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Gânglio sentinela intramamário: relevância prognóstica no cancro da mama e o que fazer aos gânglios axilares

Intramammary lymph node: prognostic relevance in breast cancer and what to do to axillary nodes

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RESUMO

Na era da biopsia do gânglio sentinela no estadiamento do cancro da mama, a metastização para gânglios extra-axilares gera novas controvérsias. É apresentado um caso de metástase única num gânglio linfático intra-mamário e discutida a sua implicação à luz do conceito de gânglio sentinela.

Palavras-chave: Cancro da mama; Gânglio intramamário; Gânglio sentinela.

ABSTRACT

In the era of sentinel lymph node biopsy for nodal staging in primary breast cancer, extra axillary nodes metastases raises many new controversies. One case of single metastasis in intramammary lymph node (IntraMN) is discussed according to the sentinel node (SN) concept.

Key-words: Breast cancer, Intramammary node, Sentinel node.

INTRODUCTION

At the present time, SN biopsy applied to T1-T2 breast cancer patients is considered state-of-the-art for nodal staging. The use of the triple technique raises many questions concerning breast lymph drainage, particularly in the case of extra-axillary drainage such as the internal mammary chain, inter pectoral or intra mammary nodes.

CLINICAL INFORMATION

We present the case of a 70 year old woman, submitted 18 years ago to a left modified radical mastectomy and radiotherapy to treat a medullary breast cancer (pT2N0M0).

Recent follow-up mammography showed a 14mm solid and central lesion on the right breast. Ultrasound guided cytology revealed a carcinoma and she underwent total right mastectomy and SN biopsy. Pre-operative lymphoscintigraphy (figure 1) showed 2 axillary SN and an additional hot-spot at the periareolar region. During the operation, 2 axillary hot and blue SN were identified, both negative on frozen section examination. Periareolar hot-spot was not pursued. The post-operative recovery was uneventful.

Definitive pathologic study confirmed an invasive ductal carcinoma, nuclear grade 2, 16mm in size. Hormone receptors were both strongly positive. Within the breast parenchyma, an additional 8mm blue nodule was noted in the lower outer quadrant, corresponding to 2 lymph nodes, one of them metastasised. The axillary SN were free of metastases.

After these results, the patient underwent a complete axillary dissection; there were no lymph node metastases in the 20 isolated axillary nodes. She also received adjuvant systemic therapy.

DISCUSSION

Until now, the clinical relevance of IntraMN metastases has not been fully understood. Traditionally, breast cancer patients with IntraMN metastases are treated as stage II disease, even in the absence of axillary nodes metastases. This rare type of stage is based on the studies of Egan and McSweeney, published more than 20 years ago, upon the evaluation of the prognostic impact of IntraMN metastases in 45 breast cancer patients. The authors showed that stage II patients (pN+) did not have a worse prognosis in the presence of an IntraMN metastasis (10 years survival-33%); on the contrary, in stage I patients, this fact was an independent predictor of survival (10 years survival-79%) (1, 2). Shen and Hunt paper (3), on 130 patients, corroborate this finding.

By definition, IntraMN are surrounded by breast parenchyma which distinguish them from lower axillary nodes (4). Of all patients submitted to mammography examination, it is possible to identify normal IntraMN in about 5% of cases. In the context of a primary breast cancer, the expected rate for IntraMN positivity without concomitant axillary metastases is very low, also around 5% (3, 5).

The sentinel node combined identification technique (triple technique), with intratumoral or close peritumoral radioisotope injection will actually reveal the real map of lymphatic drainage of a particular tumor in a particular breast (6); subareolar plexus vital dye injection will accurately reveal the axillary SN of the breast (7). Countless validation studies of the SN concept have shown that axillary SN predicts, with high accuracy, the state of the remainder of axillary nodes (8, 9, 10).

In the pre-SN era, mammography or ultrasonography IntraMN detection could imply its cytological or histological characterization and posterior excision, even under hook-wire guidance. Nowadays, if detected by lymphoscintigraphy, an effort should be made in order to identify and excise those nodes, with the help of the hand-held gamma probe and/or the vital dye (3, 11, 12).

There are no answers in surgical literature on what to do to axillary lymph nodes in the presence of a positive IntraMN, especially in the case of negative axillary SN (3, 11). As shown by this case, an axillary dis-

section could represent over-treatment. The IntraMN should be considered as not belonging to any formal lymphatic drainage area (such as axilla, internal mammary chain, periclavicular, neck) and it may be adequate to support the decision to complete or not the axillary dissection on the definitive histopathological axillary SN analysis, and spare the patient to a level two axillary clearance if this SN is deemed free of metastases (3). IntraMN metastases in the presence of a negative axillary SN should not imply a treating complete axillary dissection or the irradiation of the internal mammary chain.

Like in any other location (axilla, internal mammary), metastasized IntraMN should be interpreted as out-of-primary organ extension of the disease. Although not consensual (12), patients in this situation must be considered pN+ (stage II) and therefore receive adjuvant systemic treatments (chemo or hormonotherapy).

The sentinel node concept, with pre-operative lymphoscintigraphy and per-operative gamma-probe, should increase the detection of IntraMN, thus clarifying its staging and prognostic relevance. The true purpose of the sentinel node concept is to determine pN stage as accurately as possible.

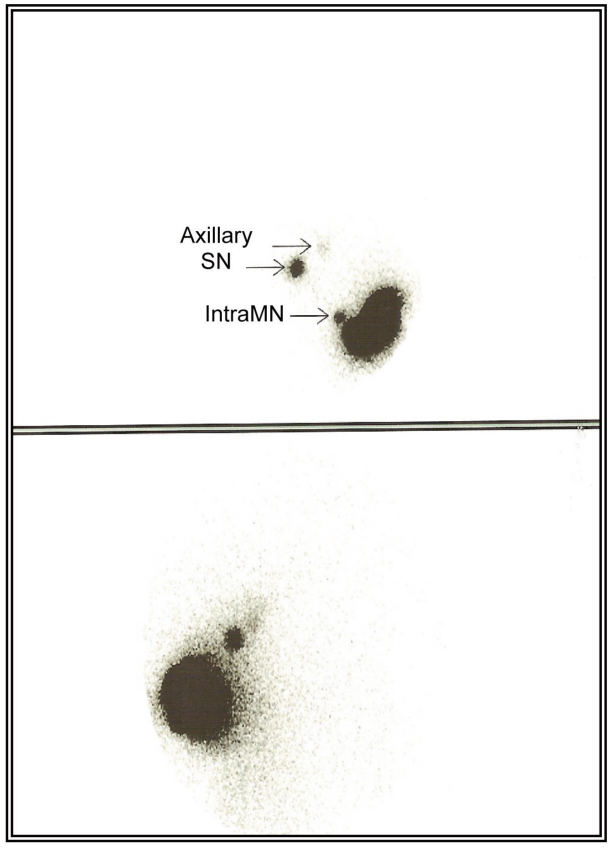

Figure 1: **Lymphoscintigraphy from the presented case in two views (antero-posterior and lateral): the IntraMN can be clearly seen in the lateral view (on top) near the main tumour signal.**

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