

EXPERIMENTAL STUDY OF ACUTE AND SUBCHRONIC TOXICITY OF DIETARY SUPPLEMENT “IODIS”

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According to the World Health Organization (WHO), pathological conditions caused by iodine deficiency ranks third among 38 most common noninfectious diseases of adults and children as well. Almost 2 billion people in the world live in conditions of iodine deficiency. The aim of our research was to study the acute and subchronic toxicity of DS "Iodis", which is a molecular complex of diiodomethyl-p-tolylsulfone with triethanolamine. The acute toxicity of DS "Iodis" was examined on mongrel white rats after a single application of 10%, 25%, 30% solution in a dose of 2 ml to a previously shaved skin area the size of 2×2cm. The animals had been observed during 14 days. The acceptability was evaluated by the survival, the general condition of the animals and the percentage of dead animals to the total. The studies have shown that at various concentrations of the solution, DS "Iodis" is well tolerated by laboratory animals and, according to the toxicity classification of substances proposed by Sidorov K. K, is referred to low-toxic compounds. Taking into account that DS "Iodis" is supposed to be applied during a month, 1% solution of "Iodis" was daily applied on skin in a dose of 2 ml during 30 days to previously shaved skin area the size of 2×2cm. The indicators of chronic toxicity were the body weight, the general condition of the animals, the biochemical parameters which characterize activity of liver and vital organs, the weight coefficients of the internal organs. The indices were examined in dynamics – before the beginning of the experiment and at the end. As a result of the experiment it was found that DS "Iodis" has no hepatotoxic effects; the activity of indicated enzymes with hepatocyte cytolysis syndrome – ALT and AST were not higher than that of control rats and matched the intact norm. The weight of the internal organs such as heart, kidneys, adrenal glands, spleen and liver of the animals from the experimental groups was not significantly different from the weight of the animals from the control group. In this way we can conclude that 1% solution of DS "Iodis" in a dose of 2 ml with durational cutaneous application (within 30 days) has no toxic effects on the morphofunctional state of the internal organs.