همة الأسنان لديكم

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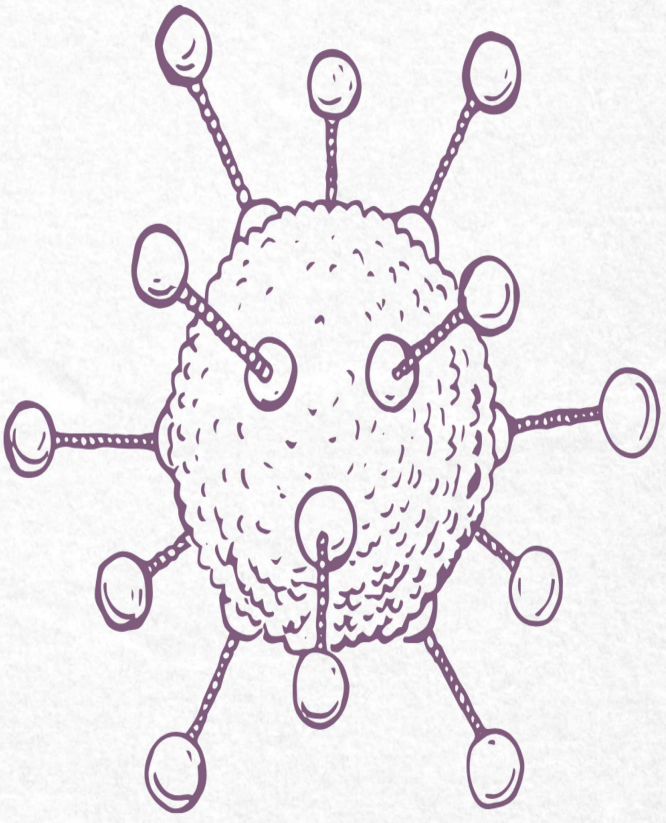
PATHOLOGY

ENDOCRINE 1



همّة الأسْنان

Endocrine system

Diseases of the thyroid gland

Increased thyroid hormone= thyrotoxicosis

actual increase excludes relative increase in cases of thyroiditis where there is destruction of the gland causing increased release (not production) of thyroid hormones... so there is a relative net increase in T3 & T4.. Here we have thyrotoxicosis but no hyperthyroidism

•Thyrotoxicosis means: increased thyroid hormone, regardless of the cause of the increase.
•Hyperthyroidism is the most common cause of thyrotoxicosis and it means there is actual increase in thyroid hormone production from the thyroid gland

A. Thyrotoxicosis Associated with hyperthyroidism (Thyroid hyperfunction):

Primary

a. Diffuse toxic hyperplasia (Graves disease)
b. Hyperfunctioning (Toxic) multinodular goitre.
c. Hyperfunctioning (toxic) adenoma

Secondary

TSH-secreting pituitary adenoma (rare)

B. Thyrotoxicosis not associated with hyperthyroidism : less common

- Excessive release of pre-formed hormones in thyroiditis (just increased release with no increased overall production)

Clinical manifestations of thyrotoxicosis

• Thyroid hormones increase basal metabolic rate, increase appetite, increase breakdown of fat and glucose
• Also increase heart rate, cause hypertension
•Increase body temperature
• SO if these hormones are increased you expect to see a wide range of symptoms.

a. Constitutional symptoms : warm flushed skin, heat intolerance and excessive sweating ,weight loss despite increased appetite.
b. Malabsorption, and diarrhoea (because of increased intestinal motility)
c. Tachycardia and elderly patients may develop heart failure due to aggravation of pre-existing heart disease

d. Nervousness, tremor, and irritability.
e. A wide, staring gaze and lid lag because of sympathetic overstimulation of the levator palpebrae superioris
f. 50% develop proximal muscle weakness (thyroid myopathy).

II.HYPOTHYROIDISM

- depending on whether it arises from
- an intrinsic abnormality in the thyroid
- or from hypothalamic or pituitary disease

This disorder may be **divided into**

primary

can be caused by
a. congenital, b. autoimmune, or
C .iatrogenic causes

secondary categories

The clinical manifestations of hypothyroidism include cretinism and myxedema

Cretinism

hypothyroidism of **infants and children**

Endemic

caused by iodine deficiency , is now much less frequent because of the supplementation of salt with iodine.

sporadic

By contrast, enzyme defects that interfere with thyroid hormone synthesis are a cause of sporadic cretinism

Clinical features

impaired development of the skeletal system and central nervous system,
a. severe mental retardation,
b. short stature,
c.coarse facial features,
d. protruding tongue,
e. umbilical hernia

Myxedema

Hypothyroidism in **older children and adults**

a. The initial **symptoms** include generalized fatigue, apathy, and mental sluggishness,
b. Decreased sympathetic activity results in constipation and decreased sweating.
c. The skin is cool and pale because of decreased blood flow.,

III.Thyroiditis

	Chronic Lymphocytic (Hashimoto) Thyroiditis	Subacute Granulomatous(de Quervain) Thyroiditis	Subacute Lymphocytic Thyroiditis	Riedel thyroiditis
Description	a. is the **most common cause** of hypothyroidism in areas of the world where iodine levels are sufficient. b. It is characterized by gradual thyroid failure secondary to autoimmune destruction of the thyroid gland. c. It is most prevalent between 45 and 65 years of age and is more common in women d.Although it is primarily a disease of old women, it can occur at any age, including childhood.	-Is much less common than Hashimoto disease. - Is most common between 30 and 50 years of age - Occurs more frequently in women than in men. - Is believed to be caused by a **viral infection**, and not by an autoimmune process. - A majority of patients have a history of an upper-respiratory infection shortly before the onset of thyroiditis - The process spontaneously remits	- Also is known as silent or painless thyroiditis; - In a subset of patients, the onset follows pregnancy(postpartum thyroiditis) - This disease is most likely autoimmune in etiology, as circulating antithyroid antibodies are found in a majority of patients.	- Is characterized by extensive fibrosis involving the thyroid and contiguous neck structures. - Clinical evaluation demonstrates a hardand fixed thyroid mass, simulating a thyroid neoplasm. - It may be associated with idiopathic fibrosis in other sites in the body, such as the retroperitoneum. - Might be a manifestation of IgG-4 related disease
clinical manifestations	•Painless enlargement of the thyroid, usually associated with some degree of hypothyroidism. - The enlargement of the gland usually is symmetric and diffuse, - In the usual clinical course, hypothyroidism develops gradually - In some cases, however, it may be preceded by transient thyrotoxicosis caused by disruption of thyroid follicles,	- The onset often is acute. - It is characterized by neck pain (particularly with swallowing),fever, malaise, and variable enlargement of the thyroid. - Transient Thyrotoxicosis may occur, as a result of disruption of thyroid follicles and release of excessive thyroid hormone.		

		- The leukocyte count and erythrocyte sedimentation rates are increased. With progression of the gland destruction, a transient hypothyroid phase may ensue. - The condition typically is self-limited, with most patients returning to a euthyroid state within 6 to 8 weeks		
Notes	a. Patients with Hashimoto thyroiditis often have other autoimmune diseases b. Are at increased risk for the development of B-cell non-Hdgkin Lymphomas which typically arise within the thyroid gland. c. The relationship between Hashimoto disease and thyroid epithelial cancers remains controversial, with some morphologic and molecular studies suggesting a predisposition to papillary carcinomas.			
Microscopically	The thyroid follicles are 1.atrophic and are 2.lined by epithelial cells distinguished by the presence of abundant eosinophilic, granular cytoplasm, termed **Hürthle**, or oxyphil, cells.