

**ANALYSIS OF PROTEO- AND FIBRINOLYTIC ACTIVITY IN THE
TISSUES OF THE INTERNAL ORGANS IN THE ENUCLEATED HYPOTHYROID
RATS**

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Pinea gland, as an endocrine gland, has very wide integrative properties: modulates neuroendocrine functions; manages a variety of hormonal and humoral signals. Mechanisms of the influence of the epiphysis on the thyroid gland have been investigated in various experiments. Melatonin has been shown to reduce the sensitivity of the pituitary thyrotrophy to the stimulating action of thyreobilin, and epiphyseal methoxindoles only affect the initial and final phases of the hypothalamic-pituitary-thyroid system. Each target organ has its own rhythm of sensitivity to melatonin, which can determine the particularities of the effect of melatonin on hemostasis and fibrinolysis. The purpose of the study was to analyze the changes in protease fibrinolytic activity that occur in the tissues of the internal organs of the enucleated hypothyroid rats. Experiments were performed on males of non-linear white rats weighing from 0.12 to 0.14 kg. The control group consisted of 10 conventionally healthy animals. The first group included 7 enucleated rats, the second – 7 animals with hypothyroidism. The third group consisted of 7 glued animals with hypothyroidism. Euthanasia of animals was performed under a light etheric anesthetic by decapitation. The proteolytic activity was determined using colorogenic compounds. The obtained results are processed by the method of variation statistics.

When characterizing the changes in tissue fibrinolysis in the myocardium of the enucleated rats, the growth of total fibrin lysis was 3.4 times, with the growth of both nonenzymatic and enzymatic lysis of fibrin. The degradation of low molecular weight and high molecular weight proteins increased 1.4 times, azocola – 3.1 times. When administered to blinded animals Mercazolilum, the total fibrinolytic activity (TFA) increased by 3.8 times in relation to control, due to the growth of non-fermentative and enzymatic activity. Relative to the first group of TFA increased by 12%, due to the growth of enzymatic fibrinolysis by 17%. In relation to the second group, the total lysis of fibrin of the third group increased by 1.5 times due to the increase of non-zenithic and enzymatic fibrin lysis. The lysis of azo-albumin of the third group increased 3 times in relation to control, the indicators of the first group - by 2.2 times, the second – by 27%.

In the liver, the total lysis of fibrin in the third group of animals increased in relation to control in 3.1 times, due to an increase in indices of non-enzymatic fibrinolysis by 4.5 times. In relation to the indicators of the first group, the total fibrinolytic activity of the third group increased by 29%. In relation to the indicators of the second group, the total lysis of fibrin increased by 1.9 times, due to an increase of 2.5 times non-enzyme fibrinolysis. Indicators of proteolytic activity increased significantly in all studied groups of animals. In the lung tissue of the third group of animals, the growth of total fibrin lysis relative to the control group in 1,3 times. Relative to the results of the first group, the rates of fibrinolysis increased 2.8 times. In terms of the second group, the total fibrin lysis decreased by 1.7 times, due to a 40% lower enzymatic lysis and a 1.7-fold decrease in non-enzymatic. The azole albumin lysis increased with respect to control 2.9 times, with respect to the indicators of the first group - by 39%, with respect to the indicators of the second group - by 26%. The azoxazine leaf has grown 3.1 times in terms of control, by 31% - in relation to the indicators of the first group, and 2.2 times in the second. The azoclical leaf rose in relation to the control 2.9 times, 2 times in comparison with the indicators of the second group, but decreased by 32% relative to the indicators of the first group of animals.

The results obtained by us indicate an increase in the parameters of proteolytic activity in the tissues of the organs under investigation. Increase of total fibrinolysis in liver and myocardial tissues of animals of the third group under study, which is carried out by increasing both enzymatic and non-enzymatic fibrinolysis. In our opinion, the results are due to the combined effect of the hormone of the epiphysis - melatonin, whose production in blind rats is ongoing, and inhibition of the thyroid gland. It is known that melatonin is metabolized in the liver, is excreted by the kidneys, and the intensity of these processes entirely depends on the state of the cardiovascular system, which can determine the particular effects of the latter on the indicators of tissue fibrinolysis.