

A CASE REPORT ON THYROTOXICOSIS - A PAPILLARY CARCINOMA OF THYROID

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ABSTRACT

Primary thyroid malignancy includes cancers such as differentiated (papillary and follicular) carcinomas, anaplastic carcinoma, medullary carcinoma, and lymphoma, out of which, papillary thyroid carcinoma (PTC) alone is responsible for 85% of cases. The prevalence of thyroid malignancy in a thyroid nodule varies from 5-10% in an euthyroid patient to 0.44-9.8% in a thyrotoxic patient. Association of PTC and thyrotoxicosis is rare and this may have adverse prognostic significance. Here, we describe the PTC in a male patient with hyperthyroidism.

Keywords: Thyrotoxicosis, Papillary Thyroid Carcinoma, Hyperthyroidism

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INTRODUCTION

Nodules of thyroid are a common endocrine problem worldwide. They are defined as lesions arising from thyroid gland. Clinically thyroid nodules greater than 1cm are usually palpable while those smaller can only be seen using an ultrasound. The prevalence of palpable thyroid nodules is approximately 5% in women and 1% in men. The most common well differentiated malignant thyroid nodules are papillary and follicular thyroid carcinomas with papillary thyroid carcinoma (PTC) is the most common thyroid cancer, representing approximately 80% to 90% of all newly diagnosed thyroid cancers (Boone *et al.*, 2003). PTC is typically characterized by an indolent clinical course in comparison to other differentiated and undifferentiated thyroid malignancies (Raboca-Carlos *et al.*, 2012). Thyrotoxicosis is a state of inappropriately high levels of circulating thyroid hormones in the body. The clinical presentation varies from a subclinical state to a life-threatening thyroid storm. Typical symptoms are due to a hypermetabolic state and include weight loss, heat intolerance, and palpitations. Differential diagnosis requires a complete physical examination, laboratory studies, and imaging to determine the etiology (Hundahl *et al.*, 1998). Hyperthyroidism was not thought to be associated with thyroid cancer. However, recently (Taneri *et al.*; 2005) reported that hyperthyroidism is positively related to the incidence of thyroid cancer.

Carcinoma of the thyroid can occur at any age and is found to be 3 times more common in women when compared to men. Family history of a first-degree relative increases the risk of thyroid carcinoma; although the genetic basis for this is not entirely clear. Certain hereditary conditions are well known to be associated with an increased risk for the development of thyroid cancer and include multiple endocrine neoplasia 2a, multiple endocrine neoplasia 2b, familial adenomatous polyposis, Cowden disease, Carney complex, type I, and familial nonmedullary thyroid carcinoma. Radiation exposure is another well-known risk factor for the development of thyroid carcinoma. In stark contrast to papillary thyroid carcinoma, anaplastic thyroid carcinoma is the most aggressive form of thyroid cancer (Ragazzi *et al.*, 2014).

CASE

A 55-year old male patient visited our hospital with chief complaints of increase in size of Thyroid with swelling of it. He has past history of hyperthyroidism since 10 years and patient is on anti thyroid drugs.

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There was no history radiation to neck in the neither past, nor family history of thyroid cancer. Thyroid function tests revealed rise in serum thyroglobulin-1792ng/ml, T3-138ng/dL, T4- 6.69 μ g/dL, TSH- 2.53 μ IU/mL was normal.

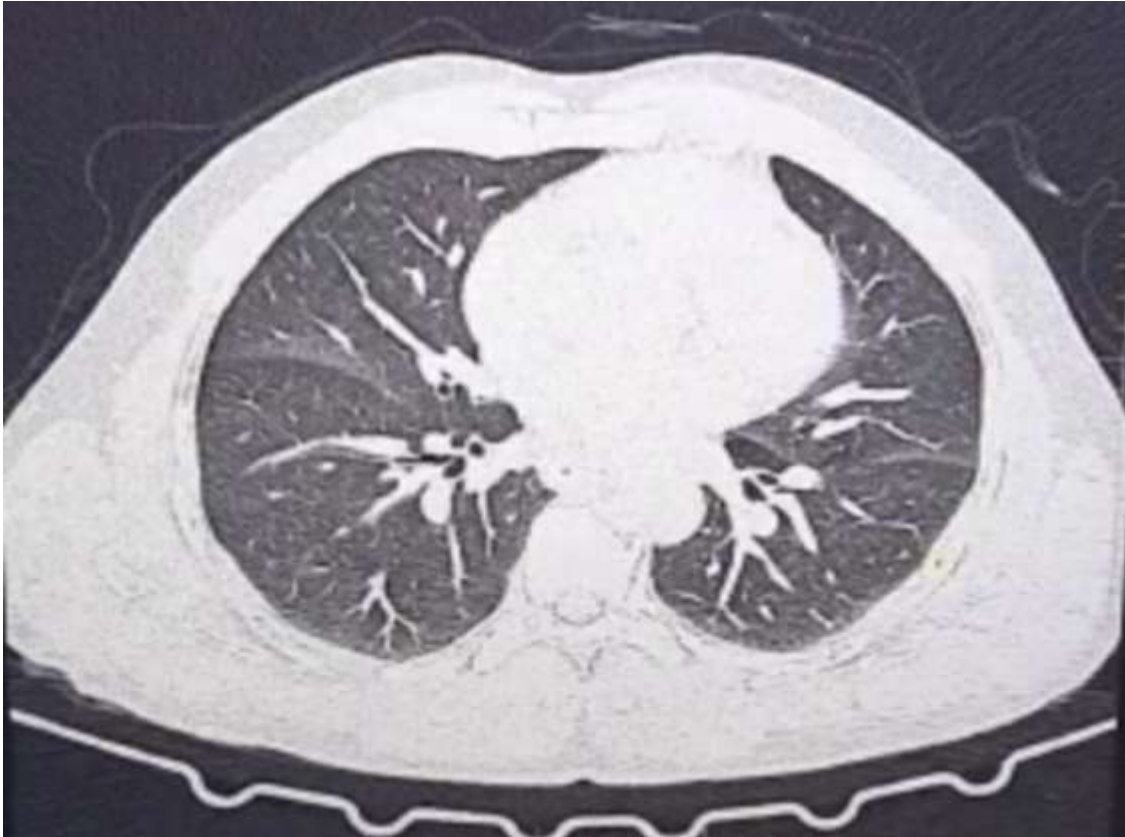


Figure 1: Shows CT scan (plain and contrast) of neck

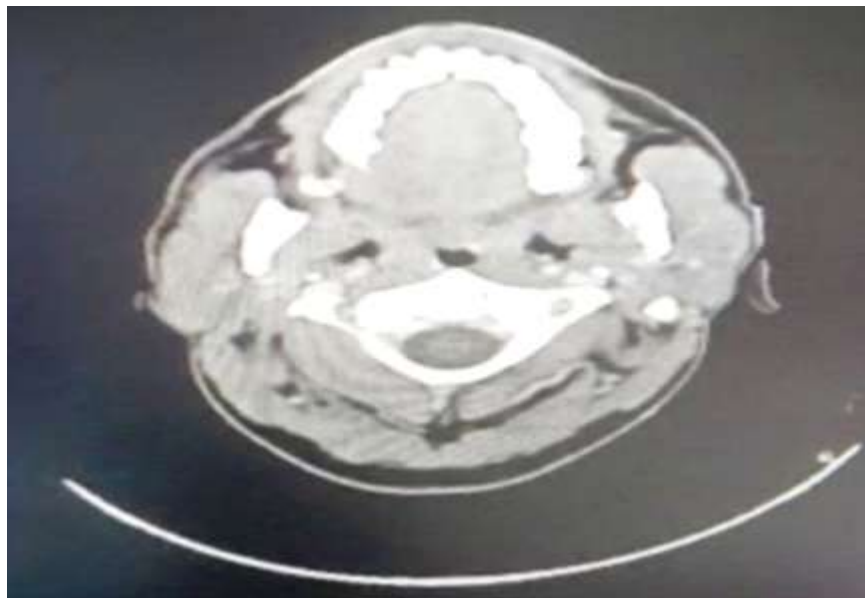


Figure 2: CT of plain and contrast neck shows coarse calcifications noted in right lobe

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Fine Needle Aspiration Cytology: The aspirated materials comprised of blood mixed with colloid. Microscopic examination showed monolayer sheets, papillae with central vascular core, follicles and single dispersed cells having hyperchromatic nuclei, abundant amount of eosinophilic cytoplasm. There is evidence of nuclear crowding and overlapping. Abundant amount of colloid, few foamy cells seen in the background. FNAC report was suggestive of Papillary Carcinoma of Thyroid.

U/S: U/S neck revealed enlargement of right thyroid lobe with cystic lesion of size 3×5cm. Left lobe of thyroid measuring 2×2cm. Isthmus measures 8mm

Plain & contrast enhanced CT scan of neck:

Findings show bulky right lobe of thyroid measuring 45×38×76mm in AP, transverse and craniocaudal dimensions. A solid cystic lesion with punctuate and coarse calcifications within noted in right lobe measuring approximately 32×35×53mm in AP, transverse and craniocaudal dimensions. The lesion displaces trachea towards left side, indenting its right posterolateral wall and causing mild luminal compromise with increased AP and reduced transverse dimension of the trachea. No retrosternal extension noted. Enlarged thyroid focally abuts right lateral wall of trachea. Isthmus measures 8mm in AP dimension. Left lobe of thyroid measures 22×28×54mm in AP, Tr and CC dimensions. No significant cervical adenopathy noted. Small volume mediastinal nodes were seen. Patient is further advised for surgery.

CONCLUSION

It's always better to have a regular follow-up for cases of thyrotoxicosis with thyroid swelling which are long standing and increasing in size, with regular U/S Neck and FNAC to rule out malignancy.

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