OCCULT BREAST CANCER

AYLTON ALBERNAZ DIAS[1], DIEGO DE OLIVEIRA SILVA[1], FERNANDO COSTA ABREU FILHO[1], JOSIMAR OLIVEIRA DA SILVA1, ANDRÉ MAROCCOLO DE SOUSA[1], IZADORA CAIADO OLIVEIRA[1], JOÃO GABRIEL FRANCO LOPES[1], JOÃO BOSCO MACHADO DA SILVEIRA[2], JUAREZ ANTÔNIO DE SOUSA[1]

ABSTRACT

Occult breast cancer is defined as one that presents with metastasis in the axillary lymph nodes without clinical evidence in a supernumerary or accessory breast. Objective: The present study aims to analyze and describe occult breast cancer, as well as its clinical manifestation, diagnosis and treatment. Results: The analysis of local and adjacent lymph nodes to the breast, by means of ultrasound associated with biopsy, proved to be favorable for the accurate diagnosis of this pathology. Conclusion: Having been correctly evaluated and identified, this carcinoma has a good response to radical mastectomy, associated with complementary exams and chemotherapy.

KEYWORDS: HIDDEN BREAST CANCER, DIAGNOSIS, TREATMENT

INTRODUCTION

It is defined as one that presents with metastasis in the axillary lymph nodes without clinical, mammographic, ultrasonographic or magnetic resonance evidence of a primary tumor in the mammary gland or in the axillary extensions, in a supernumerary or accessory breast. Axillary lymphadenopathy is compatible with the diagnosis of cancer confirmed by pathology and immunohistochemistry. It was first described by Halsted in 1907 as neoplastic axillary glands with non-demonstrable breast cancer[1].

It is understood as a rare presentation of breast carcinoma, representing 0.3 to 1% of cases, with a peak incidence around 55 years of age. Adenocarcinoma is the most frequent histopathological diagnosis in biopsy of suspicious axillary lymph nodes. Even without confirming the primary site, adenocarcinoma commonly originates from the breast, especially if hormone receptors are positive[2].

In the current context of the Covid-19 pandemic, it is necessary to consider the recent vaccination history as a possible differential diagnosis, avoiding unnecessary biopsies (Figure 2).

CLINICAL MANIFESTATIONS

Characteristics that may lead to suspicion of neoplastic origin are: hardened lymph nodes with more than 1 cm, without local inflammatory signs, present for more than 30 days and in a single lymph node chain[3].

DIAGNOSIS

Initial tests are mammography, breast ultrasound, and chest X-ray. If they are normal, a lymph node histopathological analysis should be carried out.

Mammography (Figure 4) and ultrasound showed enlarged lymph nodes, with no imaging alteration in the glandular parenchyma. Magnetic resonance imaging, due to its high sensitivity, is the exam of choice for diagnostic confirmation[4].

The ultrasonographic evaluation of the lymph node should contain, size, shape (oval, round or irregular), circumscribed margin or not, cortical thickening (uniform or focal). At ultrasonography, a normal axillary lymph node usually has a transverse diameter of less than 8 mm, but may be enlarged, with a diameter of up to 12-13 mm and a longitudinal axis of up to 25 mm, showing hyperechogenic hilum, thin hypoechogenic cortex and few vessels on Doppler (Figure 1). The metastatic lymph node presents an increase in the transverse diameter and thickening of the cortical regions[5].

Normal lymph nodes present, on ultrasound, a thin or barely visible cortical bone or regular visible cortical bone measuring up to 2 mm. Inflammatory reactive lymph nodes present a visible cortex larger than 2 mm, but with a regular, centered hyperechogenic hilum (Figure 2). Lymph nodes with a cortical of more than 2 mm and with lobulations may be related to inflammatory processes, but secondary involvement cannot be ruled out. Lymph nodes with lobulations or focal cortical thickening are suspected of secondary involvement (Figures 5 and 6), and lymph nodes that are completely hypoechoic, with a hilum pushed to the periphery or absent, are often associated with metastatic secondary involvement with a high tumor burden (Figures 7 and 8) [6].

Lymph node biopsy can be performed by fine needle

1 - Universidade Federal de Goiás (UFG).
2 - Academia Brasileira de Mastologia.

ADDRESS
AYLTON ALBERNAZ DIAS
Av. Dr José Hermano N.303, Goiânia
GO, 74865-090

aspiration (FNA), core biopsy or excisional, depending on the experience of the sonographer, the depth of the lesion and the practice of the cytopathologist (Figure 9). Core needle biopsy has the advantage of having a histopathological result; however, it should be used with caution when the lymph nodes are located close to the vessels[7].

Differential diagnosis for thyroid, lung, stomach, pancreas, colon, melanoma, and lymphomas should be considered.

TREATMENT

Traditionally, occult breast cancer was treated with a radical mastectomy. Magnetic resonance imaging, an exam of high sensitivity and specificity, is the exam of choice when no breast alteration is observed and there is axillary disease. It can facilitate the identification of occult breast cancer and thus help in choosing the best form of treatment[3].

Chemotherapy, endocrine therapy, or anti-HER-2 therapy follows the recommendations for stage II or III disease.

Neoadjuvant systemic therapy should be considered, especially for patients with significant nodal involvement (N2-N3), after systemic staging for the presence of distant metastases[4].

Systemic treatment follows the breast cancer chemotherapy protocol[5].

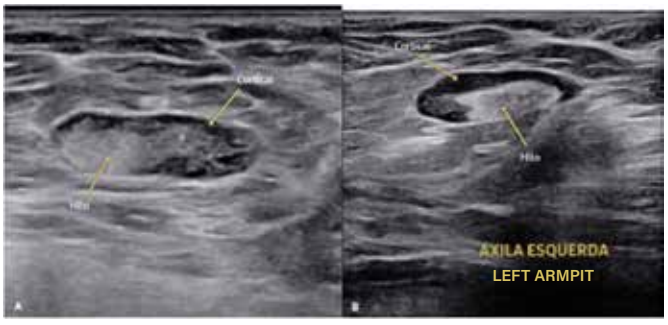

Figure 1 – Normal axillary lymph nodes. A. Axillary lymph node showing, on ultrasonography, a thin or barely visible cortical bone. B. Axillary lymph node showing, on ultrasound, regular visible cortical bone measuring up to 2 mm.

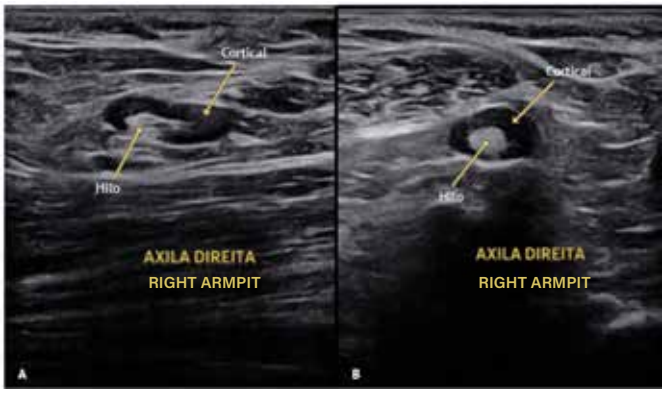

Figure 2 – Ultrasonography. Reactive inflammatory lymph nodes in the right armpit of a woman submitted to the Covid-19 vaccine. A and B. Lymph nodes present a visible cortical bone larger than 2 mm, but with a regular, centered hyperechogenic hilum.

Figure 3 – Ultrasonography. Axillary lymph nodes, all hypoechogenic, with a hilum pushed back to the periphery or absent, are often associated with secondary metastatic involvement with a high tumor burden.

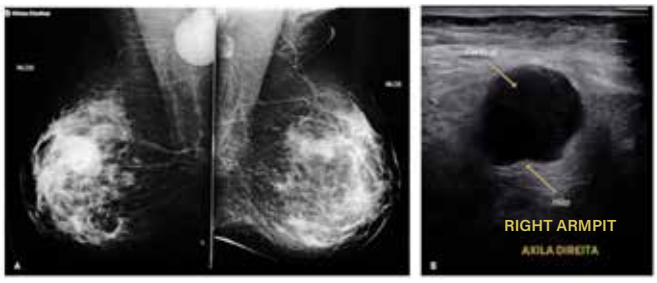

Figure 4 – A. Mammogram showing hypertrophic lymph node in the right armpit. B. Ultrasonography. Entirely hypoechogenic lymph node, with hilum pushed back to the periphery, associated with secondary metastatic involvement, in the right armpit, due to breast cancer.

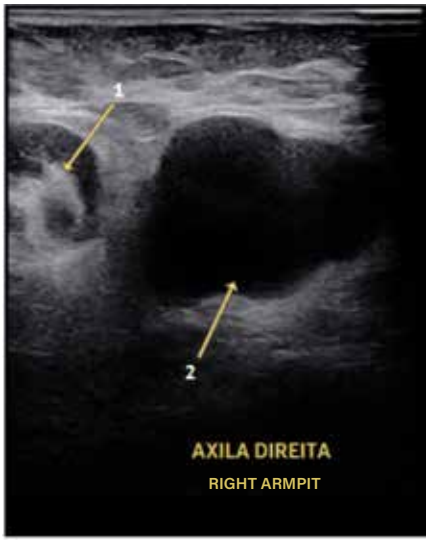

Figure 5 – Ultrasonography. Lymph nodes with thickened cortical bone and lobulations (arrow 1), lymph node entirely hypoechogenic, with hilum pushed back to the periphery (arrow 2) associated with secondary metastatic involvement in the right armpit due to breast cancer.

Figure 6 – Ultrasonography. Lymph node showing cortical size of more than 2 mm and with lobulations and hilum pushed back to the periphery associated with secondary metastatic involvement in the axilla, due to mammary carcinoma.

Figure 7 – Ultrasonography. Lymph node showing thickened cortical bone with lobulations, hilum pushed back to the periphery associated with secondary metastatic involvement in the armpit, due to breast carcinoma.

Figure 8 – Ultrasonography showing several lymph nodes showing a thickened cortical bone with lobulations and other lymph nodes, all hypoechogenic, with the hilum pushed to the periphery, associated with secondary metastatic involvement in the armpit, due to breast cancer.

Figure 9 – Axillary lymph node biopsy performed by fine needle aspiration (FNAB), guided by ultrasound.

CONCLUSION

Occult breast cancer is a rare form of manifestation of breast carcinoma, representing approximately 0.3% to 1% of cases, in which the peak incidence recorded occurs around 55 years of age. Hardened lymph nodes measuring more than 1 cm, without local inflammatory signs, present for more than 30 days and in a single lymph node chain are considered characteristic signs suspicious of neoplastic origin. Due to its high sensitivity, magnetic resonance imaging is considered the gold standard exam for confirming its diagnosis. The metastatic lymph node presents an increase in the transverse diameter and thickening of the cortical regions. Traditionally, occult breast cancer is treated with radical mastectomy, with good results, especially when correctly identified and evaluated, especially when associated with complementary tests and chemotherapy. Furthermore, systemic treatment follows the breast cancer chemotherapy protocol[6-8].

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