

LEVEL OF THYROID HORMONES UNDER THE INFLUENCE OF AQUEOUS EXTRACT FROM *LEMNA MINOR* FROND IN EXPERIMENTAL HYPOTHYROIDISM

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Introduction. Hypothyroidism is one of the most common diseases of the thyroid gland. According to epidemiological studies, the prevalence of hypothyroidism in some groups of the population reaches 10-12% and is constantly increasing. For the treatment of hypothyroid states, substitution therapy – thyroid hormones, or therapy aimed at restoring iodine deficiency – iodine preparations is mainly used. However, today a significant share of both the European and world pharmaceutical markets occupied by herbal preparations, which are a promising source of biologically active substances of thyrotrophic action. Therefore, the purpose of our study was to detect the effect of aqueous extract from *Lemna minor* frond (AELM) on the level of thyroid hormones in experimental hypothyroidism.

Methods of research. Experimental hypothyroidism induced in rats by daily administration of a 1% solution of sodium perchlorate for 20 days. The test extract and the reference drug Iodomarin were given to experimental animals intragastrically from the 21st to the 41st day of the experiment. At the end of the study period, the animals were withdrawn from the experiment by instantaneous decapitation, blood collected and the serum thyroid hormone concentrations – triiodothyronine (T₃) and thyroxine (T₄) were analyzed by enzyme immunoassay.

Results of research. The introduction of sodium perchlorate led to a decrease in the synthetic function of thyroid in rats, which was manifested in a decrease in the level of thyroid hormones in the serum. The level of T₄ in the group of rats treated with thyrostatic agent was 27.49±1.32 nmol/l versus 63.37±3.03 nmol/l in the group of intact animals. The introduction of AELM contributed to an increase in the synthetic function of thyroid gland, which was manifested in a probable increase of T₄ and T₃ levels by 1.9 and 1.6 times, respectively. Iodomarin also led to a significant increase in the content of T₄ and T₃ compared to the control pathology group by 1.7 and 1.5 times, respectively.

Conclusions. Thus, AELM is promising for further study of its efficacy in other models of experimental hypothyroidism as a thyrotrophic agent for its use in the prevention of hypothyroidism.