

# AUTOIMMUNE HYPO TO HYPERTHYROIDISM



## A RARE EVOLUTION

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**INTRODUCTION:** Hashimoto thyroiditis (HT) (with anti-thyroid peroxidase antibodies -TPOAb) and Graves Disease (GD) (with TSH receptor antibodies, TRAbs) are frequent autoimmune disorders responsible for thyroid dysfunction. There are 2 types of TRAbs, the ones that stimulate the thyroid (TSAb) causing Graves' hyperthyroidism and those that block thyrotropin action (TBAb) being occasionally responsible for hypothyroidism. Unusual patients switch from TSAb to TBAb (or vice versa) with concomitant thyroid function changes. The progression from a HT to GD is not frequent and there are only a few cases described in the literature.

### CASE REPORT:

2006

A 63-year-old woman with history of obesity and depressive syndrome was referred to our department in 2006 due to increasing weight, with a body mass index of 39Kg/m<sup>2</sup>.

Neck ultrasonography (US) revealed thyroid nodular disease and the laboratory confirmed a HT (TPOAA +) with normal thyroid function.

2007

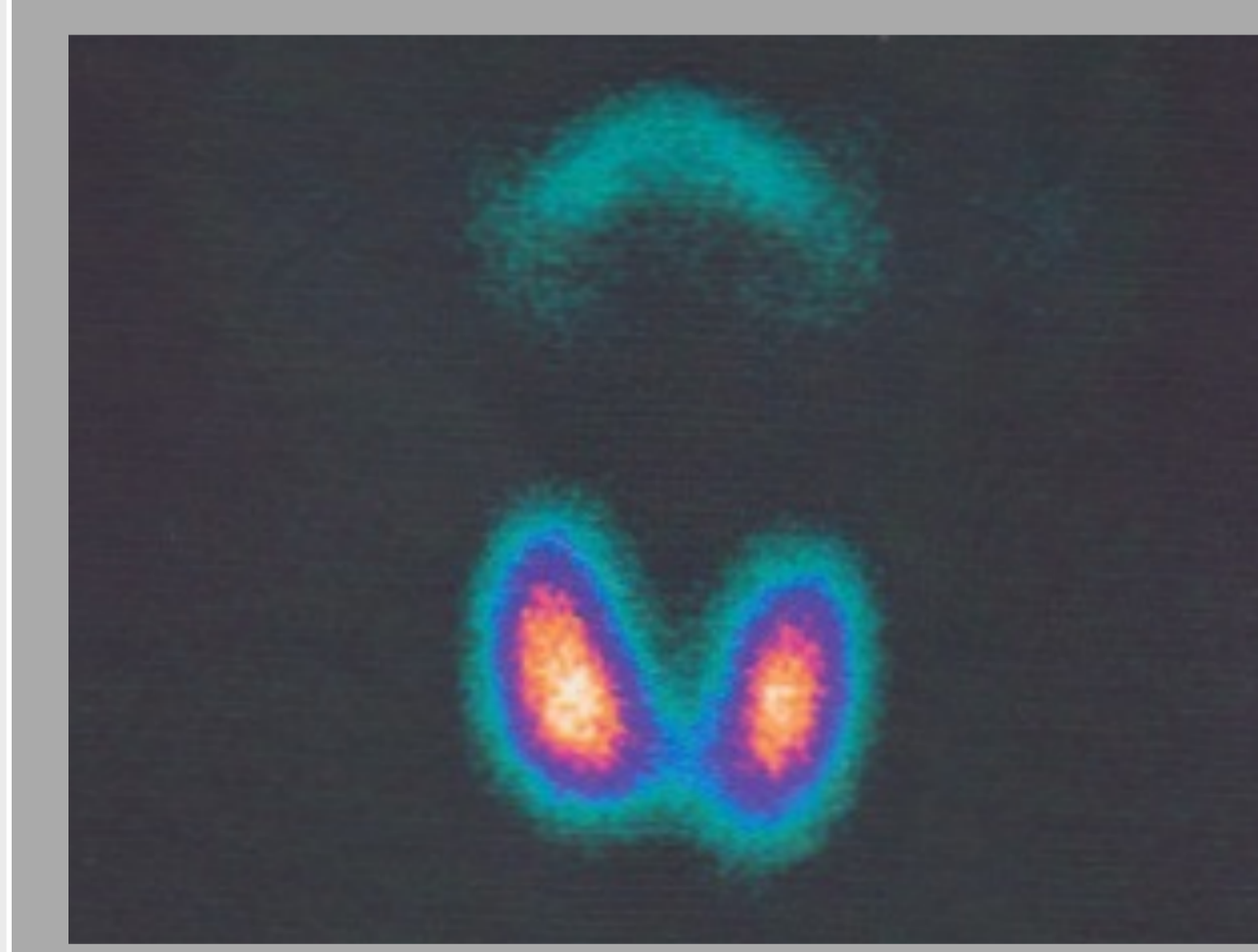
After 1 year of follow-up, the patient presented with subclinical hypothyroidism (TSH 11,0), initiating treatment with levothyroxine 50ug/day. Fine needle aspiration biopsy (FNAB) of thyroid nodule was benign. During 4 years, the patient maintained a stable thyroid function under levothyroxine.

2012

Five years after diagnosis of hypothyroidism, the patient presented a subclinical hyperthyroidism (TSH=0,01). Despite levothyroxine withdrawal, she maintained hyperthyroidism complaints, with weight loss, palpitations, tremor and heat intolerance, initiating treatment with methimasol and beta-blockers.

After scintigraphy and TRAbs titration, the diagnosis of Graves Disease was confirmed.

THYROID SCINTIGRAPHY <sup>99m</sup>Tc



**DISCUSSION:** The distinction between an evolution from HT to GD or from TBAb to TSAb is very difficult. Although the presence of TPOAb suggested HT diagnosis, the concomitant presence of these antibodies with TRAbs is also frequent. Nevertheless, considering the prevalence of both conditions, the first option seemed most likely. Patients with thyroid function fluctuation should be closely monitored.

#### REFERENCES:

1. MCLACHLAN SM, RAPOPORT B: Thyrotropin blocking autoantibodies and thyroid stimulating autoantibodies: insight into the pendulum from hypothyroidism to hyperthyroidism or vice versa. *Thyroid* 2012;
2. TAKASU N, YAMADA T, SATO A, et al.: Graves' disease following hypothyroidism due to Hashimoto's disease: studies of eight cases. *Clin Endocrinol (Oxf)* 1990; 33: 687-98
3. KAMATH C, YOUNG S, KABELIS K, et al.: Thyrotropin receptor antibody characteristics in a woman with long-standing Hashimoto's who developed Graves' disease and pretibial myxoedema. *Clin Endocrinol (Oxf)* 2012; 77: 465-70
4. JORGE Z, NOBRE EL, SANTANA A, CASTRO JJ: [Autoimmune thyroid disease: a case report]. *Acta Med Port* 2005; 18: 88-91
5. TAKASU N, MATSUSHITA M: Changes of TSH-Stimulation Blocking Antibody (TSBAb) and Thyroid Stimulating Antibody (TSAb) Over 10 Years in 34 TSBAb-Positive Patients with Hypothyroidism and in 98 TSAb-Positive Graves' Patients with Hyperthyroidism: Reevaluation of TSBAb and TSAb in TSH-Receptor-Antibody (TRAb)-Positive Patients. *J Thyroid Res* 2012;

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