

Papillary thyroid carcinoma in a hyper-functional thyroid nodule

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[Received 8 X 2020; Accepted 18 XII 2020]

Abstract

The authors reported the case of 69 years old woman presented with subclinical hyperthyroidism. ^{99m}Tc pertechnetate scan showed the abnormal focus of hot uptake in the left lobe, suggestive of a hyperfunctioning toxic thyroid nodule. Surgical treatment was advised because of the size of the nodule as a more applicable solution. Histological findings showed papillary thyroid carcinoma.

KEY words: papillary thyroid carcinoma; hot nodule; carcinoma of the thyroid

Nucl Med Rev 2021; 24, 1: 33–34

Introduction

A toxic adenoma is a thyroid solitary node that produces and secretes increased amounts of the hormones thyroxine and triiodothyronine and causes hyperthyroidism. Clinically, the most common finding is a palpable node that appears hot on the scintigram with radioiodine or technetium pertechnetate, while the remainder of thyroid parenchyma is suppressed and faintly visible. The hot nodule is very unlikely to be malignant, and less than 1% of them are reported to harbour malignancy.

Case report

A 67-year-old women came to the clinic in 2017 and presented with heat intolerance and palpitations. She had a past medical history of arterial hypertension and atrial fibrillation. There was no previous history of neck radiation.

Physical examination revealed an enlarged left thyroid lobe with no associated lymphadenopathy. Her pulse rate was 90 BPM. She had no tremor, sweaty palms or eye signs.

Thyroid hormones were in the reference range. Thyroid ultrasonogram showed a hypoechoic, large, dominant nodule, occupying almost the entire left thyroid lobe (size 37 mm x 36 mm x 25 mm) which was sharply delineated from the rest of the parenchyma. USG also showed two 5-mm hypoechoic nodules in right thyroid lobe. There was no calcification or cervical lymphadenopathy.

^{99m}Tc pertechnetate scan showed the abnormal focus of hot uptake in the left lobe, suggestive of a hyperfunctioning toxic thyroid nodule (Fig. 1). Considering the normal range of thyroid hormone, the follow-up hormone control in 6 months was advised. On follow-up visit she made thyroid hormones, TSH was suppressed 0.132 (normal: 0.35-4.94) while fT3 and fT4 were in the normal range.

Ultrasound showed an increase in nodal dimension and a fine needle aspiration cytology (FNAC) was made. Considering her new symptoms such as weight loss and insomnia, a therapy was introduced, thiamazole 5 mg daily.

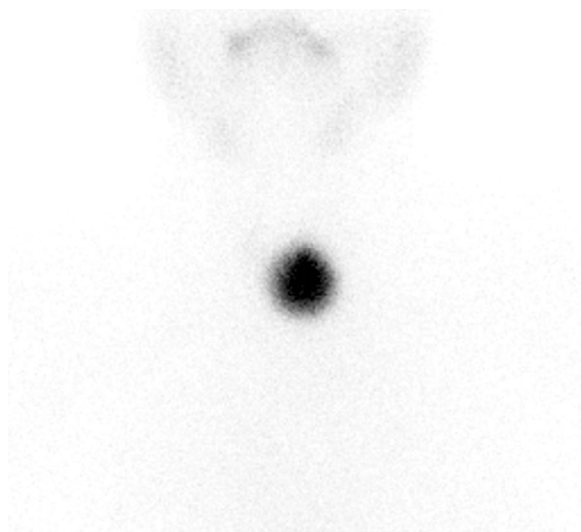


Figure 1. Abnormal focus of hot uptake in the left lobe

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Because the node was growing and narrowing trachea, surgical treatment was advised as a more applicable solution. Subsequently, the patient brought the result of an FNAB which showed some peripheral blood and a few macro thyrocytes (Bethesda I).

With thyrostatic therapy, she became euthyroid and decided for thyroid surgery — total thyroidectomy.

A month later, she brought a histological finding. Histological examination revealed multiplicated follicles of the eosinophilic cytoplasm inside the thyroid tissue, nuclei of the appearance

of ground glass with focally visible intranuclear inclusions creating an image of the papillary carcinoma-oncocytic variant. There was no clear penetration or infiltration of the surrounding parenchyma.

After seeing the histological findings, the patient prepared for therapy with 50 mCi I-131. Increased accumulation of radiopharmaceutical in the thyroid bed, suggesting thyroid remnant, was visible on the post-treatment scintigrams. No distant metastases were seen.