A 28-year-old female presented to the hospital with a 3-month history of palpitation, weight loss and neck swelling. On examination, she had diffuse soft goitre, warm extremities and fine tremors of hands. In addition, she had an irregular jerky lingual and lip movements suggestive of dyskinesia (see online supplementary video). There were no signs of infiltrative ophthalmopathy or dermopathy. Neurological examination was otherwise unremarkable. A clinical diagnosis of Graves’ disease was made that was biochemically confirmed by elevated T3 and T4 with suppressed thyroid stimulating hormone (TSH) as well as diffuse increased uptake of technetium in nuclear imaging. Unlike lingual tremors associated with other neurological conditions or adverse effects of drugs, thyrotoxicosis-associated lingual dyskinesia responds very well to beta blockers. After 6 months of follow-up on carbimazole and propranolol therapy, her thyrotoxicosis improved, and the abnormal tongue movements had disappeared.

Learning points

- Thyrotoxicosis may occasionally be associated with unusual neurological manifestations like lingual dyskinesia.
- Reversible and easily treatable conditions like hyperthyroidism should be kept in mind before investigating in detail for abnormal tongue movements.