CASE REPORT

Squamous Cell Carcinoma of the Breast with Axillary Metastasis

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ABSTRACT

Squamous cell carcinoma (SCC) arising from the breast is rare and aggressive neoplasms. We present a case of a previously healthy 46-year-old woman who, during the study of a left breast swelling, was diagnosed of a 5 cm heterogeneous solid tumor in a computed tomography and magnetic resonance imaging. Subsequently, surgical resection of the breast was performed. The histological study revealed an SCC. After the surgery, she received adjuvant chemotherapy. 1 year later, there was no evidence of local recurrence or distal metastasis. In this article, we describe the information available on SCC of the breast.

Key words: Axillary lymphadenopathy, breast cancer, patient management, squamous cell carcinoma

INTRODUCTION

Squamous cell carcinoma (SCC) is the second most frequent type of skin malignancies, and, although is more common in zones frequently exposed to the sun, it may occur on all places of the body lined by squamous cells such as the anus, genitals, lung, or esophagus. Primary SCC of the breast is a truly strange finding and very few cases have been published until now.[1] We report a case of this uncommon cancer.

CASE REPORT

We present a 46-year-old woman with no family oncological antecedents who complained of a quick growth nodule in upper outer quadrant of the left breast and enlarged ipsilateral axillary lymphatic nodes. Physical exploration evidenced a 5 cm× 4 cm in size solid lump, not painful to the palpation, with flat surface and regular shape with well-circumscribed borders. The tumor was near of the areolar limits but not accompanied of nipple secretions, retraction, or dimpling of the skin.

Thin core needle biopsy of the tumor reported a well-differentiated metaplastic epidermoid carcinoma. Imagenology studies were carried out: Computed tomography (CT) and magnetic resonance imaging (MRI) showed multicentric solid nodules in the left breast with peripheral enhancement and ipsilateral axillary adenopathies [Figures 1 and 2]. The thoracoabdominal extension study did not discover other lesions. The patient was diagnosed with Stage III SCC and the left modified radical mastectomy with axillary lymph nodes dissection was performed.

The patient recovered well after the surgery and she was discharged on the 4th post-operative day. Pathologic examination of the tumor revealed well-differentiated squamous carcinoma of the breast. Overlying skin and nipple were uninvolved. Immunohistochemistry results showed a triple negative breast cancer. After the surgery, she received post-operative chemotherapy and radiotherapy. 1 year later,

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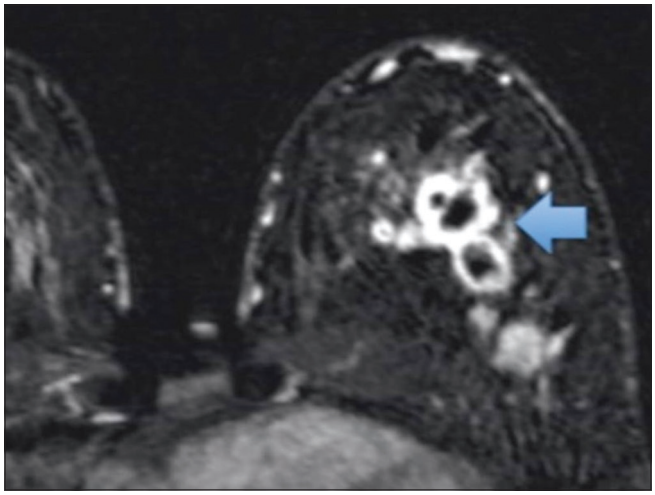

Figure 1: Breast magnetic resonance imaging T2-W evidences an irregular mass with areas of marked T2 hyperintensity and ring-like enhancement (arrow). No signs of pectoralis major muscle invasion are present

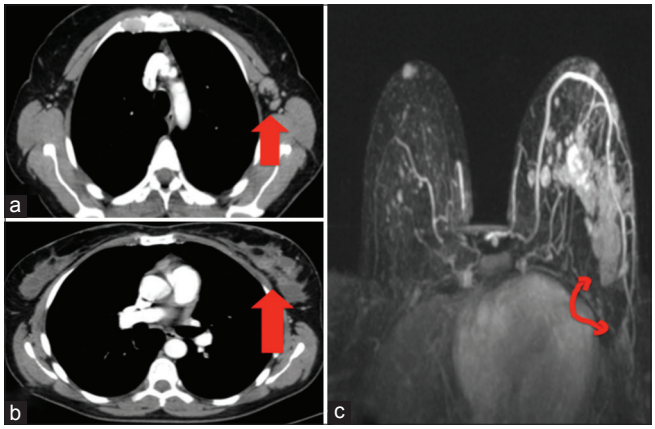

Figure 2: (a) Computed tomography (CT) image. The left axillary lymph nodes with suspected metastases from breast cancer, (b) CT squamous cell carcinoma of the left breast, (c) magnetic resonance imaging high-density lump opacity deep seated in the upper outer quadrant of the left breast with peripheral enhancement and axillary adenopathies

there was no evidence of locoregional recurrence or systemic spread, and the patient remains asymptomatic.

DISCUSSION

Mammary SCC is rare, with a prevalence of 0.1–0.04% of all invasive breast carcinomas.[1] It is highly aggressive, generally hormone receptor negative with an elevated rate of distant metastasis at diagnosis and refractory to standard chemotherapeutic regimens. Primary SCC of the breast is most commonly seen in postmenopausal elderly women. The average tumor size (>4 cm) is larger than for adenocarcinomas at diagnosis and cystic in 50% of the cases.[1,2] The etiology and pathogenesis of SCC remains unknown,[3] and its origin is typically independent of the overlying skin and nipple. The diagnosis should rule out cutaneous infiltration and the existence of another synchronous tumor. Imaging features are mostly unspecific and made no contribution to the differential diagnosis; however, CT and MRI studies are particularly useful for initial staging study and assessment of response to chemotherapy. Even more, SCC is often misdiagnosed because the radiologic features of the tumor can be confused with benign breast diseases. On mammography, the findings are also not typical except for frequent lack of microcalcifications[3] and ultrasound can show just an inflammatory process or a complicated cystic appearance. Positron emission tomography-CT is habitually used for staging.[4]

Many surgeons consider that, because its clinical behavior, this is not a standard infiltrating breast cancer - in the traditional sense - which tends to evolve in the breast ducts, and should better be correlated with a skin neoplasm that rarely presents in the squamous epithelial cells of the breast.[2] It follows an atypical presentation in terms of tumor size, lymph node, and distal metastasis.

Usually, only 30% or less presents lymph node infiltration at the moment of the diagnosis, but near 30% of patients will develop distant metastasis.[1,4] Anyway, and due to unpredictable lymph node dissemination, axillary lymph nodes dissection must always be done for staging purposes.[4]

The treatment does not differ from other breast cancer and includes surgery with axillary clearance, chemotherapy, and radiotherapy. Breast conservative surgeries are not generally recommended in this patients because most of them presents with locally advanced disease.[5] On the other hand, a possible therapeutic objective to be developed could be the recurrent expression of the epidermal growth factor receptor (EGFR) in this disease.[6]

An early diagnosis and surgical intervention reduces morbidity, improves outcome, and seems to prevent recurrence.[7] Management remains controversial but should be individualized because of its rarity and poor prognosis, with emphasis toward platinum-based chemotherapy and targeted therapy (anti-EGFR therapy).[6,7] However, due to the extreme rarity of SCC in the breasts, clinical randomized trials including large series of these cancers are needed to determine the reasons for chemotherapy resistance, to reach a consensus on the treatment, to increase our knowledge, and to improve patient's outcome.[7]

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