

SUBACUTE CHANGES IN SOME HEMATOLOGICAL AND BIOCHEMICAL INDICES OF RATS TREATED BY TECHNICAL AND 10% FORMULATION ALPHACYPERMETHRIN

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Abstract

In the present study four groups of experimental rats were treated orally for 28 consecutive days with two different doses of technical Alphacypermethrin 96% (10.5, 5.25 ppm or 1/10, 1/20 LD50) and two other doses of its formulation 10% (1.2, 0.6 ppm or 1/10, 1/20LD50). Blood samples were obtained from all groups after two weeks of start treatment and at the end of treatment period, then some hematological and biochemical parameters were assayed in blood and plasma, respectively.

Hematological results showed significant increase of RBC's count by the high dose of technical at the end of treatment period and significant increase of Hb conc. by the two doses after two weeks of treatment and the end of it. Ht % was increased significantly by the two doses of technical at the end of treatment also MCHC % was increased significantly by the two doses after two weeks of treatment and by the low dose only at the end of treatment. In case of formulation, the results showed significant decrease in RBC's count by the two used doses and significant increase in WBC's count by the low dose after two weeks of treatment, also significant decrease in Hb conc. by the two doses after two weeks of treatment and at the end of it. Ht % was decreased significantly by the low dose, MCV value was increased significantly by the high dose after two weeks of treatment and MCH value was decreased significantly by the two doses at the end of treatment period. At last MCHC % was decreased significantly by the high dose after two weeks of treatment and by the two doses at the end of it. Biochemical results in case of technical showed significant decrease in total protein conc. by the high dose after two weeks of treatment, significant decrease in albumin conc. by the low dose at the end of treatment, significant increase in total cholesterol conc. by the low dose after two weeks of treatment and by the high dose at the end of treatment. Significant increase was noticed in triglycerides conc. by the high dose at the end of treatment and in LDL conc. by the low and high doses after two weeks of treatment and at the end of it, respectively. In case of formulation, significant increase in total protein conc., total cholesterol conc. and triglycerides conc. was noticed after two weeks of treatment by the low dose. At last LDL conc. was significantly increased by the low dose after two weeks of treatment then, decreased significantly by the two doses at end of treatment.