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The Possible Protective Effect of (-)Epicatechin on Liver Toxicity Induced by CCl4in Rats

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Abstract

Hepatotoxicity affects on the metabolites and detoxification. (-)Epicatechin reduce risk of oxidative stress. The aim of this work was designed to evaluate the protective effect of (-)Epicatechin on liver fibrosis or cirrhosis induced by carbon tetrachloride in rats. Rats were divided equally into 5 groups; control, epicatechin, CCl4, silymarin & CCl4, (-)Epicatechin & CCl4. Serum AST, ALT, ALP activities and MDA level were reduced, where serum albumin level was elevated in rats induced heptoxcitity and treated with (-)Epicatechin compared with rats injected i.p. CCl4. Liver. (-)Epicatechin administration as treated of hepatotoxicity caused reduction in liver MDA while GSH, catalase, and GST were increased as compared with normal rats. Liver NOS and Cytochrome P450 as biomarker of detoxified enzyme were lower in rats induced liver damage and treated with (-)Epicatechin or Silymarin that rats induced liver damage. Histological examination revealed that inflammatory infiltrates was observed in liver tissues of rats received CCl4 that ameliorative when rats administrated (-)Epicatechin or Silymarin. Conclusion: The rats treated with (-)Epicatechin or Silymarin ameliorated the heptotoxcity by inhibiting oxidative stress and increasing GST, NOS and cytochrome P450. (-)Epicatechin as Silymarin could be administrated as the treated to decrease liver injury.

Keywords: (-)Epicatechin; CCl4; Liver fibrosis or cirrhosis; Hepatitis; Silymarin

Biography

Khadijah is faculty member in Umm Al-Qura University. Student of MSc in King Abdul-Aziz University. Started in 2018 from the Faculty of Science, Department of Biochemistry, a GPA 4.88 Out of 5 and overall grade Excelient

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