



## WHEN IS A POSITIVE ANTI-TG, ANTI-TPO OR ANTI-TSH-RECEPTOR TITER CLINICALLY USEFUL?

Hashimoto's thyroiditis often presents as a goiter in adolescents and young adults, and these patients often remain euthyroid, whereas some whose TSH was initially above normal or who were overtly hypothyroid subsequently return to euthyroidism, and yet others continue to or subsequently have hypothyroidism (1). Adult patients with Hashimoto's thyroiditis often do not have a goiter (clinical information about the patients was not provided in the present study). A common diagnostic and clinical problem is the patient who has symptoms that might indicate hypothyroidism but who has no positive physical findings. When tests for T<sub>4</sub>/free T<sub>4</sub>, T<sub>3</sub>, and TSH are ordered, they turn out to be normal. However, if antithyroid antibodies are also ordered and they turn out to be positive, what should the physician do? Most will follow the patient's TSH level closely. However, if you simply assume that the diagnosis is Hashimoto's thyroiditis and put the patient on levothyroxine therapy, then even if the patient's symptoms improve, you have not established that your diagnosis is correct. On the other hand, a euthyroid woman with positive antibodies and a TSH that is within the normal range

but >2.5 mU/L is more than four times as likely to have hypothyroidism over the next 13 years than if her TSH is ≤2.5 mU/L (2).

Only 55% of the patients with Graves' disease had positive anti-TSH-R antibodies in this study, perhaps because samples could be drawn 6 months after the diagnosis was made, and antithyroid therapy can reduce mean anti-TSHR-stimulating antibody levels by more than half (and anti-TPO titers by two-thirds) in adults within 6 months (3). Anti-TSH-R assays can be useful in evaluating pregnant women who currently have or previously had Graves' disease; in newborns with possible neonatal hyperthyroidism or who may be transiently hypothyroid because of blocking antibodies; in patients in whom euthyroid Graves' ophthalmopathy is suspected; in confirming Graves' disease in hyperthyroid patients in whom a radioiodine uptake and scan should not or cannot be performed; and possibly in determining the likelihood of a recurrence of Graves' disease before discontinuing antithyroid drug therapy.

— Stephen W. Spaulding, MD

### References

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