P211

Evaluation of Linalool Effects on Serum Lipid Profile on Carbon Tetrachloride Damaged Rats

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Background and Objective: Linalool is a linear organic compound and monoterpene alcohol, which is found in several herbs such as coriander, Thymus, Hyssop and lavender. It seems to be effective in preventing and reducing damage caused by oxidants. Therefore, the study is arranged out to evaluate the effects of linalool on lipid profiles in carbon tetrachloride (CCl_4) induced oxidative damages in rats. Materials and methods: In this study, 36 male Wistar rats were divided into six groups (n=6), respectively, normal control, linalool control, injury control, pre-treatment with linalool, pretreatment with silymarin and post-treatment with linalool. For fourteen days, Groups I and III received distilled water, Groups II and IV received Linalool and finally Group V received silymarin. All the groups except groups I and III, were also intoxicated with 1.5 ml CCl_4 (i.p, in a 1:1 dilution with olive oil) on the 14th day. Normal control and Linalool control groups received only olive oil. Group V was post-treatment group and received Linalool at 2, 6, 24 and 48h after CCl_4 injection. At the end, blood serum samples were used for biochemical tests. Results: CCl_4 significantly ($p<0.05$) increased triglyceride, cholesterol, LDL levels and reduced HDL level when compared to the control group. The administration of Linalool significantly ($p<0.05$) improved these alterations near to control rats. Conclusion: Linalool has protective effects against lipid profile alterations in carbon tetrachloride intoxicated rats.

Keywords: Linalool, Carbon Tetrachloride, Lipid Profile, Rat