Hashimoto's Thyroiditis

Hashimoto's thyroiditis is an autoimmune disease characterized by hypothyroidism with bouts of hyperthyroidism, along with an enlarged, nontender thyroid gland. Patients have antibodies such as anti-thyroid peroxidase and anti-thyroglobulin. Cytology shows Hürthle cells and lymphoid follicles. This disease is associated with HLA-DR5 and HLA-DR3 and an increased risk of non-Hodgkin lymphoma.



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Symptoms

Hypothyroidism with Bouts of Hyperthyroidism

Hippo-thigh-droid atop Hiker-thigh-droid

As this is an autoimmune disease with distruction of thyroid tissue, patients display hypothyroid symptoms. These include lethargy, weakness, hypoactivity, cold intolerance, bradycardia, myxedema, coarse skin and brittle hair. Bouts of hyperthyroidism sometimes occur due to thyrotoxicosis during follicular rupture.

Enlarged, Nontender Thyroid

Large Broken-tenderizer Thigh-droid

Patients typically present with an enlarged, nontender thyroid gland, which is also known as a goiter. These goiters occur due to lymphocytic infiltration and fibrosis, rather than hypertrophy.

Mechanism

Autoimmune

Auto-in-moon

Most commonly, this disorder arises from various auto-antibodies which target thyroid peroxidase, thyroglobulin and TSH receptors. These antibodies then lead to an antibody-dependent cell-mediated cytotoxicity.

Anti-Thyroid Peroxidase (TPO)

Ant-tie Thigh-droid H₂O₂

A common antibody present in Hashimoto's thyroiditis is anti-thyroid peroxidase, or TPO.

Anti-Thyroglobulin

Ant-tie Thigh-droid-goblin

Another group of auto-antibody found in Hashimoto's thyroiditis are anti-thyroglobulin antibodies.

Lab Findings

Hurthle Cells

Hurdles

Upon histological examination, Hürthle cells can be seen in Hashimoto thyroiditis. These cells line atrophied colloid bodies and have eosinophilic, granular cytoplasm, along with metaplasia.

Lymphoid Follicles

Lymph-lime follicles

Lymphoid follicles can be seen in histological examination of patients with this disease. These are characterized by lymphoid aggregate with germinal centers.

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Associations

HLA-DR5 and HLA-DR3

HLA (hula)- Doctor-giving-High (5) and HLA (hula)- Doctor with (3) Tree

Patients with the HLA-DR5 or HLA-DR3 haplotypes have a higher relative risk for developing this thyroid disorder.

Increased Risk Of Non-Hodgkin Lymphoma

Up-arrow Nun-on-Hog-King with Lime-foam

Thyroid lymphomas are almost always the non-Hodgkin type. The risk of developing thyroid lymphoma is associated with Hashimoto thyroiditis.

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