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Characteristic Features of Autoimmune Thyroiditis

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Abstract

Autoimmune thyroiditis (AIT) is one of the diseases of the thyroid gland with a specific course, which today is widespread in areas where iodine is scarce. This article covers the nature of the spread of AIT in the endemic zone, the clinical and morphological aspects of the disease process, as well as diagnostic and therapeutic methods, having studied reviews in the literature.

Keywords: autoimmune thyroiditis (AIT), endemic goiter, Hashimoto's goiter, diagnosis, treatment.

In recent days, AIT is understood as a chronic organ-specific disease of the thyroid gland, characterized by lymphoid infiltration of its tissue, which occurs due to autoimmune factors.

AIT meets the five classic criteria of autoimmune disease formulated by
Milgton and Vitebsk. These include:

1. The presence of organ–specific autoantibodies in the patient's blood, or confirmation of cell-mediated cytotoxicity.
2. Identification of a specific autoantigen that causes an immunopathological reaction.
3. Experimental sub-exposure of immunoaggression to a given antigen, that is, the creation of an experimental model of a given disease or syndrome.
4. The presence of clinical and laboratory symptoms specific to this disease (syndrome) and pathomorphological changes in the relevant organs and tissues.
5. The possibility of "transplantation" of the disease to the donor as a result of the administration of serum with antibodies or stimulated lymphocytes.

Classification

Several variants of the AIT classification are given, which are based on various signs.

Types of AIT

Disease	Course	Manifestations
Hashimoto's thyroiditis (hypertrophic thyroiditis)	Chronic	Goiter, lymphoid infiltration, follicular cell hyperplasia
Atrophic thyroiditis (primary mixedema)	Chronic	Thyroid atrophy, fibrosis
Juvenile thyroiditis	Chronic	Usually lymphoid infiltration
Postpartum thyroiditis	Transient; may be progressive chronic thyroiditis	Small goiter, lymphoid infiltration
Latent thyroiditis	Transient	Small goiter, lymphoid infiltration
Focal thyroiditis	In some patients, progressive	Found in 20 % of autopsies

T. F. Davies and N. Amino propose a classification of autoimmune diseases of the thyroid gland depending on its functional state and size.

AIT (type 1)
1A. With goiter
1B. Without goiter
Status: euthyroidism, antibodies to TH and TPO are detected.
AIT (type 2)
2A. With goiter (Hashimoto's disease)
2B. Without goiter (atrophic thyroiditis)
Status: permanent persistent hypothyroidism. Antibodies to TH and TPO are determined, in the case of 2B – TSH –blocking antibodies.
2B. Transient thyroiditis
Status: begins as transient thyrotoxicosis (elevated thyroid hormone levels with low absorption of radioactive iodine), often there is a transition to hypothyroidism, which can be transient. Transient hypothyroidism can be observed without prior thyrotoxicosis.
Antibodies to TH and TPO are detected.
Graves' disease (type 3)
3A. Graves' hyperthyroid disease
3B. Graves' Euthyroid disease
3B. Graves' hypothyroid disease.

Features of the clinical course of AIT in children

The course of AIT in childhood and adolescence has a number of features. The disease is characterized by a gradual onset, slow progression, an increase in the thyroid gland may be moderate and be detected in a child by accident. As a rule, children do not complain. Symptoms of compression of surrounding organs and tissues in AIT in children are rare – with large goiter sizes.

In most cases, AIT in children, the gland does not differ much from the DNZ during palpation, its surface smooth, the contours are clear. Classical palpatory signs of AIT (uneven, bumpy surface of the gland, heterogeneity of consistency) are rare in childhood. Therefore, additional laboratory and instrumental methods are crucial in the diagnosis of AIT in children.

The vast majority of children and adolescents with the initial stage of AIT have no clinical signs of thyroid dysfunction and the euthyroid state persists. However, in every fifth case is diagnosed with subclinical hypothyroidism. Children with AIT in the phase of subclinical and overt hypothyroidism, as well as patients with other forms of DND, often lag behind in physical, sexual and intellectual development, and are 1.5 – 2 times more likely than their peers to have various chronic somatic diseases. Puberty girls, patients with AIT, in 30% of cases have various disorders of puberty: either a lag in sexual development and a delay in menarche, or a violation of the ovarian – menstrual cycle by the type of hypomenstrual syndrome, secondary amenorrhea.

Diagnostics

There are already about 50 laboratory and instrumental tools and methods for diagnosing thyropathies, which can be divided into five main groups:

1.Determination of the level of thyroid and other hormones and their carriers, which reflects the functional state of the thyroid gland (T3, T4, TSH, TBG).

2. Functional and pharmacodynamic tests and tests clarifying the state of thyroid function and its regulatory mechanisms (RFP absorption test, perchlorate samples, samples for capture defect and iodine organification defect).

3. Tests and methods reflecting the metabolic and regulatory effects of thyroid hormones(basal metabolism, time of the "reflex from the Achilles tendon", concentrations of cholesterol, fibronectin, cAMP).

4. Immunochemical and other methods that establish the presence of an antithyroid autoimmune reaction (autoantibodies, circulating immune complexes, sensitized lymphocytes, laboratory signs of nonspecific immunity).
5. Methods for assessing the anatomical and histological characteristics of the thyroid gland (numerous imaging and cytobiopsy methods).

Treatment

No specific therapy for autoimmune thyroiditis has been developed.

Treatment with thyroid medications

In the presence of hypothyroidism, thyroid hormone preparations (thyroxine) are prescribed, triiodothyronine, thyroidin, L-thyroxine). The daily dose of thyroxine in adults is 1.4—1.7 mcg per 1 kg of body weight (about 100-175 mcg per person per day), and in children — up to 4 mcg per 1 kg of body weight. In some cases, in particular, in the atrophic form of autoimmune thyroiditis, an increased dose of thyroxine may be prescribed — 200-225 mcg / day. The administration of thyroid medications, especially in the elderly, should begin with small doses (25 mcg), increasing by 25 mcg every 2.5—3 weeks, monitoring clinical symptoms and TSH content in blood serum. Given the chronic nature of the disease, treatment with thyroid medications is carried out for a long time. Serum TSH levels should be monitored no more often than 1.5—2 months after the start of treatment.

Treatment with glucocorticoids

Glucocorticoid drugs are usually prescribed only when autoimmune thyroiditis is combined with subacute thyroiditis. Prednisone is usually used in a daily dose of 40 mg, followed by a decrease.

Surgical treatment

Surgical treatment is indicated only for fast-growing goiter, compression of the trachea or neck vessels due to an enlarged thyroid gland, as well as suspected cancer in the presence of nodes.

Reference

1. Д. С. Рафибеков, А. П.Калинин «Аутоиммунный тиреоидит» – Бишкек 1996.
2. Н. А. Курмачева «АИТ у детей: особенности клинического течения», Русский мед журнал , 2000 - №1.
3. Н.А. Петунина «Клиника, диагностика и лечение АИТ – Проблемы эндокринологии», 2002 - №6.
4. Т. А. Океанова, М. Э. Бронштейн, Э. И. Базарова «Клинические «маски» зоба Хашимото – Проблемы эндокринологии», 1990.
5. И. И. Дедов, Г. А. Мельниченко, В. В. Фадеев «Эндокринология», Москва, «Медицина» 2000.
6. Э. П. Касаткина «АИТ: диагностика и лечение – Проблемы эндокринологии» 2002.
7. Жуковская, А. О., & Москаленко, И. С. (2016). Аутоиммунный тиреоидит (зоб Хашимото). *Символ науки*, (10-3), 111-114.