INFLUENCE OF CHRONIC AFFECT OF SULPHURIUMCONTAINING GAS ON A RAT THYROID GLAND.

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The problems of influence of sulphuriumcontaining gas on thyroid gland now are investigated insufficiency. Between that the urgency of the given problem is defined by the necessity of prophylaxis of pathology of a thyroid gland at the workers of manufactures connected with sulphuriumcontaining gas.

We carry out an experimental research on study of chronic influence of sulphuriumcontaining gas on a rat thyroid glands. The estimation of such influence is investigated with the help of morphometrical research of a thyroid gland on the basis of techniques G.G. Avtandilov, V.L. Bykov and O.K. Khmelnitsky [1,2,3] . The rat thyroid glands , not undergone to influence of gas (control group) are investigated also.

With the help of morphometrical rules MOB-15M have determined in a micron: D-follicles diameter, h_{Ef} – height of a thyroid epithelium. Planimetrical research was based on a determination in a % of the relative area of a vascular channel Vas, relative area of a colloid C and relative area of stroma S and E – relative area of follicles epithelium.

The results are submitted in the table. In the histologic specimen of thyroid glands of the animals which have undergone to influence of gas, the variegation of a structure of a organ is revealed: presence of sites of normal frame and areas of a destruction of gland tissue.

At experimental animals the tendency to decrease of a follicles diameter is marked, height of a thyroid epithelium decreases.
In the rat thyroid glands, undergone to influence of sulphuriumcontaining gas, reveals decrease of the relative area of and areas of vessels, at the same time significance grows the relative area of a colloid and srtoma, at the expense of an edema and thickening of connective layers.

Table 1. The results are submitted:

Parameter		Group	
		Control	Experimental
D	M ± m	61,2 ± 1,3	58,9 ± 1,2
h_{Ef}	M ± m	8,0 ± 0,2	7,8 ± 0,3
E	M ± m	52,8 ± 0,6	49,0 ± 0,7*
C	M ± m	35,2 ±0,6	38,2 ± 0,5*
Vas	M ± m	3,3 ± 0,39	2,7 ± 0,2*
S	M ± m	8,7 ± 0,5	10,1 ± 0,7*

Note: * - statistically significant differences.

At experimental animals the destruction and follicles collabiration ,exit of colloid in interfollicular space are observed.

These morphological changes at the end can result in infringement of function of thyroid gland and formation of cysts of the given organ.

Literature:

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The article is admitted to the International Scientific Conference « Fundamental and Applied problems of Medicine and Biology», Tunisia (Suss) , 2007, June 10-17; came to the editorial office on 11.04.2007