



CLINICAL STUDY OF PAPILLARY CARCINOMA THYROID

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ABSTRACT **Background:** Papillary carcinoma of thyroid is the most common type of thyroid Malignancy. It is more common in females¹. Most patients are Euthyroid and present with slow growing painless mass in the neck. It spreads more commonly to lateral neck nodes. Diagnosis is established by FNA of Thyroid mass or Lymph node. Characteristic pathological features are Papillary projections with Psammoma bodies & Orphan-Annie eye nuclei. Most patients have Good prognosis with 10 yr survival rate greater than 95%, but depends on several factors.

Methods and Materials: A Retrospective study of patients diagnosed with Papillary carcinoma of thyroid from the June 2017-June 2019 in the Department of General Surgery, King George Hospital, Andhra Medical College, Visakhapatnam.

Results: Although Papillary carcinoma more commonly seen in Females in the age group of 41-60yrs, but risk of malignancy in Solitary nodule Thyroid is more in Males. Most of the cases are Euthyroid. Solitary nodule Thyroid with size 2-4cms is the commonest mode of presentation, Lymphnode metastasis is more in cases with Primary lesion >4cms. FNAC is diagnostic in 80% of cases. Total Thyroidectomy with Central compartment Neck dissection with/without Lateral cervical node dissection is done in all cases, depending upon cervical Lymphnodes involvement. Suppressive dose of L-Thyroxine is prescribed to all cases & kept on regular follow up. All the cases shows Good prognosis without any Recurrence.

Conclusion: Papillary carcinoma have an excellent prognosis if we resect the complete macroscopic tumor even in patients with metastasis to Lateral neck nodes & regular follow up of Patients.

KEYWORDS :

INTRODUCTION:

Papillary carcinoma is the most common Malignancy of Thyroid & accounts for 80% of Malignancies in Iodine sufficient areas. It occurs more often in the women¹ & mean age at Presentation is 30-50 yrs. Papillary carcinoma is the predominant Thyroid Cancer occurring in the Children & individuals exposed to External Radiation².

Most Patients are Euthyroid & Present with a slow growing Painless solid/cystic mass in the Neck. It can spread within the gland through Intrathyroidal Lymphatics to other lobe. Most common site for metastasis is Cervical Lymphnodes. Lateral Abberant Thyroid is actually a Lymphnode metastasis from Papillary Carcinoma of Thyroid. Dyspnea, Dysphagia, dysphonia indicates Locally advanced invasive Carcinoma. Distant Metastasis is uncommon, but may involve Lungs, Bone, Liver & Brain.

FNAC is diagnostic of Papillary Carcinoma Thyroid. The FNAC diagnosis of Papillary Carcinoma of Thyroid has an almost 100% correlation to a diagnosis of Papillary Carcinoma on final pathology³. USG neck is done to identify Contralateral lobe involvement & Nonpalpable cervical lymphnodes. Characteristic pathological features are Papillary projections with Psammoma bodies & Orphan-Annie eye nuclei⁴. Papillary carcinoma has different subtypes including Microcarcinoma (<1cm lesion without Lymphnodal & Extrathyroidal involvement)⁵, Encapsulated variant, Follicular variant of papillary carcinoma, Tall cell variant and columnar variant. Rarely Microcarcinomas can present with Metastatic disease⁶. However difference between these rare aggressive microcarcinomas and the usual microcarcinomas have been described with respect to immunoreactivity for cyclin D1 and p27⁷. Tall cell variant has a significantly higher incidence of extrathyroidal disease, recurrence, and metastases when compared with the usual variant of papillary carcinoma from patients of similar age, sex, and date of diagnosis^{8,9}.

Total Thyroidectomy, with central node compartment dissection with/without Ipsilateral cervical neck node dissection (levels IIA, III, IV and VB) is done depending upon involvement of lateral neck nodes is the ideal treatment option for Papillary Carcinoma of Thyroid.

Radioactive iodine therapy is indicated after Postop Biopsy confirmation, if tumour is multicentric, >1 cm size, presence of nodes, extrathyroidal spread.

Papillary Carcinoma of Thyroid have an excellent prognosis with a >95% 10-year survival rate, but it depends on several factors. AGES/AMES criteria is Proposed to classify Prognostic risk for Differentiated Thyroid carcinoma with factors including are 1) Age 2) Extent 3) Size 4) Sex 5) Grade 6) Metastasis. TNM Classification, MACIS Scoring system is also used to predict Prognosis^{10,11}. All scoring systems categorise the patients as High risk for death—40% in 20 years; Low risk for death—1% in 20 years.

METHODS:

All the Patients admitted with Goitre & diagnosed as Papillary Carcinoma of Thyroid in the Department of General Surgery, King George Hospital from June 2017- June 2019 were studied.

Aim of the study is to find out the

- 1) Risk of Papillary Carcinoma of Thyroid in Males & Female.
- 2) Age-wise distribution of Papillary Carcinoma of Thyroid.
- 3) Relationship of Lymphnode metastasis to the size of Primary lesion.
- 4) Prognosis after Initial Surgery

RESULTS:

From June 2017 – June 2019, 104 patients are admitted in the hospital with Goitre. In these Papillary Carcinoma Thyroid is diagnosed in 15 Cases, out of which there are 11 Females & 4 Males. Incidence of Papillary Carcinoma is seen More in Females, but the Risk of Papillary Carcinoma in males presenting with solitary nodule thyroid is more when compared to female patients presenting with the same.

14 cases are Euthyroid at Presentation. Clinical presentation of Papillary carcinoma varies in these cases, 13 cases presented as Solitary Nodule Thyroid, remaining 2 are Multinodular Goitre & Lateral Abberant Thyroid each. Lymph Node Metastasis is seen in 7 cases. Risk of Lymph node involvement is More in cases with Primary lesion >4cms.

FNAC is diagnostic in 12 cases. Excisional Biopsy of the cervical Lymph node is done in 1 case, it shows metastatic deposits of Papillary Carcinoma Thyroid. Remaining 2 cases are diagnosed Postoperatively after getting the Postop Biopsy Report. No any Distant Metastasis seen.

Total Thyroidectomy with central compartment neck node dissection is done in 6 cases.

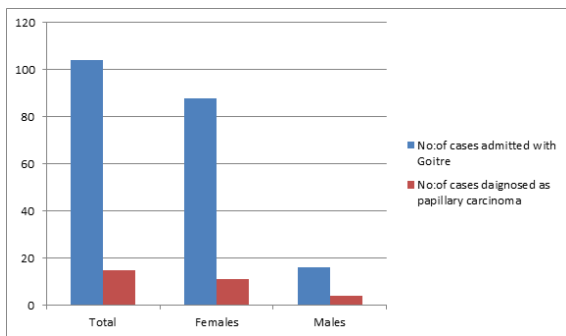
In Cases with Cervical Lymph node metastasis, Total Thyroidectomy with central compartment neck node dissection plus Ipsilateral cervical neck node dissection is done.

Completion Thyroidectomy with Central Compartment neck node dissection is done in 1 case.

After Postop biopsy confirmation, patients with Primary lesion >4cms & Lymph node metastasis are advised for Radioactive iodine uptake scan. Remnant Thyroid tissue is detected in 2 patients& they are treated with Radioactive iodine ablation. Suppressive dose of L-Thyroxine is Prescribed for all the patients & kept on Regular follow up.

No any Recurrence noted till date. Excellent Prognosis is seen in All Cases

A) Incidence of Papillary carcinoma in males and Females:



B) Age-wise distribution of Papillary Carcinoma in cases admitted with Goitre

| Age of the Patient | Results |
|--------------------|-----------|
| 21-40 yrs(26) | 7.6%(2) |
| 41-60 yrs(56) | 21.4%(12) |
| 61-80 yrs(22) | 9.09%(2) |

C) Lymph node metastasis in Papillary Carcinoma Thyroid in relation to Size of Primary Leison

| Size of Primary Leison | Results |
|------------------------|----------|
| <4 cms(7) | 28.5%(2) |
| 4-6 cms(5) | 60%(3) |
| 6-8 cms(3) | 66.6%(2) |

D) Prognosis after Surgery

| Characteristics | Results |
|--|----------|
| % of Patients underwent Radioactive Iodine Ablation Therapy postoperatively for Remnant Thyroid Tissue | 13.3%(2) |
| Local Recurrence/ Distant Metastasis | 0% |
| Mortality | 0% |

DISCUSSION:

From the above results, it is clear that most of the Swellings were benign thyroid swellings than malignant. Solitary Thyroid Nodule has more risk for Papillary Carcinoma than other types of Goitre.

However, literature tells us that malignant swellings are common in the younger and older extremes of age. This is not reflected here in this study because, there are lesser number of patients in the >60yrs age group.

It also shows that there are more number of females in the study than males. But the Relative risk of malignant thyroid swellings are more in the males. This is in accordance to literature that tells us that being of male sex is a risk factor for malignancy.

It also confirms that majority of the patients are Euthyroid at initial presentation, though it was taught that Cold nodule has more risk of malignancy.

It also correlates the size of the primary lesion with the Lymphnode metastasis, showing that the Risk of lymphnode metastasis increases only when the size of primary lesion is >4cms. This is in contrast with the studies showing that Increased risk is seen, if primary lesion >1cm.

In this study it shows that Specificity of FNAC was almost >98% in diagnosing Papillary Carcinoma of Thyroid, but Sensitivity of FNAC was 66.6% which was increased up to 80% when FNAC was done under Ultrasound Guidance, in accordance to literature.

It also shows the importance of Postop Radioactive iodine scanning in detection & ablation of any Remnant tissue after surgery & Distant Metastasis in high risk individuals.

CONCUSION:

Papillary carcinoma have an excellent prognosis if we resect the complete macroscopic tumor even in patients with metastasis to Lateral neck nodes& regular follow up of Patients Lymph node status does not alter the prognosis of papillary carcinoma of thyroid.

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