Toxic multinodular goitre: a surprising finding
Marlene Rodrigues,1 Helena Ferreira,2 Ana Antunes,1,3 Olinda Marques3,4

DESCRIPTION
A 16-year-old healthy adolescent boy was referred to the paediatric endocrinology clinic because of multiple thyroid nodules detected by cervical ultrasound, in the context of cervical lymphadenopathies. There was no family history of thyroid disease. He denied recent infections, asthenia, weight loss, sweating, palpitations, mood or sleep disturbances, dysphagia or dysphonia. At physical examination, an enlarged, irregular and fibroelastic thyroid, with a predominant right lobe, was identified. The remaining examination was normal.

Thyroid nodules are a frequent incidental finding with an incidence between 9.4% and 27.0%.1 In contrast to adults, TMNG is an uncommon thyroid disease in paediatric age. The presence of hyperthyroidism determines the need for a definitive therapy in multinodular goitre, and a correct evaluation must be established before deciding between surgery or radioactive iodine. The diagnosis of TMNG (overt or subclinical) should always be excluded in patients with physical examination or ultrasound findings consistent with nodular thyroid disease.2,3

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Contributors MR and HF were involved in the planning, conduct and conception of the work; acquisition, analysis and interpretation of data; manuscript writing; revision and final approval of the version; AA was involved in conception and design of the work; critical review and final approval of the manuscript. OM was involved in conception, design and conduct the work; acquisition and interpretation of data; critical

Learning points
► Thyroid nodules are relatively common in adolescents, usually asymptomatic and often incidentally detected. While multinodular goitre has almost always a good prognosis, malignancy needs to be excluded and a large nodule increases its probability.
► The first line investigation should include a thyroid ultrasound to evaluate the nodules’ characteristics and a thyroid stimulating hormone (TSH) determination. In the presence of a suppressed TSH, thyroid scintigraphy is indicated to differentiate between hyperfunctioning (hot) and hypofunctioning (cold) nodule.
► When hyperthyroidism is caused by an autonomous thyroid nodule, a definitive treatment is necessary such as radioactive iodine therapy or surgery. In children and adolescents, surgical resection must be considered in face of suspicious ultrasound findings, clinical presentation, nodule size >4 cm and/or compressive symptoms.
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References