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LYMPH NODE RATIO AS A NEGATIVE PROGNOSTIC FACTOR IN PATIENS WITH PAPILLARY THYROID CARCINOMA

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INTRODUCTION

Lymph node metastases is common in papillary thyroid carcinoma and associated with increased recurrence. Although, the role of the lymph nodes metastases as prognostic factor in patients with papillary thyroid carcinoma remains controversial.

Objective: The aim of this is to evaluate the prognostic value of lymph node ratio on the survival of patients older than 55 years with papillary thyroid carcinoma

PATIENTS AND METHODS

A retrospective study with 111 consecutive patients older than 55 years with papillary thyroid carcinoma undergoing total thyroidectomy with simultaneous neck dissection between 1980 and 2015 (Table 1). Ninety-one patients had paratracheal neck dissections (Figure 1), and 34 patients had therapeutic lateral neck dissections (Figure 2). The median lymph yield was 10 (ranging from 2 to 107), median positive lymph node was 1 (ranging from 0(pN0) to 50), mean total LNR (±SEM) 0.25 (±0.32), mean central LNR (±SEM) 0.23 (±0.33).

PATIENTS AND METHODS

Table 1 – Patients characteristics

Variables	Category	N(%)
Sex	Male	33(29.7)
	Female	78(70.3)
Age(year)	Range	55-81
	Median	63
pT staging	T1-T2	58 (53)
	T3-T4	53 (47)
pN staging	N0	29(25.4)
	N1a	40(37)
	N1b	42(37.6)

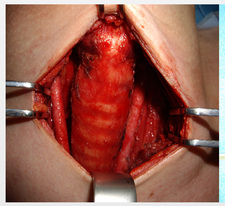

Figure 1 – Patient with papillary thyroid carcinoma underwent to total thyroidectomy plus central compartment neck dissection

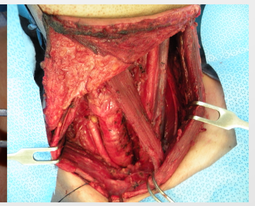

Figure 2 – Patient with papillary thyroid carcinoma underwent to total thyroidectomy plus lateral neck dissection and central compartment neck dissection

RESULTS

The LNR > 0.30 was associated with a worse cancer-specific survival. Patients with an LNR of 0.30 or lower had a specific cancer survival in 10 years of 95.2% compared with 71% for patients with LNR > 0.30 (p = 0.048)(Figure 3). Similarly, patients with an LNR of 0.30 or lower had an 83% chance of remaining disease free during 10 years of follow-up. However, the LNR showed no significant independent effect in recurrence-free survival(Figure 4).

RESULTS

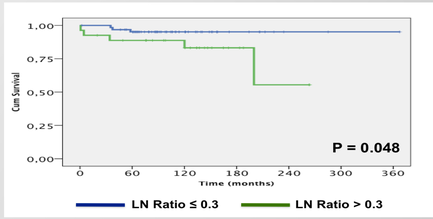

Figure 3 – Cancer-specific survival according to lymph node ratio

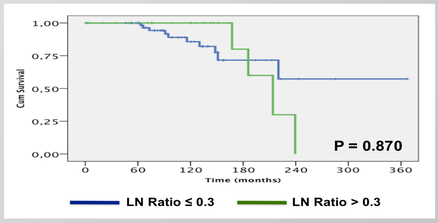

Figure 4 – Recurrence-free survival according to lymph node ratio

CONCLUSION

The LNR is an important prognostic factor in patients older than 55 years with papillary thyroid carcinoma, and a threshold LNR of 0.30 can be used to risk-stratify patients with metastatic lymph nodes submitted to neck dissection.