

Case History

Unilateral Graves' Disease

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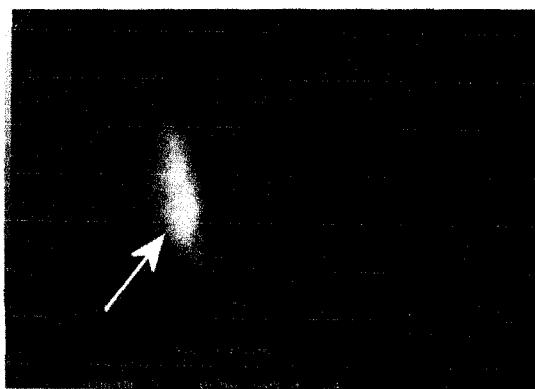
Introduction

ALTHOUGH UNILATERAL GRAVES' OPHTHALMOPATHY is frequently seen, Graves' disease usually presents as a diffuse hyperthyroid goiter, involving both lobes of the gland.

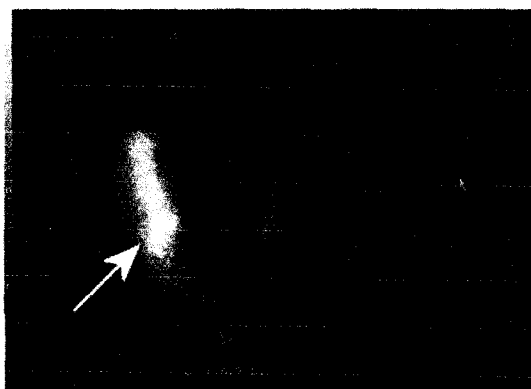
In March 2003, we saw a 39-year-old male patient, who presented with symptoms and signs of hyperthyroidism of recent onset; thyrotropin (TSH) was undetectable, while free triiodothyronine (T₃) and free thyroxine (T₄) were increased. Thyroid isotope scanning with ⁹⁹Tc showed unilaterally increased uptake in the right lobe, with no uptake in the left lobe (Fig. 1). This led to the clinical suspicion of a large hyperfunctioning nodule, involving most of the right lobe; however, the age of the patient and rapid onset of the symptoms argued against it. Consequently, ultrasound imaging was performed, and failed to show a nodule of the right lobe; on the contrary, a nonhomogeneous pattern, which was consistent with autoimmune thyroiditis and Graves' disease, was described as limited to the right lobe. A color Doppler study was able to detect a much greater vascularization of the right lobe. Finally, serum thy-

roid-receptor antibodies (TRAB) and anti-thyroperoxidase antibodies (TPO-Ab) were both positive. Unilateral Graves' disease was diagnosed, and treated with a thionamide (methimazole) for 12 months, with normalization of TRAB, TSH, and thyroid hormones. After discontinuation of treatment, thyroid hormones remained within normal limits, but TSH was again suppressed, although it remained detectable (Table 1). A repeat ⁹⁹Tc scan was similar to the initial examination, but weak uptake was now visible in the left lobe (Fig. 1); color Doppler examination showed a decrease of the vascularization, but still with a preponderance of the right lobe (Fig. 2).

Unilateral Graves' disease, although uncommon, has been described (1-3). In some cases, the unilateral involvement is only apparent, and is caused by the absence of the contralateral lobe (4). Interestingly, in all cases described in the literature, including ours, the hyperfunctioning lobe was the right one; we have no explanation for this, although it has been suggested that the right lobe is usually larger than the left, and more frequently affected by nodular and non-nodular conditions.



First Thyroid Scintigraphy



Second Thyroid Scintigraphy

FIG. 1. The first Tc^{99m} scan (2003), as can be seen on the left side figure, showed a fourfold increased homogeneous uptake (see arrow) in the right lobe and whole suppression on the left lobe compared to normal uptake while the second Tc^{99m} scan (2005) showed identical scanning pattern on the right lobe and initial weak uptake on the left lobe.

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