

Thyroidectomy in Carcinoma Thyroid – A Three Years Experience

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Twenty-five patients were operated for thyroid malignancy in dept. of Surgery, SRGH, Lahore over a period of 3 years. From Nov 2001 to Nov 2004. Carcinoma was diagnosed on FNAC in 10 pts (40%) and Total Thyroidectomy planned as first and definite procedure. In rest of 15 patents (60%) complete thyroidectomy was performed after initial total lobectomy and subsequent Histopathology. Eight pts were found to have follicular carcinoma and 16 had papillary carcinoma revealed on H/P of resected specimen. Thyroid function tests in almost all showed euthyroid status. The only exception was a female pt who's hormonal assay showed hypothyroidism but she was operated for FNAC suggested follicular adenoma. All the pts had Iodine131 whole body scan for residual thyroid and metastatic disease. No thyroxin was started before Iodine131 scan. Twenty pts were given single dose of 50-75 mCi of radioiodine, followed by thyroxin in suppressive dose. No recurrence of tumor noted during follow-up 2 years. Only one pt diagnosed finally as thyroiditis on histology of resected specimen. On FNAC, she had suspicion of follicular neoplasm mandating thyroidectomy. A female preponderance with age ranging from 15-45 yrs was observed.

Key words: thyroidectomy, thyroid carcinoma

Thyroid malignancies make up 10% of pts of thyroid disease presenting in outpatients department. Clinical presentation of these patients comprises simple nodule i.e., solitary nodule in thyroid, thyroid with pressure effects like dyspnea, dysphagia or just pain in neck. Thyroid carcinomas consist of different histologic type like Papillary, Follicular, Medullary, Hurthle cell CA ; then there are anaplastic variety and lymphomas and metastatic tumors in thyroid. FNAC of clinically suspicious nodule is the mainstay of diagnostic work up. Papillary CA can be diagnosed with certainty on FNAC. However diagnosis of follicular CA is not confirmed unless histologic features of resected specimen are suggestive¹.

Surgical resection is the prime treatment for CA of thyroid. Thyroidectomy is usually coupled with radioablation with 131-Iodine. Prognosis in cases of CA thyroid depends on size of tumor, histologic type of tumor, spread of tumor at the time of diagnosis, as well as age and sex of the pt. Early diagnosis of thyroid malignancy with FNAC has improved outlook of pts. Early surgical resection followed by radio-ablation further improves overall prognosis especially in differentiated CA². In this study of 25 pts of thyroid CA excellent results were obtained through early diagnosis and prompt surgical resection with subsequent radio-ablative dose of radioiodine.

Patients and methods:

Complete medical records of pts undergoing thyroid surgery for CA thyroid were reviewed. Data was collected regarding demographic details and clinical features as well as FNAC impression in these patients.

In all these pts, pre-operative work up consists of routine baseline investigations like CBC, CUE, BSL, blood urea and serum creatinine levels. Specific investigations, for thyroid included thyroid function test and FNAC of the nodule. Thyroid radioisotope scans also

advised to complete the work up for functioning of thyroid gland.

Total lobectomy or bilateral lobectomy with isthmectomy (total thyroidectomy) was carried out. During procedure recurrent laryngeal nerve and parathyroid glands were identified and secured. Radical Neck Dissections were carried out on the side of the Papillary carcinoma in clinically palpable nodes in 3 patients(12%). Unilateral or bilateral suction drains were placed. Post-operatively, suction drains were removed in 2-5 days. Stitches were removed after 3-5 days postoperatively and pts were discharged without Thyroxin treatment.

Patients were followed up after 4 weeks. Those pts with total thyroidectomy had 131-Iodine scan for residual thyroid tissue in neck or mets in neck region. In all those patients where remnants of thyroid gland in the neck were found radioablation with 75mCi of 131-Iodine were undertaken. Thyroxin in suppressive dosage was started in these pts.

Results:

Twenty-five pts underwent surgery for thyroid malignancy over last 3 years with male to female ratio 1:5. The age ranged from 12-45 years. Most of the female patients (96%) presented with an unsightly lump or swelling in front of neck. Five patients (20%) presented with pressure symptoms of dysphagia and pain in the neck or some degree of dyspnea. Only three pts presented with voice changes due to involvement of recurrent laryngeal nerve. There was one pt. who presented with skull metastasis from one malignant nodule in thyroid.

In almost all 24 patients (98%) FNAC suggested neoplasia (papillary or follicular). In only one patients. FNAC also reported suspicion of thyroiditis along with follicular neoplasia. All of these pts, on thyroid function tests revealed euthyroid status. In only one patient, hypothyroidism was reported and this was the patient.

Where FNAC had reported thyroiditis along with follicular neoplasia.

Unilateral total lobectomy was performed in 15 patients (60%) and was followed by completion thyroidectomy after histopathological diagnosis of thyroid CA was made. Total thyroidectomy was performed in 10 patients (40%) as initial and definitive surgical procedure.

Post-operative course was uneventful in all the pts except in nine pts of total thyroidectomy, where seven pts developed hypocalcemia transiently and others developed small seroma beneath the flaps. Hypocalcemia was managed through Ca-gluconate infusions and the seroma was aspirated, percutaneously.

All pts undergoing total thyroidectomy underwent 131-Iodine scan for remnants of thyroid gland in the neck and metastatic lesion in the neck. Out of 25 patients undergoing total thyroidectomy 4(16%) had remnant thyroid tissue in the neck. Those were given radioactive Iodine (131-Iodine) in dose of 75-100mCi. After radioablation, these were started with thyroxin in suppressive doses. We found out no recurrence in cases of differentiated CA of thyroid over a follow up of two years.

Table 1 Presenting Complaints:

Presenting Complaints	n=	%age
Swelling in front of neck	24	96
Pressure symptoms	5	20
Voice changes	3	12
Metastasis	1	4

Table 2: Initial Operative Procedure:

Operation	n=	%age
Total thyroidectomy	10	40
Lobectomy with isthmectomy	15	60

Table 3: Complications of Surgery:

Complications	n=	%age
Transient hypocalcemia	7	28
Seroma formation	2	8
Transient voice change	4	16

Discussion

Thyroid CA is associated with very good prognosis if work-up and management is undertaken in right direction and with appropriate timings¹. Solitary nodule in young female raises cosmetic concerns and becomes the start point of investigation of thyroid malignancy²

Malignancy of thyroid gland is conventionally classified into differentiated and undifferentiated types. Then there are other sub classes like papillary and metastatic tumors. All these different histologic types of thyroid tumor are important as prognosis is directly dependant on histologic type of the tumor³.

Other determinant for prognosis is age, sex of the pt, size of the tumor, spread of tumor at the time of diagnosis and uptake of radioiodine. In our study thyroidectomies performed for CA thyroid make up 10% of thyroidectomies for all thyroid conditions⁴.

Alzahrmi AS et al has described completion thyroidectomies in cases of carcinoma thyroid in 237 cases. In our study, completion thyroidectomies were performed in 15 patients (60%). In rest of 10 patients total thyroidectomy was initial and final procedure and was planned so after FNAC reported them as Pappillary CA^{5,7,9}. Furlan JC et al has reported recurrent laryngeal nerve injury in 5% cases and it included transient voice changes, unilateral cord damage or permanent voice effects. In our study transient voice changes observed in 4 pts (16%) but no permanent voice effects were seen. No pts. Developed unilateral or bilateral cord paralysis^{6,8,10}.

N Hussain et al has shown FNAC successfully diagnosed cases of thyroid CA with specificity of 95% and sensitivity of 98%. But in our study we found only one case where FNAC impression of follicular neoplasm was finally modified into thyroiditis on histopathology after thyroidectomy.

This study suggests that carcinoma thyroid is not a rarity in our set up and total thyroidectomy is the procedure of choice in differentiated carcinomas. It may be augmented by Radical neck dissections and ablation by radioactive Iodine where required. The post op complications are related with the experience of Surgeon performing this procedure.

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