

CASE REPORT**A CASE REPORT OF PAPILLARY CARCINOMA IN TOXIC MULTINODULAR GOITRE**

*Gopalakrishnan Midhun P, **Sajikumar NR

HOW TO CITE THIS ARTICLE

Gopalakrishnan Midhun P, Sajikumar N R. A Case Report Of Papillary Carcinoma In Toxic Multinodular Goitre. Orissa J Otolaryngology Head Neck Surgery. 2017 June; 11(1): 54-56. DOI : 10.21176/ojohns.2017.11.1.9

Date of receipt of article -20-11-2016

Date of acceptance – 09-01-2017

DOI- 10.21176/ojohns.2017.11.1.9

DOI URL- <https://doi.org/10.21176/ojohns.2017.11.1.9>**ABSTRACT:**

Introduction: The incidence of papillary carcinoma in toxic multinodular goitre (MNG) is very low. The prevalence is 1-4%.

Objective: To describe and report a case of papillary carcinoma thyroid in toxic multinodular goitre with literature review.

Case report: A 39 year old female presented with features of toxic multinodular goitre. After evaluation and controlling toxicity total thyroidectomy was done. The histopathology report came out as papillary carcinoma thyroid.

Conclusion: Though rare there is a definite incidence of papillary carcinoma in toxic multinodular goitre. Total thyroidectomy after controlling toxicity is the treatment of choice.

Key words: Papillary carcinoma, toxicity, multinodular goitre.

INTRODUCTION:

Multinodular goitre (MNG) is a common thyroid disease. Development of toxicity is a complication of long standing goiters. Most commonly it affects female population. The incidence of papillary carcinoma in toxic multinodular goitre is very low. The prevalence is 1-4%^{1,2}. Such nodules are not considered alarming because they are assumed to be benign³. Most of the diagnosis in such cases will come as a surprise after histopathology report.

CASE REPORT

A 39 year old female presented to outpatient department with a thyroid swelling of 5 year duration. There was associated history of increased appetite, loss of weight, prominent eyes, and palpitation for last 6 months. On examination diffusely enlarged thyroid swelling of size 8x4 cms., nodular surface, and firm in consistency was present. No palpable cervical lymph nodes were there. Bilateral proptosis

(Fig-5), tachycardia, tremor of hands and moist palms were present.

Thyroid function test showed elevated T3 and T4 with low TSH value.

Patient was started on titrated dose of carbimazole and propranolol. After attaining euthyroid status, USG (Ultra Sonogram) Neck and

Affiliations:

*Senior Resident in Surgical Oncology,
Malabar Cancer Centre, Thalassery,
Kannur (DT), Kerala – 670103
E-mail: drmidhungopalakrishnan@gmail.com

**Additional professor,
Department of General Surgery,
Govt. TD Medical College, Alappuzha

Address for correspondence:

Dr. Midhun P Gopalakrishnan,
Senior Resident in Surgical Oncology,
Malabar Cancer Centre, Thalassery,
Kannur (DT), Kerala – 670103
Email: drmidhungopalakrishnan@gmail.com
Mob. No. 09447314520

FNAC (fine needle aspiration cytology) were done. USG Neck showed a thyroid mass containing both cystic and solid areas with multiple nodules in both lobes, the largest measuring 2cms x 2 cms. FNAC was consistent with colloid nodule. Total thyroidectomy was done and histopathology report came as nodular colloid goitre with two foci of papillary carcinoma 1.5cms x 1 cms and 0.5cms x 0.5 cms (Fig 1, 2) along with toxic changes including hyperplasia of acinii and vacuolated colloid with a characteristic scalloped pattern (Fig 3). We stopped carbimazole immediately after surgery and continued propranolol till 7 days post operatively and stopped. As one lesion was more than 1 cm we did Iodine



Fig 5. Patient with bilateral proptosis

131 scan to assess the completion of thyroidectomy and to detect metastasis if any. There was no uptake of radio iodine in the neck suggestive of no residual thyroid tissue there. There was no metastasis elsewhere also. Later we put her on suppressive dose of thyroxine and she is on follow up now.

DISCUSSION:

Papillary thyroid carcinoma constitutes approximately 80% to 85% of malignant epithelial thyroid tumors. Grossly, papillary carcinomas have a variable appearance, from subcapsular white scars to large tumors more than 5 to 6 cm that invade nearby structures outside the thyroid gland. Cystic change, calcification, and even ossification may be identified⁴. Microscopically, papillary carcinomas are characterized by the presence of papillae, the characteristic nucleus containing Orphan-Annie nuclei, nuclear grooves, and intranuclear pseudo inclusions (Fig 1, 2). It may also contain concentric lamellated calcified structures called Psammoma bodies (Fig 4). Because the nuclei are enlarged, they frequently overlap one another⁵. Papillary carcinoma has a propensity to invade lymphatic spaces and therefore leads to microscopic multimodal lesions in the gland as well as a high incidence of regional lymph node metastases. But the incidence of papillary carcinoma in toxic multinodular goiter is rare. Overall prevalence is 1-4%. In thyroid toxicity the TSH will be very low. Actually in post total thyroidectomy patients for differentiated thyroid cancers we use thyroxine for TSH suppression i.e. to attain low TSH level to prevent recurrence in follow up period. But here in this case though the TSH is low there were foci of papillary thyroid carcinoma. In the presence of toxicity cytological and radiological characteristics rarely predict malignancy².

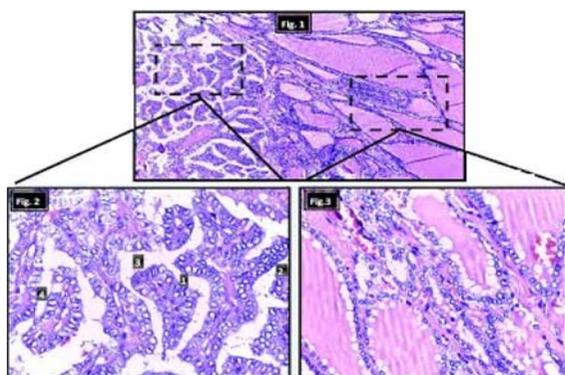


Fig-1: Nodular colloid goiter with two foci of papillary carcinoma.

- Fig 2.
1. Orphan Annie eyed nuclei
 2. Overlapping of nuclei
 3. Nuclear ridges
 4. Nuclear pseudo inclusion bodies

Fig 3. Toxic changes including hyperplasia of acini and vacuolated colloid with a characteristic scalloped pattern.

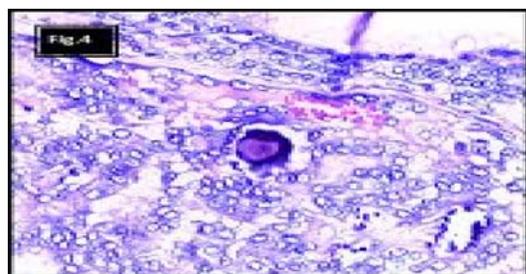


Fig 4. Psammoma Bodies

CONCLUSION:

Total thyroidectomy in all cases of thyrotoxicosis after controlling toxicity should be the norm in view of malignancy though it is rare to rule out the same. The detection of thyrotoxicosis does not exclude the possibility of thyroid carcinoma and warrants careful evaluation and appropriate therapy⁶.

Meeting at which the paper was presented:

India Singapore International Conference on Head & Neck cancer, ISCON 2015 held in RCC Trivandrum in February 2015.

Acknowledgements: We acknowledge the support of Dr. K K Sukumaran, then the HOD and Professor of General Surgery, Govt. TD Medical College, Alappuzha in presenting this case report.

DISCLOSURES:

- (a) Competing interests/Interests of Conflict- None
- (b) Sponsorships - None
- (c) Funding - None
- (d) Financial disclosures-none
- (e) Animal rights -Not applicable

REFERENCES:

1. Sasan Mirfakhraee et al. A Solitary Hyperfunctioning Thyroid Nodule harbouring Thyroid Carcinoma: : review of the literature BMC; Thyroid Research. 2013 May, 6:7. available at <https://thyroidresearchjournal.biomedcentral.com/articles/10.1186/1756-6614-6-7>.
2. Polyzos et al. Coincidental Thyroid Papillary Microcarcinoma in a patient treated for Toxic Adenoma: Archives of Iranian Medicine. 2011 Mar; 14(2): 149-151.
3. Hala M. Ifayili et al. Papillary Thyroid Carcinoma in a Autonomous Hyperfunctioning Thyroid Nodule: Thyroid. 2010 Sep; 20(9): 1029-1032.
4. Vincent T. DeVita , Theodore S. Lawrence, Steven A. Rosenberg,et.al. (Eds.) Cancer: Principles and Practice of Oncology; (Eds) 10th Edition, Lippincott & Williams and Willkins, 2015: 1179-1181.
5. L. Cheng, David G. Bostwick.(Eds), Essentials of Anatomic Pathology 4th ed. Springer science and business media, LLC. 2011: 985-986.
6. Ruqgeri RM et al. Follicular Variant of Papillary Thyroid Carcinoma presenting as Toxic Nodule in an adolescent: Co-existent polymorphism of the TSHR and GS-alpha genes: Thyroid. 2013 Feb; 23(2): 239-242.