



Study of Nodal Status In Patients of Well Differentiated Thyroid Cancers With Clinically No Neck

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ABSTRACT

Unlike squamous cell carcinoma of the head and neck, where regional metastases have a definite negative prognostic impact, the effect of cervical nodal involvement on survival in DTC has not been clearly demonstrated. If long-term survival is the standard metric of all treatment options, then the goal of limiting morbidity and recurrence becomes even more important. Therefore, management of neck in DTC must take these factors into account. On selecting patients of well differentiated carcinoma with clinically N0 neck, total thyroidectomy with bilateral level 2-3-4 dissection was carried out, and it was found that about 21% of the patients had neck nodal metastasis when clinically judged N0.

KEYWORDS

well differentiated, nodal status, No neck

Introduction:

Well differentiated thyroid cancers are associated with good long term prognosis when there are no regional or distant metastases. However, lymph node positivity changes the prognosis. In some patients, initially the metastasis to the lymph nodes may be small enough to escape routine clinico-radiological investigations. Thus, we explore the role of routine lymphadenectomy in well differentiated thyroid cancers and the impact on loco regional failure patterns.

Materials and methods: 33 patients of well differentiated thyroid cancers with clinic-radiological N0 neck were selected consecutively. All of them underwent total thyroidectomy and had a bilateral levels 2-3-4 dissection. Histopathological reports were studied and TNM stages were noted. And serial follow ups of the patients were performed using Thyroglobulin levels and USG neck as and when necessary. Any signs and symptoms were noted in relation to the recurrence.

Results:

Out of 33 patients 27 were females (81.81%) and 6 were males (18.19%). No of patients who were < 45 years of age were 73% (n=24). Whereas patients above 45 were 27% (n=9). All cases were staged using latest AJCC TNM staging on clinicoradiological basis. Most common clinical TNM at presentation was T2N0 (55%) followed by T3N0 (42%). Pre-operative histological diagnosis was made by FNAC. Most common histological finding on FNAC was papillary carcinoma in 29 patients (88%) followed by Follicular lesion and Hurthle cell ca in 2(6%) patients each. In post-operative period most prominent complication was hypocalcemia in which total 12 (36%) patients suffered hypocalcemia out of which 6 (18%) had transient and rest developed permanent hypocalcemia. Nodal positive status was found in 21% (n=7) patients. All 7 had ipsilateral central compartment positive nodes. 57% (n=4) of the nodal positive patients had ipsilateral lateral compartment node positivity. None of the patients had contralateral central compartment positive node. Only single patient had contralateral compartment node positive. Total 5 patients (15.15%) patients had extracapsular spread. Lymphovascular invasion was present in 9% (n=3)

patients and perineural invasion was present in 3% (n=1) of

the patients. 9% (n=3) patients had multicentric disease and 3% (n=1) patient had bilateral disease. Rest had single swelling on one side. None of the patients with follicular and hurthle cell variants showed lymph node metastasis. Post-operative radioiodine scan was done in all the patients. 76% (n=25) patients had normal RI scan. 18% (n=6) patients showed remnant in bed, single

patient showed submental nodal metastasis and one patient showed bilateral lung metastasis.

Table 1: Pathological TNM

	Pathological TNM	IPSI (Central)	CONTRA (Central)	IPSI (Lateral)	CONTRA (Lateral)	Size
1	PT2N1a	1 of 1	n0	n0	no	3.0cm
2	PT3N1a	1of5	n0	n0	no	6.0cm
3	PT1N1b	2 of 10	n0	3 of 15	no	0.3 cm
4	PT3N1b	2 of 2	n0	11 of 11	2 of 5	8.0cm
5	PT3N1a	2of 9	n0	9 of 24	no	6.0cm
6	PT2N1a	2of6	n0	no	no	3.0cm
7	PT1N1b	5 of 5	n0	3 of 15	no	1.3cm

Table 2: Size

Size	Final Histopathology		Total
	No	Yes	
T1	2	2	4
T2	12	2	14
T3	12	3	15
	26	7	33
P-Value	2.3986	Not Significant at 5%	

Discussion: On FNAC 88% (n=29) were diagnosed to have papillary carcinoma while 6% (n=2) were diagnosed as follicular lesion and hurthle cell carcinoma. This is in accordance to national cancer data base report by Hundhal et al [3] which suggested incidence of papillary ca thyroid to be 77% of all Thyroid carcinoma. In our study FNAC had sensitivity of 100% for papillary ca thyroid.

Intraoperatively none of the patients showed evidence of extrathyroid extension or mediastinal extension. 15% (n=5) of the patients had small lymph nodes< 1cm in central compartment. None of the lymph nodes showed macroscopic evidence of involvement by metastases. Architectural features of

the lymph node itself that indicate malignancy has been well described. On final histology all of them were found to be positive for metastases. So sensitivity for intraoperative assessment of lymph node for metastases in our study was 0%. So we can safely conclude that visual or palpatory examination is not reliable for decision regarding nodal dissection. No patient in our study developed other complications like recurrent laryngeal nerve injury, external branch of SLN injury, hemorrhage, wound infection. In various studies by Steinmuller T et al, Sywak M et al suggested a 1-2% rate of injury to RLN in patients undergoing total thyroidectomy with bilateral central compartment dissection while Reoperation within the central neck has been repeatedly shown to carry a higher morbidity than initial operation^[1,2] Prophylactic central neck dissection thus carries little additional morbidity compared with thyroidectomy alone but may decrease the rate of locally persistent or recurrent disease, thereby preventing the need for reoperation within the central compartment and its associated morbidity. In our study Final histopathology Out of all patients 29 patients had papillary carcinoma while follicular carcinoma was diagnosed in 2 patients and hurthle cell in 2 patients our study showed nodal positive status in 21% (n=7) patients. All 7 had ipsilateral central compartment positive nodes. 57 % (n=4) of the central compartment nodal positive patients had ipsilateral lateral compartment node positivity. None of the patients had contralateral central compartment positive node. Only single patient had contralateral lateral compartment node positive. In Our study we found that the nodal metastases were present in all tumors of size > .5 cm except in one patient. So in view of our findings and the findings of various studies it can be safely concluded that tumors more than 0.5 mm have higher risk of cervical nodal metastasis particularly in central compartment. In our study we observed 57% of central compartment positive nodes having metastases exhibiting lateral compartment nodal metastases pointing to importance of lateral compartment nodal dissection prophylactically in node positive central compartment patients.

Conclusion: After studying 33 patients of WDTC over duration of 24 months, we would like to conclude that It is better to offer bilateral central compartment nodal dissection irrespective of different characters of primary tumour and clinical nodal status. The central compartment nodal dissection does not add any morbidity or mortality but definitely increases clearance with no residual disease left behind. Even though our study was of small number of cases and follow up period was significantly less considering the biological behaviour of WDTC, we feel that this type of study can be stretched with larger no of patients and 10-15 years of follow up which might decide evidence based recommendation of total thyroidectomy with bilateral central compartment clearance.

References:

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