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ORIGINAL ARTICLE

Selective sentinel lymph node biopsy in papillary thyroid carcinoma in patients with no preoperative evidence of lymph node metastasis☆

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KEYWORDS
Sentinel lymph node;
Thyroid carcinoma;
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Abstract
Introduction: Lymphadenectomy is recommended during surgery for papillary thyroid carcinoma when there is evidence of cervical lymph node metastasis (therapeutic) or in high-risk patients (prophylactic) such as those with T3 and T4 tumors of the TNM classification. Selective sentinel lymph node biopsy may improve preoperative diagnosis of nodal metastases.
Objective: To analyze the results of selective sentinel lymph node biopsy in a group of patients with papillary thyroid carcinoma and no evidence of nodal involvement before surgery.
Patients and method: A retrospective, single-center study in patients with papillary thyroid carcinoma and no clinical evidence of lymph node involvement who underwent surgery between

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2011 and 2013. The sentinel node was identified by scintigraphy. When the sentinel node was positive, the affected compartment was removed, and when sentinel node was negative, central lymph node dissection was performed.
Results: Forty-three patients, 34 females, with a mean age of 52.3 (±17) years, were enrolled. Forty-six (27%) of the 170 SNs resected from 24 (55.8%) patients were positive for metastasis. In addition, 94 (15.6%) out of the 612 lymph nodes removed in the lymphadenectomies were positive for metastases. Twelve of the 30 (40%) low risk patients (cT1N0 and cT2N0) changed their stage to pN1, whereas 12 of 13 (92%) high risk patients (cT3N0 and cT4N0) changed to pN1 stage.
Conclusions: Selective sentinel lymph node biopsy changes the stage of more than 50% of patients from cN0 to pN1. This confirms the need for lymph node resection in T3 and T4 tumors, but reveals the presence of lymph node metastases in 40% of T1–T2 tumors.

PALABRAS CLAVE
Ganglio centinela;
Carcinoma tiroides;
Metástasis ganglionar

Biopsia selectiva del ganglio centinela en el carcinoma papilar de tiroides en pacientes sin evidencia preoperatoria de metástasis ganglionar

Resumen
Introducción: La linfadenectomía en la cirugía del carcinoma papilar de tiroides se aconseja cuando hay evidencia de metástasis ganglionar cervical (terapéutica) o en pacientes de alto riesgo (profiláctica), como en los tumores T3 y T4 de la clasificación TNM. La técnica de la biopsia selectiva del ganglio centinela puede mejorar el diagnóstico prequirúrgico de las metástasis ganglionares.
Objetivo: Analizar el resultado de la biopsia selectiva del ganglio centinela en un grupo de pacientes con carcinoma papilar de tiroides T sin evidencia de afectación ganglionar antes de la cirugía.
Pacientes y método: Estudio retrospectivo, unicéntrico en el que se incluyeron los pacientes intervenidos entre los años 2011-2013 que fueran clínicamente N0. La identificación del ganglio centinela se realizó mediante técnica isotópica. En todos los casos, se practicó linfadenectomía del compartimento afecto si el ganglio centinela era positivo, y del compartimento central en caso de ganglio centinela negativo.
Resultados: Se incluyeron 43 pacientes, 34 mujeres, con una edad media de 52,3 (±17) años. De los 170 ganglios centinela resecados, 46 (27%) fueron positivos para metástasis, que correspondían a 24 (55,8%) pacientes. En las linfadenectomías se resecaron 612 ganglios. De ellos, 96 (15,6%) fueron positivos para metástasis. Doce de los treinta (40%) pacientes cT1N0 y cT2N0 pasaron a pN1 tras la biopsia selectiva del ganglio centinela, mientras que 12 de los 13 (92%) pacientes cT3N0 y cT4N0, acabaron siendo pN1.
Conclusiones: La biopsia selectiva del ganglio centinela recalifica más del 50% de pacientes de cN0 a pN1. Se confirma la necesidad de vaciamiento ganglionar en los tumores T3 y T4, pero pone al descubierto la presencia de metástasis linfáticas en el 40% de los T1-T2.

Introduction

Papillary thyroid carcinoma (PTC) is the most frequent endocrine tumor.[1] This malignancy usually spreads via the lymphatic route; metastases in the regional lymph nodes are therefore common, particularly at central compartment level.[2] It is currently a matter of debate whether preventive lymph node removal of the central compartment should accompany thyroidectomy as routine practice (prophylactic lymphadenectomy [PLA]), or whether lymph node removal should only be performed when the presence of lymph node metastases (LMs) has been confirmed either previously or during surgery (therapeutic lymphadenectomy [TLA]).[3–5] Arguments in favor of PLA are the difficulty of diagnosing LMs before surgery; the fact that it avoids second surgery to perform lymphadenectomy; and the known relationship between LM and the risk of disease relapse. In contrast, purported drawbacks of PLA are the prolongation of surgery time; increased morbidity of thyroid surgery, particularly in relation to definitive hypoparathyroidism; and the fact that it does not modify survival.[5] The current recommendations are to perform lymphadenectomy in all cases where the presence of LMs has been evidenced before or during surgery, and also in those cases where the risk of lymphatic