, the concomitant administration of thymol at the doses of 150 mg/kg and 300 mg/kg resulted in a significant reduction of alanine transaminase, aspartate transaminase, and alkaline phosphatase serum activities along with increased plasma Glutathione S-transferase activity compared to co-amoxiclav group. **Conclusion:** Administration of thymol can cause a significant ameliorative effect against co-amoxiclav-induced hepatotoxicity in rats.

کلمات کلیدی:

Co-amoxiclav, Hepatotoxicity, Rat, Thymol

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