



THE EFFECT OF TOBACCO SMOKING ON THE THYROID GLAND

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ABSTRACT

Recently studying influence tobacco smoking on a condition of structure of a thyroid gland is actual. In this research connection between an experience of smoking and changes of structure of a thyroid gland, and also decrease in concentration of attention at these persons is established.

For the past 50 years, scientists have warned us about the health risks of smoking. Tobacco smoking has many effects on the condition thyroid gland. Research has shown that hyperthyroidism (Graves' disease), ophthalmopathy and other diseases are provoked by cigarette smoking.

It is believed that this arises from the stimulation of the sympathetic link of the autonomic nervous system with nicotine. In addition, the thiocyanate contained in tobacco combustion products, possibly a goiter factor. In relation to thyrotropic pituitary hormone (TSH), some studies have shown a decrease in the amount of TSH, while other experiments did not reveal this. In this way, tobacco smoking by a healthy person either does not affect the state of the thyroid gland, or causes moderate increase in the level of her hormones. The authors studies from Basel (Switzerland) claim that smoking can

significantly affect the overall population level of thyroid disease glands (10%). However, most research European countries did not find any dependence on changes in the structure of the thyroid gland in smokers. Also it is known that the intellectual abilities of people of all ages are dependent on work thyroid gland. Iodine and thyroid hormones play an important role in human acquisition knowledge, the formation of his intellectual abilities and maintaining them at a certain level.

However, no studies have been conducted to date regarding the effect of smoking on the structure thyroid gland and the relationship of these changes on human intelligence. The aim of our study was to study effects of tobacco smoking on size and echostructure thyroid gland in young men and their ability to concentrate at the same time.



Materials and methods. Based on the Republican hospital of the Ministry of Internal Affairs, we examined 95 men aged 18 to 35 years. The patients were divided into two groups. The first study group included smokers (n=50), the control group included non-smokers (n=45). The study group consisted of 15

patients who smoked less than 10 cigarettes (first subgroup) and the second subgroup included 27 people who smoke more than 10 cigarettes a day.

Patients underwent the following examinations: anamnesis was collected regarding the presence of diseases thyroid gland in close relatives and themselves examined; did an ultrasound of the thyroid gland and overlying lymph nodes (on the Logic GI at a wave length of 7.5-10 MHz); Stroop psychological test was performed.

In psychology, the Stroop effect is called the delay reactions when reading words when the color of the words does not match the written words. The technique is based on solving various lighting problems, taking into account the time for their implementation and the number of approved errors. The test is designed to assess the possibility concentration of attention, as well as the ability to highlight the main factor and ignore the rest side effects. The results of the test allowed assess the degree of decrease in concentration (in %) in patients and evaluate the integrative index each group.

Statistical data processing was carried out using computer statistical package Statistica, version 6.0.

Results and discussion. According to the results of our research found that almost half of the examined men (47.6%) were identified changes in the structure of the thyroid gland. Should note that burdened

medical history thyroid glands were detected only in 13.0% of individuals.

In a detailed analysis of the relationship between smoking, integrative indicators and structural changes in the thyroid gland, the following results were obtained:

results. It was found that patients who smoked more than 10 cigarettes per day had initial changes in the structure of the thyroid gland, and the strengthening of the correlation observed with increasing smoking experience.

In addition, men with a smoking history of more than 5 years, there was a significant increase in the volume thyroid gland. At comparative analysis of the volume of the thyroid gland long-term smokers latest indicator

amounted to 10.4 ± 6.2 cm³, while patients other groups - 6.7 ± 2.4 cm³. The results obtained can confirm that the combustion products tobacco affect the degree of absorption of iodine in the body and consequently increase the likelihood of developing goitre. It should be emphasized that structural changes in the thyroid gland were more often defined as heterogeneous structure, increased echogenicity

with areas of fibrosis and colloidal inclusions. Similar changes were found in non-smokers. men with a family history of thyroid disease. Analyzing the data obtained during the Stroop test, the increase in time for completion of the 3rd test as a percentage of 2nd indicator. It was found that a significant difference in the increase in the decrease in concentration there is no attention in the group of smoking and non-smoking men.

However, it is interesting that an act that marks a weak correlation between smoking experience and the magnitude of the degree of decrease in the concentration



of attention in the direction of increasing the latter. Indirectly, this indicates the need for costs more time to complete the task when it complication and decrease in concentration of attention with this in smokers.

Conclusions. The results obtained confirm the effect of tobacco smoking on the structure of thyroid tissue, which in the future can provoke functional changes in the thyroid gland. The revealed changes were mainly observed in men with a long

smoking history and with smoking more than 10 cigarettes a day. Color task completion rate in young male smokers was less with the complication of the task in comparison with non-smokers. Thus, this study confirms the influence of tobacco smoking on the structure thyroid tissue, and speed of execution

complex color tasks, which may have a common pathochemical mechanism and requires further study

References:

1. Mironova, E. A. Collection of psychological tests. Part 1, 2002. - 64 p.
2. Muller, B., Zulewski, H., Huber, R. et al. Impaired action of thyroid hormone associated with smoking in women with hypothyroidism. / N Engl J Med 1995. - T.333. – P.964-9.
3. Uniger, R.D. Cigarette smoking and the thyroid (editorial)./ N Engl J Med 1995. - T.333. – P.1001-2.
4. Kodirova, Nargizakhon Umarovna (2022). MODERN METHODS OF TREATMENT OF CHRONIC LUNG DISEASES. Oriental renaissance: Innovative, educational, natural and social sciences, 2 (Special Issue 4-2), 983-988.