

Original Paper

Effect of Kombucha tea on rat liver histopathological alterations due to Thioacetamide

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Abstract

Background and Objective: Kombucha (fungus) tea is a sugar sweetened black tea obtained through a fermentation process containing symbiotic culture of acetic acid bacteria and yeasts. This study was done to determine the effect of Kombucha tea on rat liver histopathological alterations due to Thioacetamide (TAA).

Materials and Methods: In this experimental study, 20 adult male Wistar rats randomly allocated into four groups as follow: 1) control, 2) TAA group, treated with (TAA), (400 mg/kg/bw) for two weeks, 3) treated with (TAA), (400 mg/kg/bw) and then with Kombucha tea (50 mg/kg) and finally 4) preventive, treated with Kombucha tea, (50 mg/kg) and then (TAA), (400 mg/kg) for three weeks. The serum level of aminotransferase (AST), Alanine transaminase (ALT), Alkaline phosphatase (ALP), Lactate dehydrogenase (LDH) and total bilirubin were measured and liver tissue samples were stained by hematoxylin and eosin.

Results: Serum level of AST, ALT, ALP, LDH and total bilirubin significantly increased in TAA group compare to control group ($P < 0.05$). Serum level of AST, ALT, ALP, LDH and total bilirubin significantly reduced in treated and protective groups in comparison with TAA group ($P < 0.05$). Mitosis and apoptosis increased in TAA group. These liver histopathological alterations reduced in treated and protective groups.

Conclusion: Kombucha tea contains therapeutic and protective effects on enzymes and liver histopathological damage due to Thioacetamide in rat.

Keywords: Kombucha tea, Thioacetamide, Liver, Enzyme, Rat

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