FREQUENCY OF DIFFERENTIATED THYROID CANCER IN ENT DEPARTMENT OF TERTIARY CARE HOSPITAL: REVIEW OF 114 CASES OF THYROID SURGERIES

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ABSTRACT

Background; Differentiated thyroid cancers comprises of papillary and follicular origins both of these cancers raise from follicular cells of thyroid gland. However there is some difference in their presentation, behavior and consequently treatment options.

Abstract: Although thyroid cancer are rare as compared to other malignancies in body. Its incidence is on the raise since last two to three decades. If properly treated by experienced thyroid physician the incidence of recurrence is rare.

Objectives: Aim of our study was to determine the frequency of differentiated thyroid cancer patient presented with goiter.

Materials and Methods: This was a retrospective study carried out on patients of Thyroid surgeries from 1st January 2014 to 30th July 2018 in ENT A unit Hayatabad Medical complex Peshawar. Total no of 114 patients were included in this study.

Results: Patient aged from 10 years to 60 years were recorded, with highest incidence in age group of 31 to 40 years. In included cases 101 (89%) were female and 13 (11%) were male. Histologically Multinodular goiters were highest in number 82 (74%). Papillary carcinoma was second highest 14 (12%). Follicular adenoma 8 (7%)and follicular carcinoma 3 (2.6%). Differentiated thyroid cancer in total constituted 17 cases (14.9).

Conclusion: As in United States incidence of thyroid cancer is on rise, similarly in our part of this country, the incidence is on rise.

Key Words: Multinodular goiter, Solitary thyroid nodule, Differentiated thyroid cancer.

INTRODUCTION

All over the world the incidence of thyroid cancers reported 1% of all malignancies[1]. In a study published by Pellegriti G et al, 3 out of 100,000 people suffered thyroid malignancies in USA and Europe annually.[2] The world Health Organization classifies differentiated thyroid cancers into papillary & follicular cancers not only on their histological differentiation but also according to their biological behavior. Out of differentiated thyroid cancers papillary is the commonest type. Thyroid cancers comprises of 80% of all thyroid malignancies.[3] It more commonly occurs in younger age group with peak incidence in 2nd & 3rd decades.[4] However recent studies have shown higher number of papillary thyroid cancer reported in 4th & 5th decades of life in areas where iodine deficiencies in not present. The incidence of cervical lymph node metastasis are more than distance metastasis. Follicular thyroid cancer is second most common cancer of thyroid malignancies (10 to 20 %), in people who are living in iodine deficient areas with mean age of 5 to 6 decades. Unlike papillary thyroid cancer follicular thyroid cancer is more prone to give distance metastasis, while chances of cervical node metastasis are less common.[4]

Advancement in Diagnostic miodalities like ultarasound elastogrtaphy, computed tomography magnetic resonance imaging (MRI), and positron emission tomography (PET) increased sensitivity and specificity of diagnosis of smaller thyroid lesion.[6]

Treatment of differentiated thyroid cancers may be either by surgery alone for small tumor or by surgery and adjuvant therapy with radio iodine ablation for high risk patients with extensive disease or distance metastasis. External beam radiation is not routinely used for differentiated thyroid cancers in patients where the tumor is extended beyond the thyroid and invaded surrounded structures. Other newer treatment modalities recommended by different thyroid associations includes Tyrosine-Kinse inhibitors, while chemo therapy has little role in differentiated thyroid cancers.[7]

MATERIALS AND METHODS

This was a retrospective study carried out on patients of Thyroid surgeries from 1st January 2014 to 30th July 2018 in ENT A unit Hayatabad Medical complex Peshawar. Total no of 114 patients were included in this study. In our study record of 349 patients operated for

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different thyroid pathologies were collected from ward and operating room registers and only 114 cases were included in whom biopsy reports were available. All those patients where record were available but biopsies were missing were excluded from our study

RESULTS

In our study a total number of 114 cases operated in our unit with proper record and biopsy reports available were included. Patient aged from 10 years to 60 years were recorded. 46 (40.3%) patients were in age group of 31 to 40 years while second highest number was 24(21%) in 2nd decade while 21(18.4%) patients were in 4th decade (Table1). In included cases 101 (89%) were female and 13 (11%) were male (Table 2%). Histologically Multinodular goiters were highest in number 82 (74%). Papillary carcinoma was second highest 14 (12%). Follicular adenoma 8 (7%) and follicular carcinoma 3 (2.6%)(Table 3). Differentiated thyroid cancer in total constituted 17 cases (14.9) (Table4).

DISCUSSION

Incidence of differentiated thyroid cancers both papillary and follicular are on the rise because of the advances in diagnostic techniques, easy availability of treatment centers and increased survival. The outcome of treatment of differentiated thyroid cancers is quite high as compare to other carcinomas in general. Being endocrine tumor the treatment required is multi disciplinary including endocrine physician, head & neck surgeon, nuclear physician and radiation oncologist.[8] All theses treatment options, i.e. Surgery, external beam radiation, surgery should be the first treatment option in management of differentiated thyroid cancers and most of these patients should be subjected to thyriodectomy until and unless there is no contra-indication.[9] Nodal dissection of the central compartment combined with thyroidectomy has shown an increased survival and lower the risk of recurrent cervical metastasis.[10,11] In recurrent thyroid carcinomas with and without cervical lymph node metastasis, surgery is still the preferred option. The role of radioactive iodine therapy is indicated in patient who have incomplete resection, extensive loco-regional recurrence or patients with distant metastasis. Thyroid suppression (TSH) is one of the important adjuvant therapy in patients with thyroid cancers.[12]

In our study majority of patients 46 (40%) were in 3rd decade of life. The median age of our patients were 36.66 years contrary to other studies 49 years by Smith et al. [13]

Askitis also mentioned in 228 patients in their study cohort were aged between 11 and 80 years, with a median age of 49.60.[14]

In our study female were more in number 101(89%) compared to men 13 (11%). In a study by Seetu Palo striking female predominance was noted. [15] Pang et al also noted high percentage of female case in their study.[16]

Epidemiological study by Guth S et al, the incidence of thyroid nodule was more for women (5%) then men (1%) living iodine sufficient regions on the other hand the incidence of thyroid nodule by ultrasound in some studies been reported to be 19 to 68%, again with higher incidence in elderly females. [17]

Histopathalogies of all surgeries collected showed that majority of cases were multinodular goiter 87 (%), papillary ca 14 (12.8%) were second highest, follicular adenoma 8 (7%), and follicular ca in 3 (2.6%) patients. In total differentiated thyroid cancer cases were 17 (14.91%). Veyseller et al in his series of patients mentioned that majority of histological specimens (87.6%) were multinodular goiter.[18] About 100 000 thyroid operations are performed in Germany each year most common indication is bilateral multinodular goiter.[19]

238 (15.6%) cancers were recorded in study by Smith et al. These data confirm higher than expected incidental thyroid cancer rates (15.6%) in the largest multi-institutional surgical series to date.[13]

Nodular thyroids, males, and young patients were more likely to harbor incidental carcinoma. These data support consideration of initial total thyroidectomy as the preferred approach for patients referred to the surgeon with bilateral nodular disease.[20]

Multinodular goiter is the commonest indication for thyroidectomy in endemic iodine deficient regions. Pre-operative evaluation for thyroid cancer by means of fine needle aspiration biopsy is difficult in multinodular goiter owing to the presence of multiple nodules and thyroid cancer is frequently an unexpected post operative finding.[21]

CONCLUSION

Table 1: Age of Patient

Age of patient	Total
10-20	7 (6.1%)
21-30	24 (21%)
31-40	46 (40.3%)
41-50	21 (18.4%)
51-60	12 (10.5%)
61-70	4 (3.5%)
Total	114

Table 2: Gender

Gender	Total
Male	13 (11%)
Female	101 (89%)
Total	114

Table 3: Histology

Gender	MNG	Papillary Ca	Follicular Adenoma	Follicular Ca	Medullary Ca	Anaplastic Ca	Thyroiditis	Total
Male	7	3	0	1	1	1	0	13
Female	75	11	8	2	1	2	2	101
Total	82 (74%)	14 (12.2%)	8 (7%)	3 (2.6%)	2 (1.75%)	3 (2.6%)	2 (1.75%)	114

Table 4: Differentiated Thyroid ca

Gender	Papillary Ca	Follicular Ca	Total
Male	3	1	04
Female	11	2	13
Total	14 (12.28%)	3 (2.6%)	17 (14.9%)

We conclude that the prevalence of malignancy was significantly higher in MNG, with PTC being the most common histological subtype. But, the prevalence of malignancy in MNG was also quite high and cannot be underestimated. It would be practically wise to keep this in mind while evaluating patients with MNG and ample effort should be made to pre-operatively identify any malignant focus, so that appropriate therapeutic protocol can be planned.

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