



A CLINICAL STUDY: INCIDENCE, AGE SEX, CLINICAL FEATURES AND MANAGEMENT OF THYROID MALIGNANCIES

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ABSTRACT **Background:** Thyroid malignancies account for 90% of endocrinal malignancies. The incidence of thyroid malignancies has increased three fold over the past 3 decades. Many patients present to the surgical outpatient department with a thyroid nodule. **Objective:** The relative incidence of various thyroid malignancies, age and sex distribution of thyroid malignancies and initial modes of presentation of individual thyroid cancers. The frequency of lymph nodal and distant metastases in different thyroid cancers and the most common organs involved by distant spread in thyroid cancers. A clinical examination is always the first step to assess a nodule. A thyroid profile is also essential. This is accompanied by certain tests which increase the rate of detection. Fine needle aspiration cytology (FNAC) is the present gold standard and primary tool for assessing risk of malignancy. Other tests include ultrasonography, thyroid scintigraphy, CT scan and MRI. **Materials And Methods :** This is a combined retrospective and prospective study of 40 cases of primary malignant tumours of thyroid diagnosed and treated in Kurnool Medical College between July 2014 and October, 2016. **Inclusion Criteria:** Those patients with postoperative histopathological confirmation of thyroid malignancy were included in the study. **Exclusion Criteria :** Those patients with benign histopathology proven after surgery were excluded from the study. **Results:** Peak incidence of thyroid cancer was noted in 30-40 years age group. Majority of patients were female. Female to male ratio was 1.35:1. Majority of the patients had Papillary Carcinoma of thyroid (80%). Next most common type of thyroid cancer was Medullary Carcinoma (10%). 95% of patients had thyroid swelling at the time of presentation. Majority had solitary thyroid nodule (40%). Right lobe (60%) was most commonly affected in the cases studied. In studied cases, Total thyroidectomy was done. Then all operated cases were kept on (L- Thyroxine) to suppress TSH (0.2 - 0.3 mg daily).

KEYWORDS : Thyroid Malignancy, FNAC , Papillary Carcinoma, Solitary nodule

INTRODUCTION

Thyroid diseases have always been an enigma, the management of thyroid disease has undergone a tremendous changes over the ages, from the crude surgeries of the ancient time to the multidisciplinary approach of the modern era, however in the present scenario surgery plays an important role in the management of malignancies. Thyroid malignancies account for 90% of endocrinal malignancies. The incidence has increased three fold over past three decades, many patients present to the surgical department with a thyroid nodule. There are many methods to predict malignancy in a thyroid nodule. A clinical examination is always the first step to assess a nodule. A thyroid profile is essential, FNAC is the gold standard. Other tests includes ultrasound, thyroid scintigraphy, CT scan, MRI.

MATERIALS AND METHODS

This is a combined retrospective and prospective study of 40 cases of primary malignant tumours of thyroid diagnosed and treated in Kurnool Medical College between July 2014 and October, 2016

Inclusion Criteria

Those patients with fnac diagnosed, postoperative histopathological confirmation of thyroid malignancy were included in the study.

Exclusion Criteria

Those patients with benign histopathology proven after surgery were excluded from the study.

Study factors:

All patients were admitted and detailed history and clinical examination was done and investigated. Informed consent was taken and thyroid profile, FNAC was done in all cases. All cases that gave consent for surgery were explained about the risk and complications of surgery and anesthesia, a pre op indirect laryngoscopy was done in all cases to check the status of the vocal cords. The type of surgery depended on the clinical diagnosis and FNAC report, co relation of the clinical diagnosis, pre operative TSH levels, cytology and the final histopathological diagnosis was done. Follow up was done at regular intervals by clinical examination. The observed results were subjected to statistical analysis and the following observations were made.

Ethical issue

Ethical clearance was obtained from Institutional Ethical Committee of the Institute.

Observations: This is a combined retrospective and prospective study of 40 cases of thyroid malignancy diagnosed and treated in Government General Hospital Kurnool from July 2014 to October 2016.

Age Incidence:

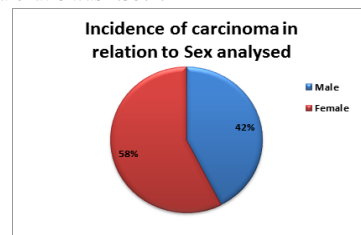
- The age of 40 patients ranged from 16-70 years with mean age of 43 years.

SEX:

Majority of patients were female.

Sex	No. of Patients	% of cases
Male	17	42.5%
Female	23	57.5%

Female to male ratio was 1.35:1.



RELATIVE PREVALENCE OF DIFFERENT THYROID CANCERS

Thyroid Cancer type	No. of Cases	% of Cases
Papillary Carcinoma	32	80%
Follicular Carcinoma	2	5%
Hurthle Cell Carcinoma	-	-
Medullary Carcinoma	4	10%
Anaplastic Carcinoma	2	5%

Majority of the patients had Papillary Carcinoma of thyroid (80%). Next most common type of thyroid cancer was Medullary Carcinoma (10%) Sporadic type. Familial MTC did not come across. Follicular Carcinoma was found in 5% of cases. Anaplastic Carcinoma constituted 5% of cases.

Majority of cases had presented usually 1 - 2 years after noticing a neck swelling.

INITIAL MODE OF PRESENTATION:

The initial mode of presentation of cases are categorized as follows:

Clinical Presentation	No. of patients	% of cases
Solitary Thyroid nodule	16	40%
Multi nodular goitre	11	27.5%
Neck swelling and Cervical lymph node metastases.	6	15%
Neck swelling and Distant metastases.	1	2.5%
Local recurrence of swelling after pervious operation.	2	5%
Fixity to trachea	4	10%
RLN paralysis	2	5%
Hypo / High thyroid	-	-
Occult thyroid cancer	2	5%

Cervical lymph node enlargement was found in significant number of patients (15%). Majority of involvement was in the levels III, IV and VI in the neck.

Distant metastases at presentation was found in 1 of the 40 cases studied. The patient with Anaplastic Carcinoma of thyroid presented with ascites and metastases in liver and lungs.

SITE OF GROWTH:

Site of Growth	No. of Cases	% of Cases
Right lobe	24	60%
Left lobe	12	30%
Isthmus	-	-
Both lobes	4	10%

Right lobe (60%) was most commonly affected in the cases studied.

Pressure Effects:

	No. of Cases	% of Cases
I. Pressure Effects	17	42.5
a) Dysphagia	3	7.5
b) Dyspnoea	4	10
c) Deviation of trachea	8	20
d) Hoarseness of voice	2	5
2. No Pressure Effects	23	57.5

In Carcinoma of thyroid pressure effects are caused by size of the growth and by invasion of surroundings structures like trachea, esophagus and recurrent laryngeal nerve. In present group cases of the size of the growth has been variable and has no significant relation to any aspect of disease except the pressure effects. In 2 cases the hoarseness of voice was the symptom and deviation of trachea was present in 8 of studied cases. In 6 cases Dysphasia was the symptom. In 2 cases Dyspnoea was the presenting symptom.

Fine needle aspiration cytology was done in all the patients

DISCUSSION

This is a combined retrospective and prospective study of 40 cases of thyroid malignancies diagnosed and treated in Kurnool Medical College, Kurnool between July 2014 and October 2016

Age Incidence

In the present series, majority of the cases were noted in the 40-60 years age group. No cases were reported in the 0-10 years age group and beyond 70 years of age. The incidence of thyroid cancer was found to increase with every decade till the 50-60 years age group.

Age Group	Present Series	MISRA et al ⁵⁰
0-10 years	0%	1.4%
11-20 years	25%	5.9%
21-30 years	24.5%	21.5%
31-40 years	27.5%	25.6%
41-50 years	25%	20.8%
>50 years	24.5%	17%

These results are almost similar to the findings of the study conducted by Misra et al⁵⁰ during a 30 years period from 1967 to 1996 as the maximum incidence of cases was noted in the 30-60 years age group with the incidence decreasing thereafter.

Sex Distribution:

Sex	Present Series	MISRA et al ⁵⁰	Hoffmann et al ³⁴
Male	42.5%	37%	53.3%
Female	57.5%	63%	46.7%

57.5% of the patients in the present study constituted female patients which is almost similar to 63% female composition in Misra et al study⁵⁰.

RELATIVE INCIDENCE OF DIFFERENT THYROID CANCERS:

Thyroid Cancer Type	% Series	Misra et al ⁵⁰	Hoffmann et al ³⁴
Papillary Carcinoma	80%	62%	82.2%
Follicular Carcinoma	5%	17%	4.4%
Hurthle cell Carcinoma	-	-	-
Medullary Carcinoma	10%	8%	6.7%
Anaplastic Carcinoma	5%	10%	6.7%
Others	-	-	-

Majority of the patients had papillary carcinoma of thyroid in the present series, 80% Papillary carcinoma also constituted the majority of cases during the Misra et al study (62%) and in the study of Hoffmann et al (82.2%).

Incidence of follicular carcinoma was (5%) which is almost similar to the finding in Hoffman study in which follicular carcinoma constituted 4.4% of cases. The percentage of follicular cancer among thyroid cancer was 17% in the series of misra et al³⁴.

Medullary carcinoma constituted 10% of total cases in the present study which is almost similar to the findings in the Misra et al study 50.

Anaplastic carcinoma of thyroid constituted 5% of cases which is less than that found in the Misra et al study [10%].

Cases of mixed thyroid tumours or lymphoma of thyroid or multiple endocrine neoplasia were not noted during the present study.

INITIAL MODE OF PRESENTATION

Clinical Presentation	Present Series	Misra et al ⁵⁰
Solitary thyroid nodule	40%	68.2%
Multi modular goiter	27.5%	11.4%
Occult thyroid cancer	5%	12.1%
Hyperthyroid/Hypothyroid	0%	5.3%
Neck swelling with Cervical lymph node mass	15%	9.8%
Distant metastases	2.5%	9.1%
Fixity to trachea	10%	4%
RLN paralysis	5%	5%

Majority of the thyroid enlargement in our study as in the form of solitary nodule of thyroid 40% which is less than that found in the series of Misra et al (68.2%) 27.5% of thyroid cancers presented as multinodular goiter as against 11.4% in the Misra et al series⁵⁰.

No cases of hyperthyroidism or hypothyroidism were noted in our thyroid cancer cases. The incidence of cervical lymph node involvement in the present series 15% was higher than that found in the series of Misra et al (9.8%).

The percentage of patients with distant metastases was less 2.5% in the present series and 9.1% in Misra et al series.

CONCLUSIONS

- Thyroid Cancer is a common Endocrine Neoplasm accounting for a significant number of cases diagnosed each year.
- Thyroid Cancer can occur over a wide range of age but is more common in the 40-60 years age group.
- Women are more commonly affected by thyroid cancer than men.
- Papillary thyroid carcinoma is the commonest type of thyroid cancer followed by Medullary carcinoma in present study.
- The initial mode of presentation of thyroid cancer was usually with an enlarging thyroid.
- Spread of Malignancy is usually by lymphatics in Papillary Thyroid cancer.
- Thyroid cancers with more undifferentiated histology presented with advanced stage disease and those with well differentiated histology usually presented as limited stage disease.

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