

## 97. BIOCHEMICAL AND HISTOLOGICAL ALTERATIONS IN RATS SUBACUTELY POISONED WITH T-2 TOXIN

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Aim of this experiment was to ascertain which biochemical and morphological lesions could be produced in rats after subacute poisoning with T-2 toxin, a trichothecene *Fusarium* species mycotoxin. Males Wistar rats weighing 220-250 g were treated with daily doses of 0.1 LD<sub>50</sub> of T-2 toxin sc during 28 days. Every week a group of six rats was sacrificed, in order to obtain blood for biochemical analyses and livers, hearts and kidneys for histological preparations.

The activities of all the enzymes monitored were increased significantly in comparison with the control after 7, 14 and 21 days, while after 28 days their activities were significantly decreased. The greatest values of alanine aminotransferase (ALT) and aspartate aminotransferase (AST) serum activities were registered on day 14 of the experiments, when they were increased by 1.48 and 1.5 times, respectively. Highest serum activities of lactate dehydrogenase (LDH) and creatine kinase (CK) were found on day 21 of the study, when 3.76- and 3.93-fold increase in comparison with the control could be seen, respectively.

Hepatic injury varied from the intracellular oedema, vacuolar and hydrops degeneration to cell necrobiosis and necrotic alterations with primarily centrolobular localization. Parenchymatous and hyaline degeneration of the heart muscle and small necrotic foci and mononuclear cellular infiltration was found. In kidneys, dystrophy and hemorrhagic necroses were established.

These data suggest that T-2 toxin induced lesions of parenchymatous organs and enzyme leakage from them during the first three weeks of the experiment, followed by a deprivation of the enzyme cellular stocks.

**Keywords:** T-toxin, mycotoxins, enzymes, lesions, rats