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Oncology

EVALUATION OF ONCOLOGIC AND FUNCTIONAL OUTCOME IN 25 CONSECUTIVE CASES OF THYROID CANCER

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ABSTRACT **BACKGROUND:** The incidence of thyroid cancer has increased in recent years,facilitated by technological development. Management of thyroid carcinoma needs standardisation and regular institutional evaluation.

MATERIAL AND METHODS: It is a prospective study of 25 consecutive cases of thyroid cancer, managed in surgical oncology department from August 2017 to March 2019.

RESULTS: Majority of patient were having normal parathyroid function and minimal uptake on radioactive iodine study. Conclusion: Well Differentiated Thyroid cancers when managed by total thyroidectomy and Radio Active Iodine ablation rarely leads to clinically significant loco regional recurrence. Bilateral RLN damage or permanent hypoparathyroidism are uncommon complications when surgery is done by an expert (or under his guidance).

KEYWORDS : Thyroid, Carcinoma, Functional Outcome

1. INTRODUCTION

Thyroid cancer is a relatively uncommon neoplasm. The nationwide frequency of thyroid cancer among all the cancer cases is 0.1%-0.2% [1][3]. The age-adjusted incidence rates of thyroid cancer per 100,000 are about 1 for males and 1.8 for females. The incidence of thyroid cancer has increased in recent years,facilitated by two important developments :

1. widespread use of imaging techniques and
2. Popularity of FNAC.

Solitary Thyroid Nodule (STN) is the most common presentation of thyroid cancer but less than 5% of thyroid nodules are malignant. 4 to 8% of general population have palpable thyroid nodules, depending upon the age group examined. Hence, when deciding how aggressively to work up newly discovered thyroid nodules, the clinician must consider the risk factors for malignancy. These risk factors could be historical ones like Radiation exposure, low iodine intake, positive family history or recent history of rapid growth. High risk features of malignancy on physical examination includes, hard nodule ,fixity to surrounding structures, vocal cord fixation and associated neck nodes.

2. MATERIAL AND METHODS

It is a prospective study of 25 consecutive cases of thyroid cancer managed. It is a prospective study of 25 consecutive cases of thyroid cancer, managed in surgical oncology department from August 2017 to March 2019 of Mahatma Gandhi Medical College, Jaipur. The patients were investigated thoroughly in the form of CBC, LFT, RFT, Thyroid Function test,Thyroglobulin, Calcitonin (when required), FNAC, USG and CT Scan Neck (if required) and preoperative Hopkins examination for vocal cord mobility. Various details of surgical procedure were noted in the form of incision used, intra-operative pathology, type of thyroidectomy and nodal dissection etc. In post-operative period attention was given to vocal cord mobility (assessed during extubation), any voice change, bleeding, tetany etc. In the follow-up visits patients were advised about RAI scan and ablation if required.

3. RESULTS

Maximum patients were in 21-44 years age group and median age at diagnosis was 42 years. Male female ratio was 9: 16 (1:1.78). Swelling neck was the most common complaint (16/25), 6 were referred for further management as hemithyroidectomy(done outside) revealed malignancy, 2 had fracture (systemic disease) and 1 had change of voice.

Chart 1. Type of surgery

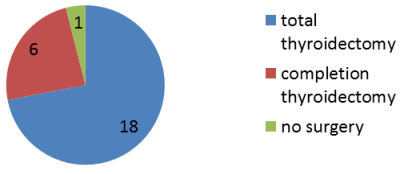


Chart 2 POST OP UPTAKE OF RAI

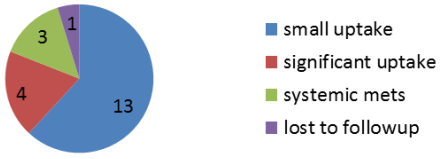
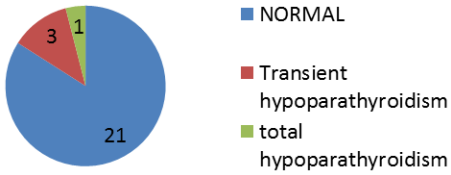


Chart 3 HYPOPARATHYROIDISM



4. DISCUSSION

Thyroid cancer represents most common malignancy of the endocrine system and second most common malignancy of Head and Neck (after upper aero digestive tract) [1][6]. Majority of thyroid cancer are derived from thyroid follicular cells. Surprisingly thyroid malignancies vary in aggression from the most indolent form of cancer, like well differentiated papillary carcinoma to , most aggressive form of cancer , like Anaplastic thyroid carcinoma. Former has 10 year survival of 90% to 95%, whereas the later has 1 year survival of < 5% [2][4]. In the present study Male: Female ratio was 0.56 which is quite close to what is given in the literature i.e. 0.5 [3].

The present study has maximum number of patients in 21-44 years age group; this too is in concordance with what is given in literature. Most common complaint in the present study was Solitary Thyroid Nodule; this too is similar to the literature[1].

Review of literature reveals that PTC accounts for 70-85% of all new cases; the present study has 72% patients of PTC. FTC accounts for 15%, the present study has 12%. Anaplastic accounts for 5%, the present study has 4% [5]. But contrary to literature which states incidence of MTC to be around 5%, the present study has 12% of MTC.

Most patients presented in stage I, because according to A JCC staging any patient with PTC/FTC in age group <45, without distant mets is classified in stage I. Total Thyroidectomy was done in all except one patient, which was the case of Anaplastic Carcinoma. 16/25 patients underwent upfront total thyroidectomy, as these patients had preoperative diagnosis of thyroid malignancy. 8/25 patients under went hemithyroidectomy, HPE of which revealed malignancy, hence these patients underwent second surgery i.e. completion thyroidectomy. Six of these patients were referred from outside GCRI; two were from our own unit. This shows that all patients, except anaplastic thyroid carcinoma should undergo total thyroidectomy. This is because metastatic disease can be treated by Radio Active Iodine only after total thyroidectomy has been done, otherwise, thyroid will take up all radioactive iodine.

Out of 25 cases of thyroid cancer, 4 patients were having either MTC or Anaplastic carcinoma. These patients did not require postoperative Iodine scan. So out of rest 21 cases, 13 patients had small uptake of RAI and 4 had significant uptake of RAI. These 4 patients underwent ultrasonography neck, but only one had sonographycally detectable lesion. This patient was advised second surgery, but she refused. Rest 3 were managed by RAI. 3 patients had systemic metastasis; all these three patients were managed by RAI. One patient was lost to the follow up.

There are four parathyroid glands, even if one parathyroid is saved with its blood supply patient, in post-op period will not develop features of hypocalcaemia. In the present study of 24 total thyroidectomies, 2 patients developed transient hypocalcemia (because of handling there is transient ischemia of parathyroid glands), this resolved with time. One patient out of 24 (4%) developed permanent hypoparathyroidism. No patient developed bilateral Recurrent Laryngeal Nerve injury.

5. CONCLUSION

Well Differentiated Thyroid cancers when managed by total thyroidectomy and Radio Active Iodine ablation rarely leads to clinically significant loco regional recurrence. Bilateral RLN damage or permanent hypoparathyroidism are uncommon complications when surgery is done by an expert (or under his guidance). Anaplastic thyroid carcinoma carries grave prognosis.

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