



## DETERMINATION OF CLINICAL AND EPIDEMIOLOGICAL CHARACTERISTICS OF ENDEMIC GOITER AND AUTOIMMUNE THYROIDITIS IN MILITARY PERSONNEL

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### ABSTRACT

*One of the leading symptoms of both endemic goiter and sporadic goiter is an enlarged thyroid gland. Inspection and palpation of the gland area allows you to determine how enlarged the thyroid gland is. According to its location, the scrotum is located in the front of the neck, behind the sternum, and under the hyoid bone.*

Particular attention is paid to scientific research aimed at improving the treatment of endocrine diseases that occur as a result of an unhealthy lifestyle among the world's population. In this regard, it is important to identify the clinical and functional characteristics of the specific course of diseases associated with endocrine diseases, developing as a result of endemic goiter and autoimmune thyroiditis in modern medicine; develop a comprehensive step-by-step approach plan that takes into account the somatic condition of patients[1,3].

There are 6 degrees of goiter according to the degree of enlargement:

- Grade 0 - the gland is not visible or not felt when palpated.
- Grade I - the gland is not visible, it is felt when palpated and is visible during swallowing.
- Grade II - the thyroid gland is visible when swallowing and feels good to the touch, but the shape of the neck is unchanged.
- Grade III - the gland is enlarged when examined, the shape of the neck changes and thickens - "thick neck".
- Grade IV - a clear, protruding goiter is visible, distorting the appearance of the neck.
- Grade V - a very large gland is visible, at this stage the gland presses on the esophagus or trachea, making swallowing and breathing difficult.

By functional state, goiters are divided into:

- hyperthyroid - the thyroid gland has increased function,
- euthyroid - the thyroid gland has normal function,
- hypothyroid - the thyroid gland has decreased function.

One of the leading symptoms of both endemic goiter and sporadic goiter is an enlarged thyroid gland. Inspection and palpation of the gland area allows you to determine how enlarged the thyroid gland is. According to its location, the scrotum is located in the front of the neck, behind the sternum, and under the hyoid bone[2,3].



Although most patients do not have impaired thyroid function, in people living in areas with a significant goiter endemicity, the disease may present with symptoms of hypo- or hyperthyroidism. Patients with hypothyroidism usually have a slow response to external stimuli, and their mental and physical performance are impaired. Patients are naturally lethargic, lethargic, and intolerant of cold. Examination reveals bradycardia and decreased reflexes. In congenital hypothyroidism, signs of cretinism are exacerbated, and signs of a sharp lag in physical and mental development are clearly visible[2,5].

Symptoms: Patients have some limitation of neck movement, especially when buttoning the collar or moving up and down, right and left, they feel "discomfort" in the neck area, have a dry cough, hoarseness, and difficulty breathing. One of the next symptoms is associated with tracheomalacia, which is a disorder of the nervous system (control) of the trachea and larynx, and as a result of the constant pressure of the bull, the tracheal wall becomes thinner. Respiratory distress is one of the most common symptoms of a bull behind the sternum. Most often (especially with a bull behind the sternum), patients complain of a feeling of heaviness in the head when bending the body. When examining such patients, one can note the dilation of the jugular veins, a characteristic "jellyfish head" image in the upper part of the chest wall. Respiratory failure causes changes such as "bull's heart". The consequence of compression of the sympathetic nerve bundles is the appearance of Horner's symptom (ptosis, miosis, enophthalmos), increased sweating on the half of the body on the affected side[3,5].

In a bulla located below the hyoid bone, the upper larynx constricts, causing difficulty in breathing. Swallowing and turning the head are particularly difficult when part of the bulla is located behind the esophagus. X-ray examination with the use of a contrast agent ( $\text{BaSO}_4$ ) helps to determine whether barium is retained in the aberrant bulla and whether the esophagus is slightly displaced anteriorly or laterally[1,4].

An aberrant goiter is a pathologically enlarged accessory thyroid gland that can often become malignant. Metastases of thyroid cancer (cancer) to the lymph nodes in the neck are sometimes confused with an aberrant goiter.

Treatment - in small diffuse goiters, thyroidin is prescribed. In large diffuse goiters that compress or push aside the trachea, esophagus, and blood vessels, partial or subtotal excision of the thyroid gland (resection or ectomy) is required. In all types of nodular goiters (taking into account the malignancy that can be observed in up to 25%), surgery is necessarily performed. In this case, a thyroid resection is performed, an urgent histological examination is performed, and additional treatment measures are prescribed based on the results. In the prevention of endemic goiter, the use of iodized table salt and the development of a complex of sanitary and hygienic measures play a special role[2,3].

Diffuse toxic goiter (Basedov's disease, thyrotoxicosis, thyrotoxic goiter) is an endocrine disease that occurs as a result of an excessive increase in the secretion of thyroid hormones and is accompanied by severe disorders in various organs and systems. There are many theories about the origin of diffuse toxic goiter. Most scientists in our country are supporters of the neurogenic theory and emphasize the leading role of neuropsychiatric trauma (stress) in the development of this disease. The founder of this theory, S. P. Botkin (1884), wrote: "There is no doubt that mental states have an influence not only on the course of Graves' disease, but also on its development. Grief, various losses, fear, anger, panic have often caused the rapid, within



a few hours, development of symptoms characteristic of Graves' disease." S. A. Masumov, M. S. Astrov, analyzing materials from bull expeditions and observations, emphasized the great importance (up to 40-60%) of mental trauma (stress) in the etiology of diffuse toxic goiter [1,5].

In terms of the frequency of occurrence of diseases of the female genital organs and hormonal disorders (33.6%), they are the second factor (pregnancy, menstrual disorders, infertility despite the desire to have children, loneliness, etc.). The importance of infection in the etiology of diffuse toxic goiter is not great, but at least 5-6% of patients associate their illness mainly with severe influenza or angina. It has also been proven that the influence of exogenous factors on the body, in the presence of constitutional and genetic factors - disorders of the endocrine system, predisposing to diffuse toxic goiter.

In patients with diffuse toxic goiter, a long-acting stimulator - LATS - was detected in the blood, which acts as a specific antibody to the thyroid gland and causes a similar activation of the thyroid gland under the influence of thyrotropin. Increased accumulation of T3 and T4 in the body disrupts the processes of oxidative phosphorylation in tissues, which is clearly manifested in the disruption of all types of metabolism, the disruption of the activity of the central nervous system, heart, liver and other organs[2,5].

Diffuse toxic goiter most often affects women aged 20 to 50. The ratio of women to men is 10:1. The higher incidence of the disease in women is due to a more pronounced disruption of the normal relationship between the gonads and the hypothalamic-pituitary system, which is accompanied by an increased synthesis of thyroid hormones.

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