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Research Article

**ANALYSIS OF INCIDENCE OF MULTINODULAR GOITER
AND FOLLICULAR CARCINOMA OF THYROID**Dr Hifza Masood¹, Dr Bakhtawar Faisal¹, Dr Hina Ehsan¹¹Nishtar Hospital, Multan

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Abstract:

Objectives: The main objective of the study is to analyze the incidence of multinodular goiter and follicular carcinoma of. **Material and methods:** This cross-sectional study was conducted in Nishtar Hospital, Multan during July 2019 to December 2019. This study was done with the permission of ethical committee of hospital. The data was collected from 50 patients of both genders. Demographic information of patients, clinical features and tissue biopsy results were extracted. All the selected patients underwent ultrasonography and fine needle aspiration cytology in cases with a suspicion's nodule rapidly growing hard, irregular nodule which was detected on clinical examination and on ultrasound. **Results:** The data were collected from 50 patients of both genders. The female predominated the male in the ratio of 7.5:2.5. The most common presenting symptom was swelling in front of neck, which moved with swallowing. In 85(85%) patients the swelling which was of thyroid origin was benign, while in 15 (15%) patient it was malignant. Out of all malignant tumors the papillary carcinoma was on the top with a percentage of 10%. **Conclusion:** It is concluded that the risk of malignancy in multinodular goitre is not as low as it was thought before and that it is quite significant and is mostly of the papillary type.

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INTRODUCTION:

Clinical thyroid cancer is uncommon, with an estimated incidence in various parts of the world of 0.5 to 10 cases per 100,000 persons. It accounts roughly for about 0.5% of all cancers in men and 1.5% of all cancers in women. It is however the most common endocrine tumor and may present either as a solitary nodule in the setting of an entirely normal thyroid gland or, as a dominant nodule in the setting of a multinodular goiter [1]. Thyroid carcinoma is the commonest endocrine malignancy and accounts for approximately 1% of all malignancies. Approximately 34000 new cases are diagnosed each year in USA [2]. Majority of diagnosed patents are women making thyroid carcinoma as the seventh most common female malignancy [3]. Outcome in thyroid carcinoma is very variable ranging from clinically insignificant disease to a very aggressive disease. Overall, the prognosis of thyroid carcinoma is good with an excellent disease-free survival. Hundahl SA et al reported ten-year relative survival rate based on total cohort of 53,856 patients in USA of 93% for papillary and 85% for follicular carcinomas [4]. The incidence of thyroid carcinoma is increasing but some of it is due to early detection secondary to appropriate management of thyroid nodules [5].

Thyroid carcinoma arises from thyroid follicular cells (Papillary, follicular and anaplastic) or from other cells within the thyroid gland like lymphocytes (primary thyroid lymphoma) or neuroendocrine C cells (medullary thyroid carcinoma) [6]. Papillary and follicular carcinomas are considered differentiated carcinomas and are often managed similarly despite many differences between the two [7]. Papillary thyroid carcinoma accounts for the majority 80-90% while follicular 5-10% and anaplastic carcinomas are rare at 1-2%. In Pakistan among thyroid carcinomas papillary is the commonest ranging from 69-71% followed by follicular carcinomas from 11.6-13%.

Aims and objectives

The main objective of the study is to analyze the incidence of multinodular goiter and follicular carcinoma of thyroid.

MATERIAL AND METHODS:

This cross-sectional study was conducted in Nishtar Hospital, Multan during July 2019 to December 2019. This study was done with the permission of ethical committee of hospital. The data was collected from 50 patients of both genders. Demographic information of patients, clinical features and tissue biopsy results were extracted. All the selected patients underwent ultrasonography and fine needle aspiration cytology in cases with a suspicion's nodule rapidly growing hard, irregular nodule which was detected on clinical examination and on ultrasound. All the patients were offered surgery as treatment based on diagnostic work up equivocal from various investigation. After the surgery all the thyroid specimens were sent for histopathology evaluation. All pre-operative and post-operative findings were recorded in detail in a standard format and results were evaluated.

Statistical analysis

The sensitivity, specificity, positive predictive value and negative predictive value in diagnosing each category were calculated. The cases with diagnostic discrepancies were reviewed and the possible causes of diagnostic errors analyzed.

RESULTS:

The data were collected from 50 patients of both genders. The female predominated the male in the ratio of 7.5:2.5. The most common presenting symptom was swelling in front of neck, which moved with swallowing. In 85(85%) patients the swelling which was of thyroid origin was benign, while in 15 (15%) patient it was malignant. The type of malignancy on histopathology reports are shown in Table 2. Out of all malignant tumors the papillary carcinoma was on the top with a percentage of 10%.

Table 01: Gender wise distribution of selected patients

Gender	No. of patients (%)
Male	25
Female	75

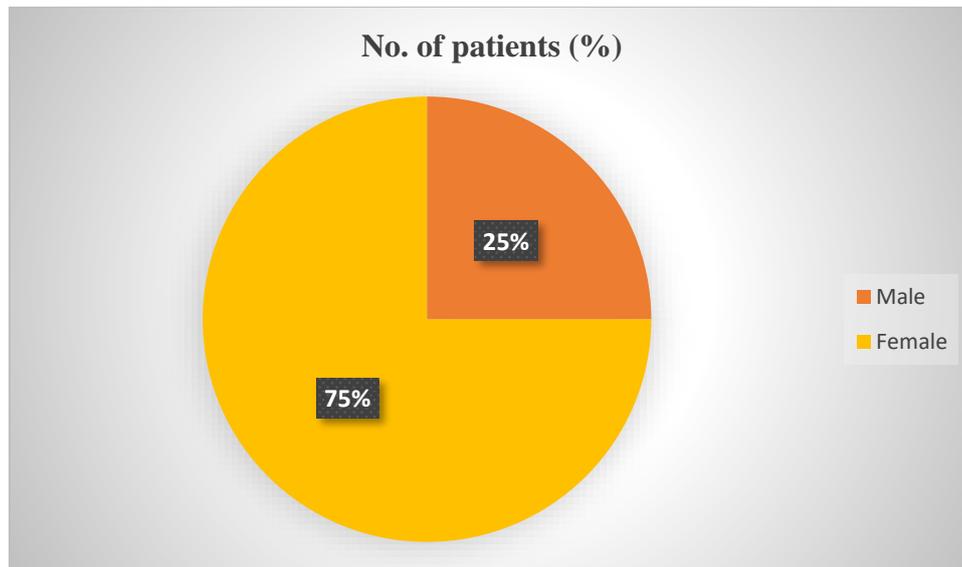


Table 02: Histopathological analysis of selected patients

Type of Malignancy	No. of patients & %ages
Papillary	10 (66.6%)
Follicular	4 (25.6%)
Medullary	1 (6.66%)

DISCUSSION:

Thyroid carcinoma usually presents as an asymptomatic painless nodule or a mass in the neck detected by the patient or health care professionals or as an incident thyroid nodule during increasingly widespread use of cross-sectional imaging of head and neck region.

Since thyroid nodules may be present in up to 76% of unselected females using ultrasound and only less than 5-10% of these nodules are malignant, the challenge is to diagnose and treat malignant thyroid nodules in a sea of benign nodules [9]. Certain features which increase the likelihood of a nodule to be malignant are local pressure symptoms, vocal cord paralysis, associated lymphadenopathy, rapid growth, male gender, family history and history of radiation exposure [10].

The investigation of a thyroid nodule or mass includes ordering a thyroid function test which is universally normal. Some authors have shown positive correlation of TSH level with thyroid malignancy within the normal TSH range. Ultrasound is a useful tool that characterizes a mass or a nodule and various ultrasound characteristics help in raising the suspicion of malignancy like hypoechogenicity, microcalcification, absent halo, irregular margins and increased vascularity [11].

CONCLUSION:

It is concluded that the risk of malignancy in multinodular goitre is not as low as it was thought

before and that it is quite significant and is mostly of the papillary type.

REFERENCES:

1. Al-Salamah SM, Khalid K, Bismar HA. Incidence of differentiated cancer in nodular goiter. *Saudi Med J* 2002;23:947-52.
2. Mulaudi TV, Ramdial PK, Madiba TE, et al. Thyroid carcinoma at King Edward VIII Hospital, Durban, South Africa. *East Africa Med J* 2001;78:252-5.
3. Gharib H. Changing concepts in the diagnosis and management of thyroid nodules. *Endocrinol Metab Clin N Am* 1997;26:777-800.
4. Mortensen JD, Woolner LB, Bennett WA. Gross and microscopic findings in clinically normal thyroid glands. *J Clin Endocrinol Metab* 1955;15:1270.
5. McCall A, Jarosz H, Lawrence AM, et al. The incidence of thyroid carcinoma in solitary cold nodule and in multinodular goiter. *Surgery* 1986;100:1128.
6. Franklyn JA, Daykin J, Young J, et al. Fine needle aspiration cytology in diffuse multinodular goiter compared to solitary thyroid nodules. *BMJ* 1993;307:240.
7. Davies L, Welch H. Increasing incidence of thyroid cancer In the United States. *JAMA*. 2006;295(18):2164-2167.
8. Ferlay J, Bray F, Pisani P. Cancer incidence, mortality and prevalence worldwide. *Globocan*. 2000;1:1-25.

9. Ramona C, Adela B, Angela B. Thyroid cancer profile in Mures County (Romania): a 20 years study. Rom j morpholembryol. 2012;53(4):1007–1012.
10. Champa S, Tariq W, Imrana Z, Abdul S. Histopathological pattern of diagnoses in patients undergoing thyroid operations. Rawal Med J. 2009; 34:14–16.
11. Hanumanthappa M, Gopinathan S, Rithin S, Guruprasad R, Gautham S, Ashit S, Bhargav S, Naren S. Incidence of malignancy in multinodular goiter: a prospective study at a tertiary academic centre. J Clin Diagn Res. 2012;6(2):267–270.