

DIFFUSE TOXIC GOITER (GRAVES' DISEASE)

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Abstract: Diffuse toxic goiter is a disease caused by excessive production of thyroid hormones by a diffusely enlarged thyroid gland. Persistent hyperfunction of the thyroid gland is called thyrotoxicosis or hyperthyroidism. The condition occurs with various pathologies of the thyroid gland: its nodular degeneration, cancer, inflammatory diseases.

Keywords: thyrotoxicosis, cancer, inflammatory diseases.

There are quite a lot of causes of this disease. According to modern ideas, hereditary predisposition plays a significant role here. In recent years, as a result of various studies, scientists have concluded that diffuse toxic goiter, in all likelihood, is an autoimmune disease associated with a deficiency of the immune system. With diffuse toxic goiter, violations of immunological processes and, in particular, antibodies to thyro-globulin are detected. Great importance in the development of the disease is attached to the detection of a long-acting thyroid stimulator - Lats factor, which is an immunoglobulin and is formed in the thymus gland and lymphocytes of the patient.

The immediate occurrence of the disease, or rather, the probability of a person getting sick with it or not, is associated with many factors. The first place among them is given to infections and mental injuries. When an infection enters the body, protective mechanisms are triggered in it, which can lead to the immune system choosing thyroid tissue as a target.

Diffuse toxic goiter (DTG, hyperthyroidism, Graves-Bazedov's disease) is an autoimmune disease that develops due to the production of antibodies to TSH receptors (RTG), clinically manifested by thyroid gland damage (thyroid gland) with the development of thyrotoxicosis syndrome. It is worth noting that the antibodies produced in DTG have a non-destructive effect on the target organ, as in other autoimmune diseases, and a stimulating effect. This disease was first described in 1835 by Irishman Robert James Graves (1797-1853). Almost simultaneously with him, in 1840, the German physician Karl Adolf von Bazedov (1799-1854) described the so-called Merseburg triad observed by him in four patients (after the name of the city of Merseburg, where he worked) - tachycardia, exophthalmos and goiter, which are characteristic symptoms of DTZ. Bazedov himself called the disease described by him exophthalmic cachexia.

Under stress, the adrenal glands produce the hormones adrenaline and norepinephrine in large quantities, and they, in turn, increase the rate of synthesis of thyroid hormones. In

addition, stress activates the secretion of thyroid-stimulating hormone (TSH), which also leads to the development of diffuse toxic goiter. In addition, mental injuries affect the immune system and increase the predisposition to infectious diseases, which further increases the likelihood of the occurrence of basedova disease.

The main thing to understand is the fact that people who had among their close relatives those who suffered from diffuse toxic goiter need to observe certain safety measures: try to avoid severe stress and take care of their immunity. Even too abrupt climate changes, for example, when traveling in a cold winter to hot countries, can become a trigger for the development of basal disease. Therefore, people with a hereditary predisposition to this disease need to be careful and try not to give their body heavy loads.

The classic clinical signs of thyrotoxicosis are combined into the well-known triad of symptoms described by K. Bazedov: goiter, bug-eyed, palpitations. From other complaints that should alert and make you consult a doctor, it is necessary to distinguish the following: irritability, mental instability, excessive sweating, poor tolerance of high temperatures, hand trembling (fine tremor), weakness, fatigue, stool disorder (diarrhea), frequent and excessive urination (polyuria), menstrual irregularities, decreased sexual desire.

Prevention of diffuse toxic goiter includes, first of all, the preservation of mental calm, since stress is one of the most important triggers of the occurrence of this disease. It is recommended to take light sedatives, especially herbal ones, drink herbal teas and take baths with herbal extracts. Aromatherapy is also useful for stress.

To protect the body from infections, it is recommended to strengthen the immune system by taking vitamins, especially those belonging to group B, and conducting restorative procedures – a warm shower, dousing with warm water, walking.

Since this disease is associated with a hereditary predisposition, those who have or have had relatives suffering from it need to consult a doctor even when the signs of basedova disease are not at all obvious – it is better to be safe than to skip the initial stage.

What is contraindicated in basedova disease? Of course, any procedures that cause stress for the body are contrast showers and baths, cold water dousing, mud treatment and tedious physical exertion. It is not recommended to dramatically change the climate zone during this illness, so do not plan to spend your vacation in hot countries, but rest in the same region where you live. Russian southern resorts should be visited in autumn or spring, when the temperature is comfortable there, although in this case it is better to consult with your doctor first.

Taking iodine preparations in any form for the prevention and treatment of diffuse toxic goiter has practically no value. Moreover, large doses of iodine can lead to thyrotoxicosis! It is important to remember this: iodine preparations are also medicines, they should be prescribed by a doctor, and they can only be taken under the supervision of a doctor.

None of these methods fights the cause of Graves' disease - antibodies. Traditionally, treatment begins with drug therapy using drugs that block the synthesis of thyroid hormones. Such drugs include thiamazole (mercazolil, tyrosol) and propylthiouracil (propicil). Thyrostatic therapy can be prescribed either as a preparation for other methods of treatment (surgery or radioiodotherapy), which are carried out against the background of normal thyroid function, or as an independent course of treatment lasting 1-1.5 years. Then the therapy is canceled. The occurrence of a recurrence of thyrotoxicosis is an indication for choosing a more radical treatment method. In some cases (when planning pregnancy, severe ophthalmopathy, intolerance to drug therapy, the patient's desire), when a toxic goiter is detected for the first time, a short course of thyrostatics is used to eliminate thyrotoxicosis and immediately begin treatment with more radical methods.

Indications for surgical treatment of Graves' disease are the large size of the thyroid gland (more than 50 ml), the presence of endocrine ophthalmopathy, allergic reactions to thyrostatic drugs, the patient's desire. The thyroid gland is removed entirely (thyroidectomy, extremely subtotal resection). In the future, the function of the thyroid gland is compensated by taking levothyroxine sodium preparations. Most patients with diffuse toxic goiter can receive radioiodine therapy as a radical treatment. This technique is safe in the absence of postoperative complications, however, it is not always radical (depends on the dose of radioiodine) and is difficult to access in our country.

As mentioned above, in addition to thyroxine and triiodothyronine, which regulate the general metabolism, the thyroid gland also produces another hormone – thyrocalcitonin, which regulates the level of calcium and phosphorus in the blood. Therefore, with basedova disease, you need to take care of maintaining the normal metabolism of these substances. Otherwise, the patient's bone system and teeth will suffer. We must not forget about replenishing the deficiency of these two minerals: for this, dairy products and fish must be present in the diet.

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