



PESTICIDE INDUCED PULMONARY TOXICITY IN RABBITS: PREVENTIVE ACTION OF A FLAVONOID

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Abstract

The objective of this study was to highlight the relationships between pulmonary poisoning by pesticides and the protective effect of quercetin. For the realization of this study, we used two pesticides; phosalone and deltamethrin, and a flavonoid; quercetin alone or in a mixture at consecutive doses of 2 ml/kg/day, 1 ml/kg/day and 1 ml /kg/day for phosalone, deltamethrin and quercetin, respectively. All substances were administered subchronically orally for 15 days. The study is carried out on male rabbits of *Oryctolagus cuniculus* L. strain of 40 aged from 4 to 6 weeks and weighing approximately 800 to 1100 g. Rabbits are divided into eight groups of about 05 individuals per group. The first batch served as a control and received distilled water. The other groups were treated with pesticides and quercetin alone or as a mixture. The results showed that the pesticide treatment induced changes in the biochemical and enzymatic parameters with an increase in the level of protein concentration in the batch treated by the mixture of the two pesticides. The GSH level has significantly decreased against an increase in the enzyme activity of GPx and MDA which is a biomarker of lipid peroxidation. The treatment of rabbits with quercetin restored the pulmonary enzymatic and non-enzymatic biomarkers to normal levels indicating a protective effect against phosalone and deltamethrin induced toxicity.

Key words : Lung toxicity; Quercetin, Deltamethrin, Phosalone, Rabbit.