Radiology Case Reports 19 (2024) 6053–6056

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journal homepage: www.elsevier.com/locate/radcr

Case Report

Axillary skin lesion: A rare presentation of metastatic male breast cancer ☆

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ARTICLE INFO

Article history:
Received 10 August 2024
Revised 20 August 2024
Accepted 21 August 2024

Keywords:
Breast carcinoma
Male
Cutaneous metastasis

ABSTRACT

Male breast cancer is an uncommon condition, accounting for less than 1% of all breast carcinomas and under 1.5% of all malignant tumors in men. Skin lesions can often be the initial reason for consultation. At this advanced stage, diagnosis is typically delayed, leading to a poor prognosis. Herein, we report the case of a 66-year-old man who presented with a dermo-epidermal axillary mass, indicative of cutaneous metastasis from an invasive ductal carcinoma.

Introduction

Breast cancer in men is a rare disease, accounting for approximately 1% of cancers. Its incidence is too low to warrant systematic screening. In contrast to female breast cancer, male breast cancer often presents with skin lesions that affect the areola, nipple-areolar complex, or the surrounding skin. These cutaneous manifestations can, in some instances, be the primary presenting feature. Breast imaging in men is primarily diagnostic, different techniques such as mammography, ultrasound, and possibly magnetic resonance imaging (MRI) can be used. These methods can help reassure some patients or guide potential biopsy procedures for histological examination [1].

We present the case of a 66-year-old man with a dermo-epidermal axillary mass, indicative of cutaneous metastasis from invasive ductal carcinoma. In presenting this case report, we aim to underscore the importance of considering male breast cancer when evaluating skin lesions, in order deliver an accurate diagnosis and provide adequate treatment for patients.

Case report

This case involves a 66-year-old man with no significant medical history who has been experiencing cutaneous swelling and itching in the left axillary region for the past 4 months. Clinical

☆ Competing Interests: The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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https://doi.org/10.1016/j.radcr.2024.08.110

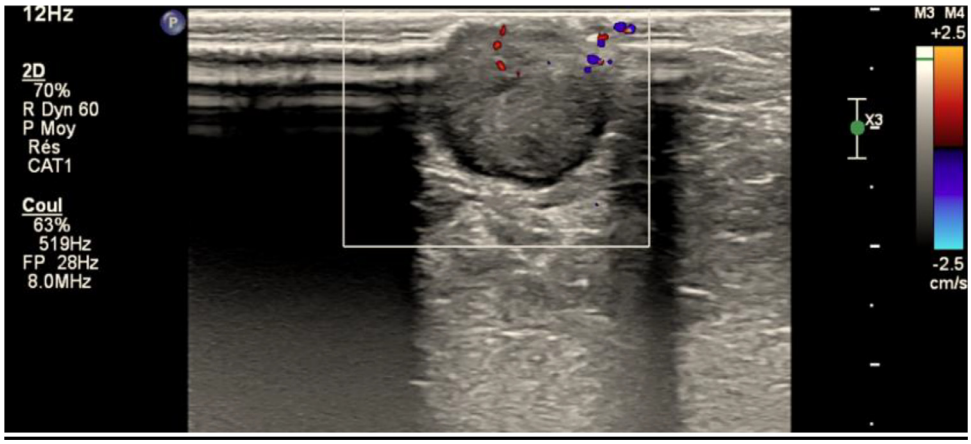

Fig. 1 – Ultrasound image of the axillary mass reveals a heterogeneous hypoechoic dermo-epidermal mass.

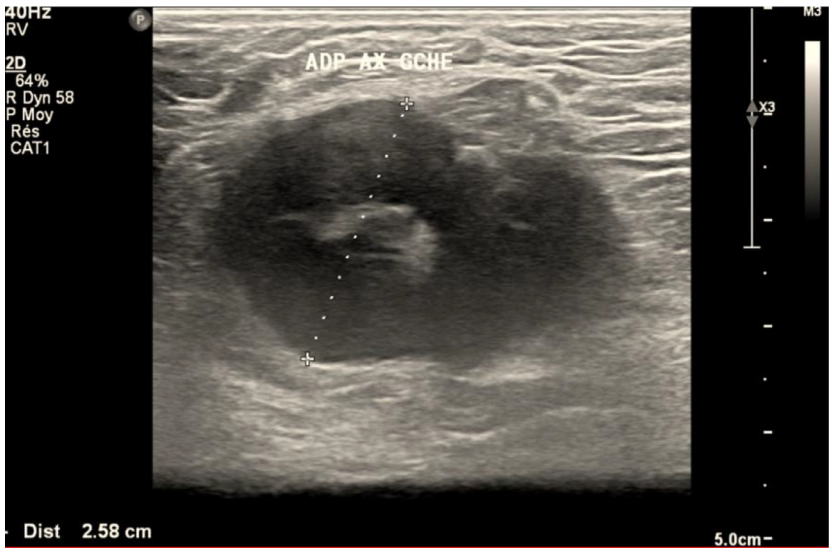

Fig. 2 – Ultrasound image of the left axilla shows enlarged oval lymph node (measuring 26 mm) with a thick cortex measuring 10 mm and loss of the fatty hilum.

examination identified a subcutaneous mass in the left axillary region. An ultrasound was performed, revealing a well-circumscribed dermo-epidermal mass with regular contours, which appeared hypoechoic and heterogeneous, oriented perpendicular to the skin, and showed peripheral color Doppler uptake (Fig. 1). Additionally, the axillary lymph nodes exhibited a thick cortex and loss of the fatty hilum (Fig. 2).

To achieve better characterization, an MRI of the axillary region was requested. This imaging revealed an oval dermo-epidermal mass with regular contours and intermediate signal intensity on both T1 and T2-weighted images. The mass exhibited homogeneous and intense enhancement following contrast injection. It remained distant from the surrounding muscles, notably the serratus anterior, triceps brachii, and latissimus dorsi. Additionally, suspicious axillary lymph nodes were observed (Fig. 3).

Initially, a core needle biopsy was performed on the skin mass; however, it was inconclusive on 2 separate occasions. Consequently, a biopsy of the axillary lymph node was made, it confirmed metastatic breast carcinoma, histologically classified as intracanalicular carcinoma. The tumor was negative for estrogen and progesterone receptors but positive for the HER2 receptor.

A CT scan of the chest, abdomen, and pelvis performed, revealing multiple solid nodules of varying size secondary to metastatic breast carcinoma (Fig. 4).

The patient's case was presented at a multidisciplinary meeting, and a treatment plan involving a combination of the chemotherapy drugs Paclitaxel and Carboplatin, along with dual HER2 blockade, was decided. The patient remains stable, as indicated by the follow-up CT scan conducted 5 months later.

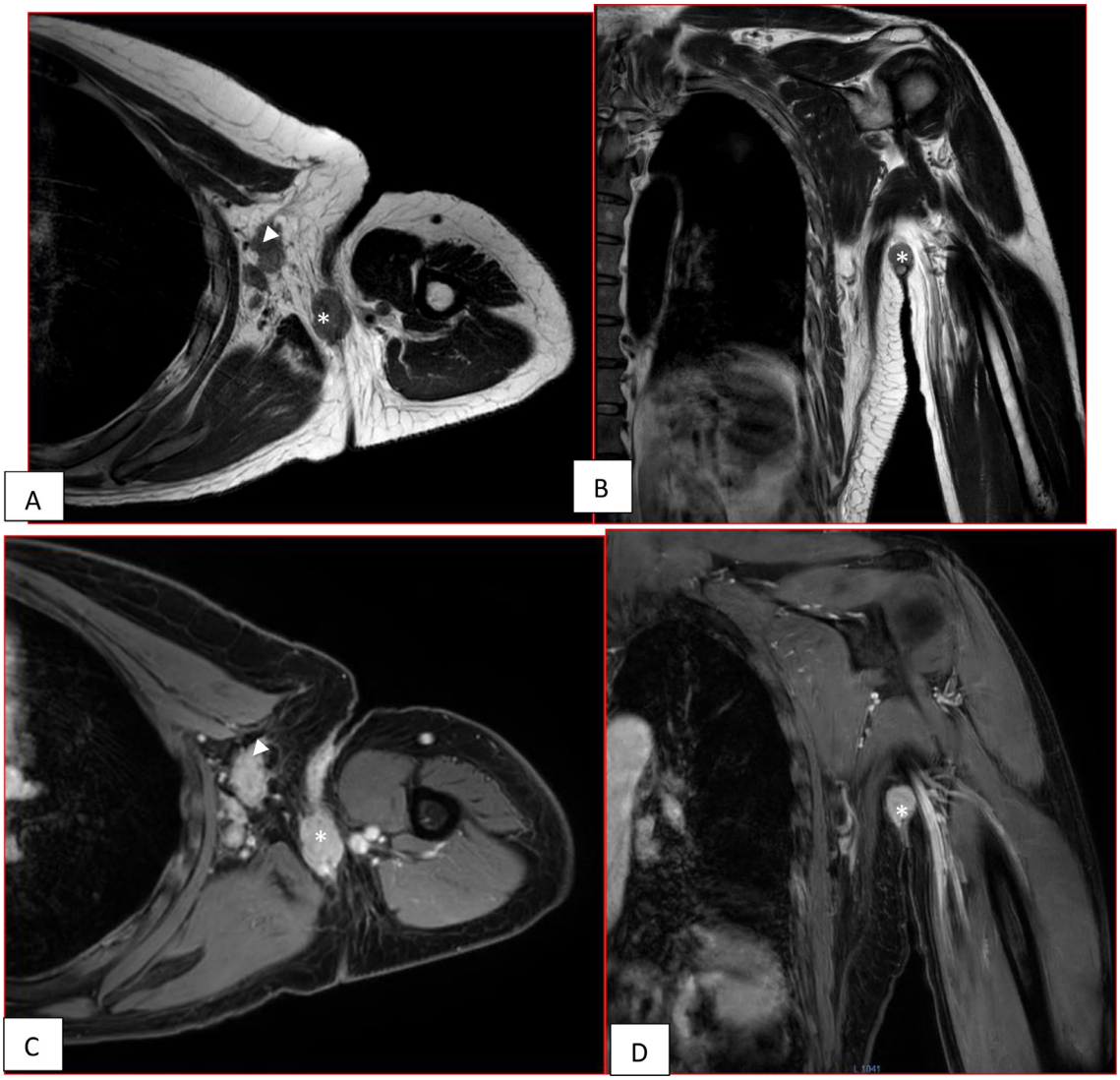

Fig. 3 – Left axillary MRI: (A and B) Axial and Coronal T2-weighted images show a well-defined dermo-epidermal mass with intermediate T2 signal. (C and D) Axial and coronal postgadolinium fat-saturated T1-weighted images demonstrating significant enhancement of the mass (asterisk), ipsilateral suspicious lymph nodes were noted (arrowhead).

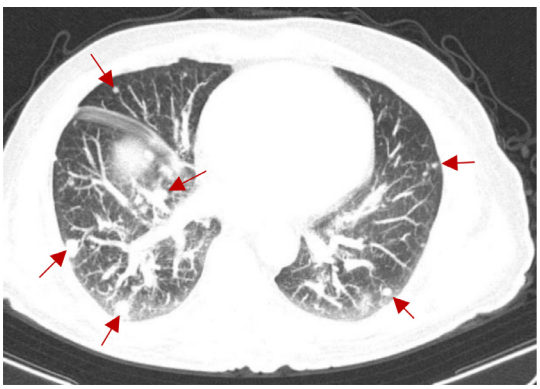

Fig. 4 – Axial chest CT scan shows multiple solid nodules of varying size (arrows).

Discussion

Breast cancer accounts for less than 1% of all cancers in men [2,3]. The average age at diagnosis ranges from 60 to 70 years, which is 10 years later than in women [3,4]. The prognosis is bleaker than in the female form because the diagnosis is often made late [1]. The risk factors include heredity (BRCA II), reduced testosterone synthesis, and Klinefelter syndrome. As in women, invasive ductal carcinoma is the most common histological type [1].

The clinical symptoms are similar to those in women, with a majority of cases presenting as a well-defined, hard, painless mass, primarily located retroareolarly. Serosanguinous discharge or axillary lymphadenopathy are rarely symptomatic [1]. Unlike female breast cancer, male breast cancer is characterized by the frequency of skin lesions affecting the areola,

nipple-areolar complex, or the entire skin. These cutaneous manifestations can, in some cases, be the main presenting feature, as in our case [1].

Breast imaging in men is predominantly diagnostic, as the low incidence of male breast cancer does not justify routine screening [1]. Different imaging techniques such as mammography, ultrasound, and MRI can reassure some patients or guide potential biopsy sampling for histological examination [1].

The use of mammography in men is possible and should be bilateral, even if the symptoms are unilateral. When technically challenging, only an oblique view is obtained [1,5]. In 60% of cases, breast cancer presents as a mass with microlobulated, spiculated, or ill-defined contours, typically located retroareolarly and often eccentric to the nipple [6]. Microcalcifications are rarely a prominent feature due to the low incidence of isolated ductal carcinoma in situ [7]. Associated anomalies classically described in female breast cancer, such as axillary lymphadenopathy, skin retraction, and nipple retraction, are also found. In cases of discharge, exploration via galactography is technically feasible. Cancer is bilateral in 1% to 4% of cases, justifying bilateral mammography even if the symptoms are unilateral [8].

On ultrasound, male breast cancer presents as an irregular hypoechoic cavity with variable attenuation associated with a peripheral halo [9]. Posterior acoustic shadowing is inconsistent, as the frequent retroareolar location of the tumor makes this sign nonspecific. Cancer can also manifest as a cystic lesion, with a mural nodule indicative of papillary ductal carcinoma in situ. Additionally, in men, the discovery of a cyst on ultrasound, regardless of its appearance, should prompt cytological and/or histological sampling. Ultrasound is particularly useful for exploring deep masses that may be missed on mammography. Upon axillary exploration, lymphadenopathy is detected in 50% of breast cancers [10].

The performance of breast MRI in men is possible, even though there is no clearly established consensus indication. The radiological appearance is that of an irregular mass with intense and early enhancement with secondary washout according to a type 3 curve. The Breast Imaging Reporting And Data System (BIRADS) MRI criteria are applicable to breast cancer in men [11].

Conclusion

Male breast cancer is a rare disease, representing about 1% of all cancers. Cutaneous lesions may be the initial reason for consultation, often leading to delayed diagnosis and a poor prognosis. Imaging is essential in managing these patients, guiding biopsy procedures, determining locoregional and distant staging, and monitoring post-treatment progress.

Patient consent

The authors of this manuscript declare that an informed consent for publication of this case was obtained from the patient.

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