

Hashimoto's Thyroiditis

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The thyroid gland is a ductless gland in humans, primarily concerned with cell metabolism. The normal level of thyroid gland activity results in Euthyroid status. An overactive thyroid results in hyperthyroid status marked by increased metabolic state and an under-active thyroid results in hypothyroid state characterized by decreased metabolism.

Any enlargement of the thyroid is known as goiter. If the thyroid gland is enlarged, the physician should determine whether the enlargement is diffuse or multinodular or whether a single nodule is present.

All diffuse goiters in the United States with normally active thyroid (Euthyroid) are due to chronic lymphocytic thyroiditis, also known as Hashimoto's thyroiditis. Incidence is 3 to 6 cases per 10,000 population per year. The prevalence among women is at least 2%.

Hashimoto's thyroiditis is characterized by painless, diffuse enlargement of the thyroid gland occurring predominantly in middle-aged women. The patient is often Euthyroid (normal level of thyroid activity). Hypothyroidism gradually develops. The thyroid gland is diffusely replaced by a lymphocytic infiltrate and fibrotic reaction.

Persons with Hashimoto's thyroiditis have serum antibodies reacting with thyroglobulin and against an unidentified protein present in the colloid secretion of the thyroid. In addition, many patients have cell mediated immunity directed against thyroid antigens. All theories emphasize a basic abnormality in the immune surveillance system which in some way allows auto-immunity to develop against thyroid antigens as well as against other issues, including stomach, adrenal and ovaries, in many patients with thyroiditis. Thus, Hashimoto's disease can be associated with Addison's disease and other endocrine defects (New England Journal of Medicine 335:99, 1996).

The gland involved by thyroiditis tends to lose its ability to store Iodine, produces and secretes iodoproteins that circulate in plasma, and is inefficient in making thyroid hormone. Thus, the thyroid gland is under increased TSH (thyroid stimulating hormone from pituitary gland) stimulation, fails to respond and has rapid turnover of thyroidal iodine.

Diagnosis is made by the finding of a smooth, firm, diffuse thyroid enlargement in a young woman with strongly positive anti-thyroid antibodies and a Euthyroid or hypothyroid metabolic status. A patient with a small goiter and euthyroidism does not require treatment unless the TSH level is elevated which indicates under-active thyroid (hypothyroidism). The presence of a large gland, progressive growth of the goiter, or hypothyroidism indicates the need for replacement thyroid hormone. Surgery is rarely indicated. Development of lymphoma, though very unusual, must be considered if there is growth or pain in the involved gland.

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