

THYROID MALIGNANCY IN MULTI NODULAR GOITER; INCIDENCE, A RETROSPECTIVE STUDY IN SOUTHERN PUNJAB.

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ABSTRACT.....Objectives: To assess the incidence of malignancy in patients with Multinodular goiter in southern Punjab. **Study design:** A retrospective study. **Place & Duration of study:** Department of General Surgery, Sheikh Zayed Medical College & Hospital Rahim Yar Khan, from April 2010 to May 2012. **Patients and Methods:** All patients were presented in OPD with history of Multinodular goiter on clinical examination or USG neck. FNAC of any dominant nodule or suspicious nodule on USG neck was performed. All patients were operated & total thyroidectomies were done in all patients irrespective of the age. We sent all specimens for histopathological examination and reports were collected from department. The whole information collected was entered in a pre designed proforma. **Results:** During 2 years period, total 141 patients of thyroid disease were seen in OPD out of which 98 patients have Multinodular goiter. Histopathology of these patients showed 10 malignancies & 88 benign. Most of the patients that turned out to be malignant belong to 41-50 years age group. 7 patients were female and 3 were male. Among the malignancies 50% were papillary, 30% were follicular, and 10% were anaplastic carcinoma & lymphomas each. **Conclusions:** Multinodular goiter (MNG) is the commonest indication of thyroidectomy in iodine deficient areas of Pakistan. This study concludes that don't consider MNG as a benign disease anymore until proved otherwise.

Key words: Thyroid carcinoma, Multinodular goiter, papillary carcinoma.

Article Citation

Nadeem K, Akhtar N, Tarar JM. Thyroid malignancy in multi nodular goiter; incidence, a retrospective study in southern punjab. Professional Med J 2013;20(4): 587-590.

INTRODUCTION

Thyroid carcinoma represents total 1 % of human neoplasm with increasing incidence for the last 4 decades. However, that increase appears to be due to an increase in the diagnosis of papillary micro-carcinomas associated with increased sampling of resected specimens by pathologists¹. Epidemiologically ascertained risk factors are ionising radiation, the presence of thyroid adenoma and multinodular goiter (MNG). Multinodularity of goiter should no longer be considered an indicator of probable benign disease². Traditionally it was thought that multi nodular goiter (MNG) is a benign disease but recently it has been discovered that thyroid malignancy can occur even in MNG.

Review of literature showed no statistical difference in incidence of malignancy in both MNG and solitary nodular goiter^{3,4} and incidence of carcinoma in patients with MNG varies from 7-17%^{5,6}. The risk of thyroid malignancy in the nodules of MNG is comparable to that which exists in solitary thyroid nodules, the possibility of thyroid malignancy should be considered

in all patients with MNG⁷. FNAB used in solitary nodular goiter as diagnostic tool is not feasible in MNG.

MATERIALS & METHODS

This retrospective study has been conducted from April 2010 to May 2012 at Sheikh Zayed Medical College/ Hospital Rahim Yar Khan. We recruited all OPD patients presented with Multinodular goiter on clinical examination or on ultrasound of neck. Preoperatively FNAB of any dominant nodule or nodule which was suspicious on USG neck was performed. Serum level of TSH, FT3, and FT4 was detected to know the toxic status of patient. Scintigraphy was not done because of its low specificity in detection of carcinoma. All the patients included in study were operated and total thyroidectomies were done & specimens sent for histopathological examinations. With collaboration of histopathological department all reports were collected and all the information was documented on pre-designed proforma.

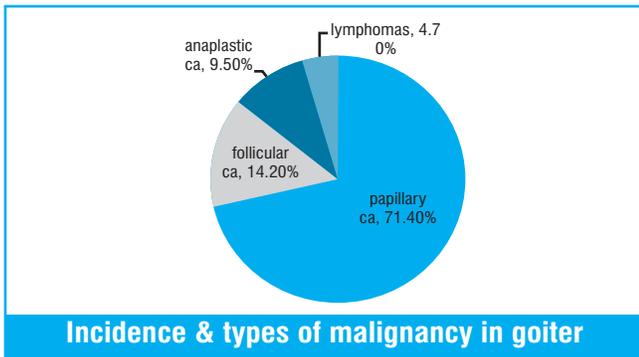
RESULTS

In this retrospective study of two years total 141

patients were operated for thyroid lesions, out of which 98 patients were with multi nodular goiter. Total thyroidectomy was done in 76 patients, but in 22 patients subtotal thyroidectomy was done. Total 21 patients (15 female & 6 male) with carcinoma were detected (papillary 15, follicular 3, anaplastic 2, lymphoma 1). In 98 patients with Multinodular goiter 10 patients (7 females & 3 male) were proved carcinoma on histopathological examination, out of which 5 patients have papillary, 3 have follicular, 1 have anaplastic & 1 have lymphoma on report. Maximum patients with carcinoma belong to 41-50 years age group with Mean age of 45.2 years. Among these 10 patients who were diagnosed as carcinoma 6 patients were male and 4 were female.

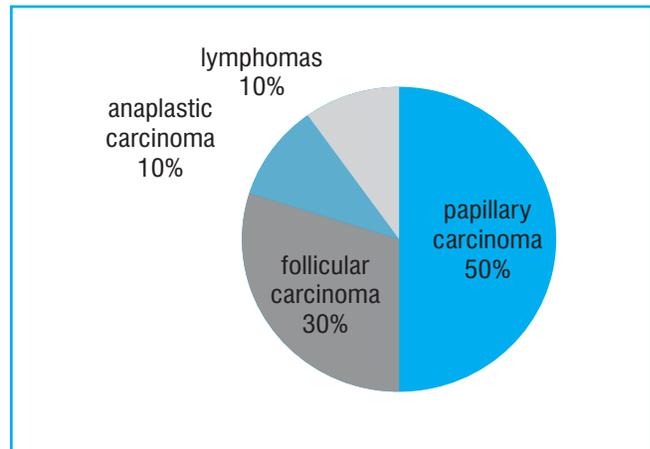
Type of thyroid carcinoma	No. of cases	Percentage
Papillary carcinoma	15	71.4%
Follicular carcinoma	3	14.2%
Anaplastic carcinoma	2	09.5%
Lymphoma	1	04.7%
Total carcinoma/Total cases	21/141	14.9%

Table-I. Total number of carcinoma cases in operated thyroidectomies.



Type of thyroid carcinoma	No. of cases	Percentage
Papillary carcinoma	5	50%
Follicular carcinoma	3	30%
Anaplastic carcinoma	1	10%
Lymphoma	1	10%
Ca in MNG/Total MNG	10/98	10%

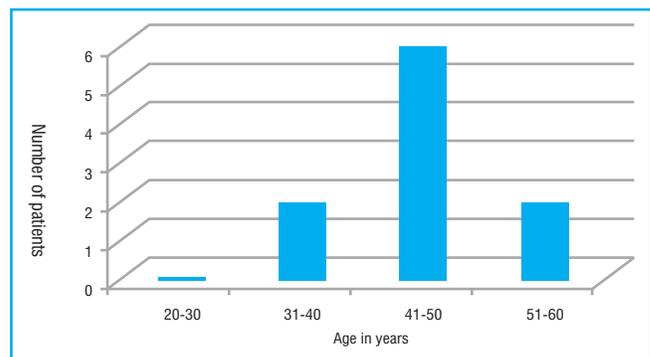
Table-II. Carcinoma cases in patients operated for Multinodular goiters.



Incidence & type of thyroid malignancy in MNG

Age(years)	Type of carcinoma
45	Papillary carcinoma
54	Anaplastic carcinoma
41	Papillary carcinoma
38	Papillary carcinoma
42	Follicular carcinoma
48	Follicular carcinoma
34	Lymphoma
47	Papillary carcinoma
58	Follicular carcinoma
45	Papillary carcinoma

Table-III. Age of patients with MNG, in which carcinoma detected.



DISCUSSION

In Pakistan thyroid cancer is responsible for 1.2% cases of all malignant tumors. Thyroid carcinoma (TC) is a relatively rare tumor, but it represents the most

frequent form of cancer of the endocrine glands². A personal history of radiation to the neck, detection of calcifications by ultrasound or by neck X-rays, and a family history of thyroid diseases should be considered clinical risk factors for malignancy in multinodular goiter⁸. The female to male ratio in this part of the world is noted to be between 2.5 to 4:1, which is comparable to international data^{9,10}. The overall incidence of malignancy in this study was 14.9% comparable to 14.3% another study done in Karachi Pakistan, whereas in USA it was 5.8%, in Libya 9.7% and in South Africa 5.4%. The studies from Riyadh reported a strikingly high incidence of thyroid malignancy ranging from 21% to 29%¹¹. In the present study, papillary carcinoma was more frequent 71.4% than the follicular variant which is in accordance with the published figures^{12,13}. Previous reports from this region show papillary thyroid cancer to constitute 57 to 89% of all thyroid malignancies^{14,15}. Another 2 studies done in India & Pakistan revealed that reported incidence of papillary thyroid cancer in MNG is about 60 % while in our study it is 50% which is almost same followed by follicular and then other types of malignancies^{16,17}.

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Article received on: 12/02/2013
Accepted for Publication: 08/04/2013
Received after proof reading: 21/05/2013



*The worst part of success is trying to
find someone who is happy for you.*

Bette Midler