

THE LYMPH NODE RATIO, PROGNOSTIC FACTOR IN CANCER OF THE ORAL CAVITY

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Introduction: Squamous cell carcinoma of the head and neck is the sixth most frequent in the world, it is estimated that there are 600,000 new cases diagnosed each year¹ of which 263,000 originate in the oral cavity, mainly in the tongue. Approximately 60% of patients present in our country in a loco-regionally advanced stage.

The most important prognostic factor in patients with head and neck cancer is the histologic lymph node status, survival can decrease up to 50% at 5 years in patients with lymph node metastases in the neck.

The only way to know if a patient has lymph node metastases in the neck is to perform a neck lymph node dissection however, both the surgical technique and the technique for the pathological study of the lymph nodes are prognostic factors for the outcome of neck dissection.

The relationship between the number of dissected and metastatic nodes in neck dissection is called lymph node ratio (LNR) and recently has been introduced into practice as a prognostic factor, theoretically, a high LNR is related to a worse prognosis, either because of a large number of metastatic nodes or because the neck dissection was insufficient and metastatic nodes remained in the surgical site of the cervical lymphadenectomy.

Objective: To know the prognostic value of LNR in patients with oral cavity cancer

Material and Methods: Descriptive, cross-sectional, observational and retrospective study in patients with oral cavity cancer, LNR was compared with other prognostic variables and its association with tumor recurrence.

Patients with invasive squamous cell carcinoma of the oral cavity treated surgically with resection of the primary tumor and neck dissection over three years were included, all were preoperatively classified based on TNM classification.

Patients who had undergone previous treatment with chemotherapy and / or radiotherapy and those who did not undergo neck dissection were excluded.

The LNR was obtained by dividing the number of metastatic nodes by the number of dissected nodes, nodal recurrence was evaluated and compared with the nodal index obtained.

Conclusions: LNR is a prognostic factor in oral cavity cancer, although associated with the stage. Patients with high LNR (> 0.069) have a higher relapse rate and may be candidates for concomitant chemo-radiotherapy.

The LNR can translate insufficient surgery or greater stage and aggressiveness of oral cavity cancer

Results: 120 patients with oral cavity cancer were included (subsites in table 1), 58.3% men and 41.7% women with a mean age of 62.7 years. 64.2% were cN0 and 37.8% cN (+). 27.3% of the patients had lymph node metastases with nodal capsular rupture.

The mean dissected nodes was 31.94, the mean of metastatic nodes was 2.18 and the mean of LNR was 0.069 (0.022 in cN0 and 0.13 in cN +). Most patients had moderately differentiated carcinoma (77%) and lymph node capsular rupture was identified in 27.3%.

Adjuvant treatment: 40% of patients received radiotherapy and 30% concomitant chemotherapy and radiotherapy, the drugs used were Cisplatin and 5-Fluorouracil, the decision was made based on the risk of relapse identified at the pathological stage.

The rate of recurrence in patients with LNR > 0.069 = 45% compared with 22% in patients with LNR<0.069.

Regional recurrence was identified in 31% of patients with a median time of 15 months.

The mean number of nodes dissected in the radical neck dissection was 32 and the mean number of nodes with metastases was 2.18. The mean nodal index was 0.069; in cN0 patients the mean nodal index was 0.022 and in cN(+) patients 0.13.

We found that regional recurrence was higher when the nodal index was greater than 0.06

SITE	Frecuency	%	LNR
Gum	11	9.2	0.026
Lip	2	1.7	0
Tongue	92	76.7	0.073
Jugal mucosa	1	0.8	0.312
Hard palate	3	2.5	0.098
Trigone	10	8.3	0.054
Vallecula	1	0.8	0.090
Total	120	100	

DISCUSION: Both in patients submitted to elective and therapeutic dissection the nodal index has value as a prognostic factor and probably has more importance than the pN classification, especially in patients classified as pN2. In these patients we can have the same nodal stage but different risk, for example, the presence of 2 metastatic nodes in 15 dissected has a LNR of 0.13 (high risk), but if the dissected lymph nodes are 35 the patient would have a LNR=0.05 (low risk) and both patients are staged in the TNM classification as pN2.

In the present series, the nodal index greater than 0.06 was associated with a worse prognosis and although the information still needs to be validated it is likely that a high nodal index identifies patients requiring more aggressive treatment due to the higher risk of regional relapse.