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STUDIES ON THE EFFECT OF THE INSECTICIDE "CURACRON" ON ALBINO MICE

A THESIS SUBMITTED FOR

THE AWARD OF THE Ph.D. DEGREE

(ZOOLOGY)

BY

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ABSTRACT

The aim of this work is to study the effects of the organophosphorous insecticide curacron on the young mice. Mice were divided into three main groups; each main group was divided into four subgroups. The first subgroup served as control while the other three were treated with 1/20, 1/10 and 1/4 of the LD_{50} of curacron, respectively. Each treated animal was intraperitoneally injected every other day for 15 days with the selected dose and the animals were sacrificed 24 hours, 15 and 45 days after the last treatment, respectively. After treatment the animals showed aggressive behavior and the rate of growth among most treated animals was less than that of the control. In some subgroups, there were significant decrease in erythrocyte count and haemoglobin content, significant increase in the mean corpuscular volume and the mean corpuscular haemoglobin content and insignificant change in the mean corpuscular haemoglobin concentration. Effect on the liver was manifested by congestion of the central veins and blood sinusoids, cellular necrosis, cytoplasmic degeneration, accumulation of inflammatory cells especially around portal tracts and activation and hyperplasia of Küpffer cells. The ultrastructure consequences in the liver comprise the presence of lipid droplets in the cytoplasm. The rough endoplasmic reticulum and the mitochondria were deteriorated and free ribosomes were increased and scattered in the cytoplasm. There was depletion of the glycogenic inclusions in the constituent hepatocytes. The nuclei showed remarkable features of nuclear damage. In the cortical region of the kidney, the Malpighian