

Abstract Form

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| Project Title: | Thyroid switch Postpartum: Hashimoto's to Graves' | | | | | | |
| Research Category (please check one): | | | | | | | |
| <input type="checkbox"/> | Original Research | <input checked="" type="checkbox"/> | Clinical Vignette | <input type="checkbox"/> | Quality Improvement | <input type="checkbox"/> | Medical Education Innovation |

Abstract

Introduction: Graves' disease and Hashimoto's thyroiditis are two autoimmune diseases on opposite ends of the spectrum of the thyroid. Graves' disease is usually associated with hyperthyroidism, while Hashimoto's thyroiditis is usually associated with hypothyroidism. Conversion of hypothyroidism to hyperthyroidism and vice versa has been reported except in the immediate postpartum period. This phenomenon may not be as rare as previously thought and the physicians should be aware of this possibility.

Case Description: A 44-year-old woman presented to clinic for asymmetric increasing eye prominence. She had a previous diagnosis of hypothyroidism and was stable on Levothyroxine replacement for over six years. Three months after the birth of her child, she noticed increasing prominence in her right eye. On presentation, she admitted palpitations, diarrhea and weight loss. Physical exam showed enlarged thyroid gland, lid lag with proptosis, exophthalmos, and increased stare with asymmetry of the eyes (R>L). Labs were notable for suppression of thyroid stimulating hormone (TSH) of 0.155 (normal 0.554 - 4.780 mIU/mL), normal free thyroxine (T4) of 1.3 (normal 0.9-1.8 ng/dL) and total triiodothyronine (T3) of 99 (normal 0.9-2.3 ng/dL). The above laboratory levels persisted on repeat evaluation after discontinuing levothyroxine. Further laboratory work showed elevations of thyroid-peroxidase (TPO) antibody (22 IU/mL, normal <9 IU/mL), thyroid stimulating Immunoglobulin (TSI) (315 %, normal <140 %), and thyroid stimulating hormone receptor antibody (TRAb) (4.02 IU/L, normal <2.0 IU/L). Given eye asymmetry, CT of the orbits was obtained to rule out orbital tumors. She was subsequently advised to start on Methimazole. She was referred to Ophthalmology and was initiated on teprotumumab infusions to decrease orbital fibroblast production. The patient continues to follow up for further management of her stable condition.

Discussion: Antibodies responsible for Hashimoto's and Graves' are thyroid-stimulating antibodies and thyroid-blocking antibodies, respectively. Switching between TBAb and TSAAb (or vice versa) occurs in unusual patients. These changes involve differences in TSAAb versus TBAb concentrations, affinities and/or potencies in individual patients. Pregnancy related immunosuppression reduces the levels of TRABs in most cases. Hence the switch has not been reported post pregnancy. It is important to recognize the change in symptomatology for prompt and adequate treatment before further manifestations arise. Diagnosis requires careful clinical and biochemical assessment. otherwise, Hashimoto's to Graves' switch can be easily confused for over-replacement of levothyroxine. This switch, which was once felt to be rare, is becoming increasingly common. The occurrence of "switching" emphasizes the need for careful patient monitoring and management