

Effect of Olive Oil and Pomegranate Peels on Rats Suffering from Chronic Injury in the Liver

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Abstract

The aim of this study was to investigate the effect of olive oil and pomegranate (*Punica granatum* L.) peels on rats suffering from chronic injury in the liver. Forty-eight male albino rats (Sprague Dawley Strain) used in this study, the rats divided into two main groups. The first main group (6 rats) fed on basal diet (as a control negative group). The second main group (42 rats) treated with CCl₄ in paraffin oil (50% v/v 2 ml/kg) twice a week subcutaneous injection for two weeks to induce chronic damage in the liver. Then the second main group was divided into seven subgroups. Results showed that, injected rats with CCl₄ induced significant increase in organs weights / body weight% including (liver and kidney), serum lipid profile except HDL-cholesterol, kidney functions, liver enzymes activity, bilirubin, glucose and nitric oxide (NO), while weight gain, serum protein, albumin and superoxide dismutase (SOD) decreased. Treating rats, which were, suffer from chronic injury on the liver with two level from pomegranate peels (3 and 6%), two dosage from olive oil (1 and 2 ml olive oil /kg b.w.) and the same dosage from olive oil with the same levels from pomegranate peels together improved all above parameters. the best results in these parameters recorded for the group treated with 6% pomegranate peels and 2 ml olive oil /kg b.w., followed by the groups treated with 3% pomegranate peels and 1ml olive oil /kg b.w. and 6% pomegranate peels, respectively. From these results, it could be concluded that, pomegranate peels and olive oil (alone or together) improved the sever disorders which result from the injection with CCl₄.

Keywords: liver damage, liver enzymes, lipid profile, kidney function, glucose, superoxide dismutase, nitric oxide.