

PHARMACOLOGICAL STUDY OF FUCUS VESICULOSUS

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Introduction. Thyroid disease is widespread in the world and is one of the most common endocrine pathologies. Therefore, one of the promising ways to improve the therapy of the main diseases of the thyroid gland – hyperthyroidism and hypothyroidism – is the use of drugs of plant origin. Herbal medicines are used in combination with pharmacotherapeutic treatment or independently for mild forms of the disease. Medicinal plants are the most promising source of biologically active substances of thyreotropic action. One of the plants used in folk medicine for diseases of the thyroid gland is *Fucus vesiculosus*.

Aim. To study the thyreotropic properties of the water extract of the thallus of *Fucus vesiculosus* on the model of the "goiter reaction" in rats.

Materials and methods. In the experiment, rats weighing 70-80 g were used. The duration of the experiment was 10 days, during which an aqueous extract of thallus of *Fucus vesiculosus* in doses of 1.0, 1.5, 2.0 and 2.5 ml was administered daily by means of a probe to animals. The animals of the control group received water in an equivalent amount. After 10 days, the animals were withdrawn from the experiment by means of instantaneous decapitation and serum levels of thyroid hormones, triiodothyronine (T3) and tetraiodothyronine (T4), were determined, the determination of which was carried out by the method of enzyme immunoassay using test systems.

Results and discussion. Analyzing the obtained data, it should be noted the thyreostatic action of the water extract of the thallus of *Fucus vesiculosus*. There was a significant decrease in blood serum T4 in all test doses compared with intact animals. In a dose of 1.0 ml, the level of the hormone T4 decreased by 1.2 times, 1.5 ml in 1.5 times, in a dose of 2.0 ml – by 1.6 times and at a dose of 2.5 ml – in 1,7 times. In doses of 1.0 ml, 1.5 ml and 2.5 ml the increase in the level of the hormone T3 in the blood serum was negligible, and only in a dose of 2.0 ml there was a significant increase in the level of the hormone in 1.6 times.

Conclusions. The screening studies made it possible to establish the thyreostatic effect of the aqueous extract of thallus of *Fucus vesiculosus* on the synthetic function of the thyroid gland. Thus, the experimental studies carried out by us make it possible to confirm the prospects and feasibility of further research with a view to developing drugs with antithyroid action.