

Papillary Carcinoma of Thyroid In Graves' Disease – Surgeons' Dilemma.

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Abstract: Association of papillary carcinoma with Graves' disease is not a very common finding. We report a case of 39 years old woman with Graves' disease and associated papillary carcinoma. In this lady with Graves' disease for 2 years, papillary carcinoma was diagnosed after 1 year. The importance of USG guided FNAC from suspicious area in thyroid is highlighted here. Antithyroid medications were prescribed and after control of thyrotoxic state total thyroidectomy was done. Histopathology examination confirmed papillary carcinoma of thyroid – conventional type.

1. Introduction

Palpable thyroid nodules are frequently found in Graves' disease. The association of thyroid cancer with Graves' disease is described in some literatures. The incidence of papillary carcinoma of thyroid in Graves' disease is about 2% worldwide¹.

A written informed consent was obtained from the patient for this case report and any accompanying images.

2. Case report

We report a case of 39 years old woman with Graves' disease and associated papillary carcinoma. Due to her uncontrolled thyrotoxic state, she couldn't undergo thyroid surgery, although papillary carcinoma was a known diagnosis for a year.

Association of papillary carcinoma with Graves' disease is not a very common finding and in this lady with Graves' disease for 2 years, papillary carcinoma was diagnosed after 1 year. The importance of USG guided FNAC from suspicious area in thyroid is highlighted here.

She presented to our Thyroid Clinic, with features of Graves' disease (eye signs, tremors, pulse rate 160/min, loss of weight, irregular menses, palpitation and general weakness) in November, 2015. Her thyroid gland was diffusely enlarged (see Figure 1) with a palpable hard nodule over left lobe. There was no compressive symptom. No regional lymphadenopathy was noted.



Figure 1: Neck of the patient (Enlarged thyroid gland)

USG of neck (see Figure 2) suggested multiple thyroid nodules involving both lobes and isthmus with largest one 13 × 16 mm over left lobe.

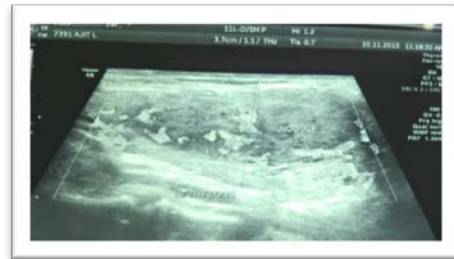


Figure 2: Ultrasound film of thyroid gland.

FNAC of the palpable nodule of left lobe of thyroid revealed papillary carcinoma. Her Serum TSHR autoantibody (TSI) was raised with raised T3, T4 and decreased TSH level (see Table 1). Antithyroid medications (Tab Neomercazole, Tab Inderal) were prescribed and revised three times to achieve control of thyrotoxic state.

Table 1: Thyroid profile test results

Test	11/11/'15	03/12/'15	07/01/'16
T3 nmol/L	8.27	3.58	2.48
FT4 pmol/L	80.2	50.3	21.8
TSH uIU/ml	0.02	0.02	0.02

Total thyroidectomy with lymph node dissection (see Figure 3) was done in January, 2016.



Figure 3: Total thyroidectomy & neck dissection.



Figure 4: Specimen of total thyroidectomy.

Histopathology examination confirmed papillary carcinoma of thyroid – conventional type (see Figure 5). One lymph node was involved by tumour.

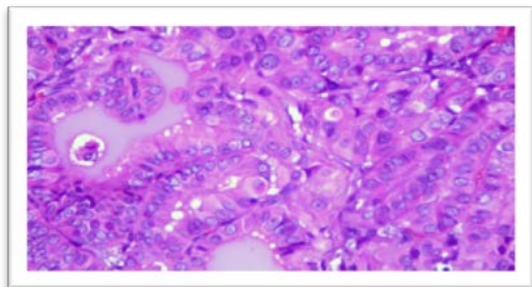


Figure 5: Histopathology slide.

TNM staging of our case – pT2pN1aMxLoVoRo; Stage 1(<45years), AJCC 7th edition, 2010.
Post operative report (2 weeks after operation): T3 1.11nmol/L, T4 125.9 nmol/L, TSH 0.01 uIU/L. Serum Calcium 9.7mg%, PTH 38 pg/ml. Thyroglobulin 0.01 ng/ml.

She was advised for Radioactive Iodine Scan. She was also advised for annual clinical examination, USG of neck, blood tests for thyroglobulin and thyroid profile.

3. Discussion

Palpable thyroid nodules occur in approximately 15% of grave's patient and raise a concern about the possible presence of thyroid malignancy². In Graves' disease, patients should be informed about the possibility of coexistent thyroid cancer. FNAC is an important preoperative examination³. Most of the thyroid micro-carcinomas with concurrent Graves' disease are 9 mm or smaller. Total thyroidectomy is the treatment of choice for these patients⁴. The incidence of thyroid storm is about 1-2% among patients with overt hyperthyroidism with overall mortality rate of 10-20%⁵.

4. Conclusion

The association of papillary cancer in Graves' disease is rare (2%) but due to better and accurate diagnosis, this may increase. USG of neck in all thyroid pathologies should be mandatory and USG guided FNAC of suspicious areas should be done. Thyroid storm is a well recognized complication of surgery in thyrotoxic patient (mortality averages 14%). Measures to prevent thyroid storm before, during and after surgery should be at hand for this kind of cases.

5. References

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