

# A thyroid nodule mimic

Felix K Jebasingh,<sup>1</sup> Pooja Ramakant,<sup>2</sup> Nylla Shanthly,<sup>3</sup> Thomas Vizhalil Paul<sup>1</sup>

<sup>1</sup>Department of Endocrinology, Diabetes and Metabolism, Christian Medical College, Vellore, Tamil Nadu, India

<sup>2</sup>Department of Endocrine Surgery, SGPGIMS, Lucknow, Uttar Pradesh, India

<sup>3</sup>Department of Nuclear Medicine, Christian Medical College, Vellore, India

## Correspondence to

Professor Thomas Vizhalil Paul, thomasvpaul@yahoo.com

Accepted 8 October 2015

## DESCRIPTION

A 48-year-old man, known for well-controlled hypertension over the past 8 years, was evaluated for low back pain. The clinical examination was unremarkable except for a 4 cm right-sided nodule in the region of the thyroid gland. So a clinical diagnosis of right solitary thyroid nodule was made and investigated. His biochemistry showed a high serum calcium level of 11.4 mg/dL (8.3–10.3) and phosphate of 1.4 mg/dL (2.5–5.5) with intact parathormone (PTH) of 877.8 pg/mL (8.0–74). His 24 h urine calcium level was high for his weight, with a tubular maximum excretion of phosphate <2.5%. Ultrasonography of the neck revealed a right solitary thyroid nodule (figure 1) and also bilateral renal calculi in the abdominal sonography. However, parathyroid scintigraphy and single-

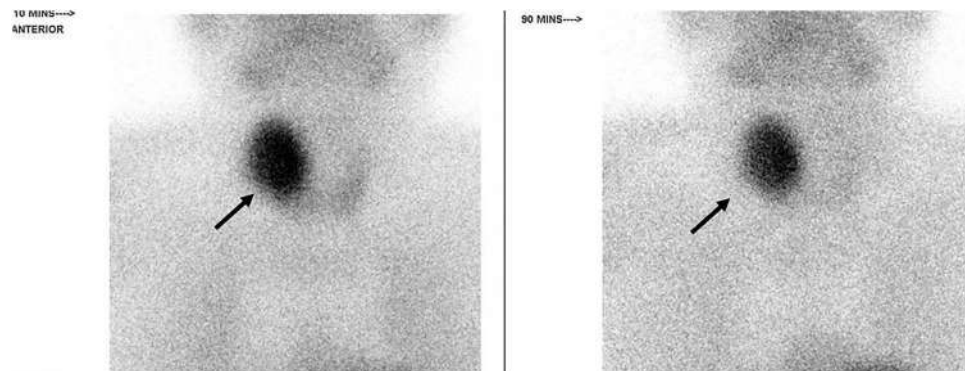
photon emission CT (SPECT)-CT confirmed a large right parathyroid adenoma (figures 2 and 3). His bone mineral density showed a low bone mass with a Z score of <−2 in all regions. He did not have clinical or biochemical evidence of any syndromes. He underwent localised right parathyroid adenoma removal and was intraoperatively found to have a 4.5×4.9×3.2 cm enlarged right inferior parathyroid gland. The histopathological specimen was also confirmatory of right parathyroid adenoma with atypical features. Even though our patient had clinical and radiological features of a simulating right side thyroid nodule, the scintigraphy image was highly suggestive of a large right parathyroid adenoma. Clinically palpable benign parathyroid adenoma is very rare, as only 2% of benign primary hyperparathyroidism cases have an enlarged, palpable parathyroid gland. Palpable parathyroid adenomas are parathyroid carcinomas unless proven otherwise.<sup>1–3</sup>



**Figure 1** Ultrasonography of the neck showing a thyroid nodule on the right.

## Learning points

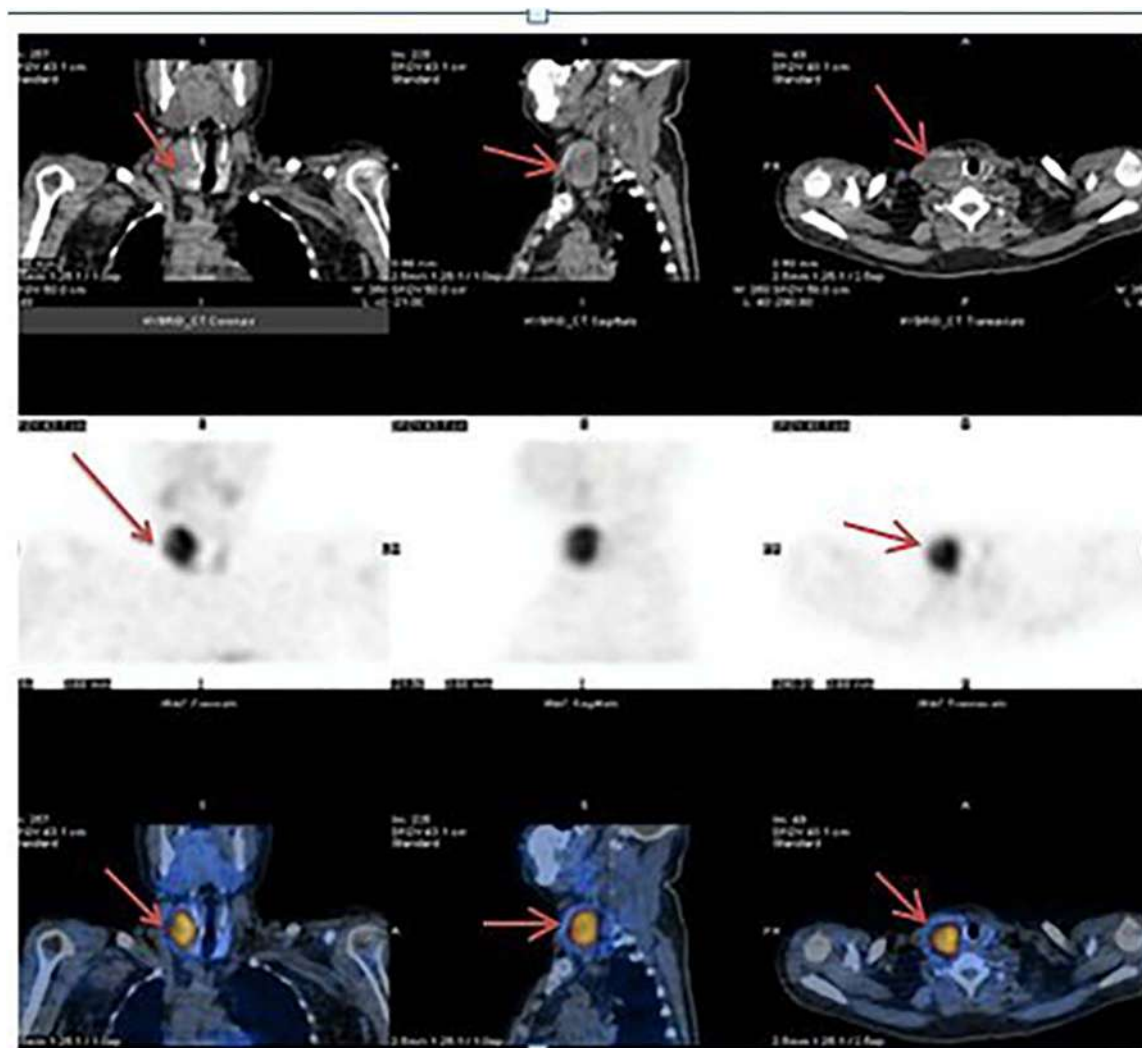
- ▶ A palpable parathyroid adenoma does not always have a malignant nature.
- ▶ A large palpable parathyroid adenoma can mimic a thyroid nodule on clinical examination.
- ▶ Parathyroid scintigraphy is a very useful investigative tool for localising parathyroid adenoma.



**Figure 2** Parathyroid scintigraphy showing a large right parathyroid adenoma (shown with arrows).



**To cite:** Jebasingh FK, Ramakant P, Shanthly N, et al. *BMJ Case Rep* Published online: [please include Day Month Year] doi:10.1136/bcr-2015-212962



**Figure 3** Single-photon emission CT (SPECT)-CT of the neck revealing a right parathyroid adenoma (shown with arrows).

**Competing interests** None declared.

**Patient consent** Obtained.

**Provenance and peer review** Not commissioned; externally peer reviewed.

## REFERENCES

1 Weymouth MD, Serpell JW, Chambers D. Palpable parathyroid adenomas presenting as clinical solitary thyroid nodules and cytologically as follicular thyroid neoplasms. *ANZ J Surg* 2003;73:36–9.

- 2 Arnstein AR, Rosenberg IK, Belamaric J, *et al*. Palpable calcified parathyroid gland in primary chief-cell hyperplasia. *N Engl J Med* 1971;285:1365–6.
- 3 Woolfson AM, Fleming JA, Stewart JS. A palpable parathyroid tumour in a patient with osteogenesis imperfecta. *Proc R Soc Med* 1975;68:61–2.

Copyright 2015 BMJ Publishing Group. All rights reserved. For permission to reuse any of this content visit <http://group.bmj.com/group/rights-licensing/permissions>.  
BMJ Case Report Fellows may re-use this article for personal use and teaching without any further permission.

Become a Fellow of BMJ Case Reports today and you can:

- Submit as many cases as you like
- Enjoy fast sympathetic peer review and rapid publication of accepted articles
- Access all the published articles
- Re-use any of the published material for personal use and teaching without further permission

For information on Institutional Fellowships contact [consortiasales@bmjgroup.com](mailto:consortiasales@bmjgroup.com)

Visit [casereports.bmj.com](http://casereports.bmj.com) for more articles like this and to become a Fellow