

A CASE OF GRAVES' DISEASE

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Case

A 32-year-old Asian male was diagnosed with Graves' disease in July 2015. Thyroid function tests performed on the serum produced the following results: Free T₃ 18.8 (Ref 3.1–6.8 pmol/L), Free T₄ 39.26 (Ref 13.12–21.3 pmol/L), and TSH <0.005 (Ref 0.27–4.2 µIU/mL). The results of all other routine biochemical tests were normal. The patient did not suffer from any other disease that could influence the pituitary–thyroid axis. The thyroid gland showed a diffuse uptake on a technetium scintigram. He was prescribed an oral dose of methimazole 30 mg daily to normalize T₃ and T₄ levels while avoiding a rise in TSH. The patient was followed at a three-month interval to study the response to the treatment. Although he exhibited some clinical improvement after six months of therapy, Free T₃ and Free T₄ levels stayed high, while TSH remained suppressed (<0.005). In April 2016, the patient presented with features of hypothyroidism (cold intolerance and lethargy). Thyroid function tests revealed a Free T₃ level of 3.4 pmol/L, Free T₄ at 9.1 pmol/L, and TSH <0.005 µIU/mL. Based on the clinical presentation:

Clinical Quiz: Questions

1. What is the most likely reason for the TSH level failing to recover?
2. Which other laboratory tests should have been conducted on this patient?

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FOR FURTHER READING

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