ABSTRACT

The Protective Effects of Lecithin on The Hepatotoxicity of Carbontetrachlorida Induction in Male Rats (*Rattus norvegicus*)

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Objective : This study explores the protective effects of Lecithin on the hepatotoxity of carbontetrachlorida induction in rats (*Rattus norvegicus*).

Design and Methods : This study used the *Post-test Control Group Design*. The forty five rats *(Rattus norvegicus)* 3 months old were devided to 5 groups.Group A control, were receiving intragastric sonde of CMC-Na 0,25% 0,01 ml/kg for 9 days and intraperitoneal injection of olive oil at 9th day. Group B were receiving intragastric sonde of CMC-Na 0,25% for 9 days and intraperitoneal injection of CCl_4 1 ml/kg at 9th day. Group C were receiving intragastric sonde of lecithin 90 mg/kg for 9 days and intraperitoneal injection of CCl_4 1 ml/kg at 9th day. Group D were receiving intragastric sonde of lecithin 180 mg/kg for 9 days and intraperitoneal injection of CCl_4 1 ml/kg at 9th day. Group E were receiving intragastric sonde of lecithin 360 mg/kgfor 9 days and intraperitoneal injection of CCl_4 1 ml/kg at 9th day. After 24 hours of injection olive oil and CCl_4, at 10th day, all the rats were sacrificed. The blood were collected intracardially for measure the SGOT, SGPT and γ-GT activities. The liver was removed for histopathological assessment of liver damage. The data of activities SGOT, SGPT and γ-GT collected were analized using the *analysis of variance (ANOVA)* and the difference were analized by the *least significant difference test (LSD)* at 5% level of confidence. But the data of histopathological assessment were analized using *Kruskal Wallis test* and the difference were analized by *Z test.*

Result :Rats treated with CCl_4 had the significantly highest level of SGOT, SGPT, and γ-GT as compared the other 4 group. Pre treatment of rat with lecithin showed reduction in biochemical parameters in serum as compared the group that treated with only CCl_4. Histopathological studies provided supportive evidence for the biochemical analysis. Livers of rats treated with CCl_4 showed classic histology of cirrhosis, whereas the hiatopathological changes were reduced after administration of lecithin and CCl_4.

Conclusion : Pre treatment with lecithin protect CCl_4 induced liver damage in rats.

Key word : lecithin, carbon tetrachloride, hepatotoxicity, free radical.