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Case Report

Carcinoma of accessory breast: an incidental finding

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ABSTRACT

Accessory breast carcinoma (ABT) is a rare disease, it accounts for less than 1% of breast cancers. ABT is often under diagnosed, therefore, it should be considered for all lumps presenting along the milk line (from axilla to groin). Reported cases show the most common area for accessory breast cancer to be the axilla. In this report, we report a 50-year- old woman with invasive ductal carcinoma of the accessory breast in her right axilla with metastasis to the axillary lymph node. She is currently undergoing chemotherapy as we write this article. The diagnosis of ABT is often delayed due to the frequent absence of an accessory areola or nipple, coupled with a lack of awareness among physicians and patients regarding these seemingly harmless-looking masses. Consequently, it is essential to thoroughly examine any mass along the mammary line and promptly evaluate suspicious lesions.

Keywords: Accessory breast, Carcinoma, Mammary line

INTRODUCTION

Accessory breast tissue (ABT) is a congenital condition in which additional breast tissue develops outside the normal breast area. The most common site of ABT is the axilla but it can be found in the infra mammary region, face, posterior neck, back, inguinal region, and even the thigh.[1-3] While ABT is typically asymptomatic, it may occasionally exhibit pathologies similar to those of primary breast tissue, including both benign and malignant conditions.[4]

Carcinoma arising from ABT is rare, accounting for only 0.3%-0.6% of all breast cancers as reported by Zhang et al.[5] At our facility, between September 2022 and September 2024, 28 patients were diagnosed with breast cancer, of which only one case (3.5%) involved accessory breast cancer, further highlighting rarity of the condition.

A comprehensive review of existing literature revealed that most patients are often diagnosed at an advanced stage of the disease due to the atypical locations of the tissue and low clinical suspicion. This delay in diagnosis is frequently associated with larger tumors, advanced nodal involvement, and poorer outcomes.[6,7]

Friedman-Eldar et al reported that due to the proximity of ABT to axillary lymph nodes, ABT cancers have a higher rate of nodal positivity at diagnosis, further contributing to the worse prognosis in these patients.[8]

In this report, we present the case of a 50-year-old woman with invasive ductal carcinoma of axillary breast, with metastasis to the axillary lymph nodes.

CASE REPORT

The patient is a 50 year old female who presented to the surgical outpatient clinic on account of right axillary swelling of 5 years duration which was noticed by the patient incidentally. Swelling increased gradually over time especially during lactation. It was initially painless but patient experienced occasional pain which was usually localized.

There was no history of discharge from the swelling, no associated skin changes. Family history is positive of axillary breast in her mother and female siblings. No family history of breast cancer. She is a known hypertensive patient managed medically.

Breast examination revealed normal breast tissue on both sides, an axillary mass 8×8 cm in size with no nipple discharge. On palpation it was non mobile and non tender and adherent to the overlying skin.

The rest of physical examination was unremarkable.

An Initial assessment of axillary lymphadenopathy of unknown origin was made, fine needle aspiration was inconclusive. Consequently, axillary exploration was done and the swelling was excised (Figure 1 and 2). Lymph nodes were removed up to level 2. Tissues were sent for biopsy and immunohistochemistry.

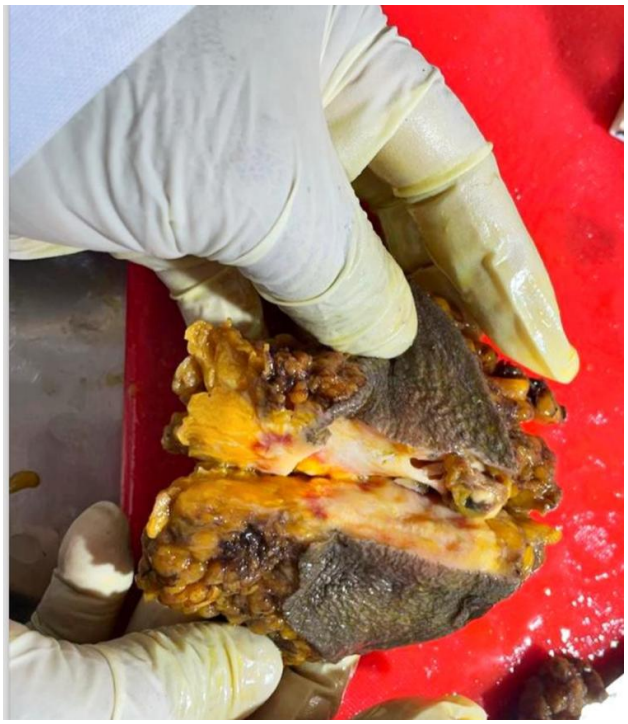

Figure 1: Axillary breast tissue.

Report of biopsy showed that the axillary swelling was a breast tissue with features of Invasive ductal carcinoma and metastasis to axillary lymph nodes.

A definitive diagnosis of invasive ductal carcinoma of the accessory breast with metastasis to the axillary lymph node was made.

The patient was sent for chemotherapy and is currently receiving treatment as at the time of writing this article.

Figure 2: Metastatic lymph nodes.

_X__ Not applicable

___ (sn): Sentinel node(s) evaluated. If 6 or more nodes (sentinel or nonsentinel) are removed, this modifier should not be used

___ (f): Nodal metastasis confirmed by fine needle aspiration or core needle biopsy

pM Category (required only if confirmed pathologically)

_X__ Not applicable - pM cannot be determined from the submitted specimen(s)

___ pM1: Histologically proven metastases larger than 0.2 mm

DIAGNOSIS/CONCLUSION

RIGHT ACCESSORY AXILLARY BREAST WITH AXILLARY NODES - INVASIVE CARCINOMA, NO SPECIAL TYPE (DUCTAL) GRADE 2, pT3; pN2a; pMX

SAMPLE TYPE

RIGHT ACCESSORY AXILLARY BREAST WITH AXILLARY NODES

ICD-10

C50.611- MALIGNANT NEOPLASM OF AXILLARY TAIL OF RIGHT FEMALE BREAST

Signed

Figure 3: Immunohistochemistry report.

DISCUSSION

Breast tissue develops from an ectodermal tissue in a line called the milk line that extends from the anterior axillary folds to the inguinal regions. This development occurs bilaterally during the fifth to sixth week of life and continues until some tissues finally regress leaving the main breast tissue at the pectoral regions, the site of normal breasts. Incomplete regression of some of the

developmental tissues leads to what is called an accessory breast, which undergoes all the physiological and pathological changes as in the normal breast tissues, including turning cancerous. Formation of cancer by the ABT s is, however, very rare.[9,10]

The axillary region is the commonest site of ectopic breast tissue and consequently the commonest site of accessory breast cancer.[9] The primary adenocarcinoma of ectopic breast tissue (PEBC) is an extremely rare entity. The locations has been found to be at the following sites in their order of occurrence: axillary regions, subclavicular and anterior axillary regions, over the sternum, and in the upper abdominal skin outside the distribution. Our case report is that of a 50-year-old woman with no family history of breast cancer. This is in agreement with a case report by Salemis in Athens that also had a 72-year-old woman with no family history of breast cancer presenting with axillary breast cancer.[9]

However, it was in disagreement with the average age of occurrence, as our case falls at the median age of occurrence of axillary breast cancer while theirs fell at an extreme age. The report also stated that axillary breast cancers occur 10 years earlier than the orthotopic breast cancers with median age being 51 years and peak incidence being 40 and 45 years by Friedman-Eldar et al study by also agreed with the common occurrence. of ectopic breast tissue to be in the axillary and also emphasizes the rare development of the cancers thereof.[8] In a study by Thasanabanchong and Vongsaisuwon, there was a similarity to our case report in terms of age, but showed a very much rarer variant of ectopic breast cancer. In this case they had a 51-year-old woman who had subcutaneous breast tissue over the costal ridge.[10]

The management of ABT can be challenging because of the initial difficulty in making the diagnosis. The index case presented with axillary swelling for over five years, which has over time progressively increased in size, more engorged during lactation and painless. This is similar to a case report by Rateria et al which presented with a right axillary lump and also non-tender.[11] This can be said to be a classical presentation of axillary breast carcinoma. Other symptoms and signs include irregular menstrual periods, as is the case with Thasanabanchongand et al it can also be asymptomatic, as is the case with Friedman-Eldar et al which was only seen on palpation of the axillary region.[8,10] Differential diagnoses are mainly cancers of primary breast origin, either from the tail of spence or from aberrant breast tissue in the axilla, and secondary metastatic carcinoma of axillary lymph nodes, etc. It is very important to differentiate these differential diagnoses because their management is different, hence histological sampling via core needle biopsy is crucial.[6] Diagnoses must include the following criteria: absence of metastasis, no continuity with normal breast, presence of normal breast tissue in the cancerous substance, absence of sudoriparous cancer in the axilla.[11] So basically the diagnosis follows the triple diagnostic assessment employed in eutrophic (typical) breast cancers via clinical signs and symptoms, radiological using ultrasound and mammography, and histological via immunohistochemistry.[6]

Treatment of accessory breast cancer is not specific and also follows the treatment guidelines for the pectoral (typical) breast cancers, which involves wide local surgical excision with regional axillary SLND, associated, depending on the case, with chemotherapy, radiotherapy, and hormone therapy.[6] Chemotherapy and radiotherapy may be indicated in case of metastasis as it is in our index case. Long-term follow-up is also required to exclude local recurrence and concomitant breast tumor.[6] Prognosis of ABT is the same as that of typical breast cancer, which is dependent on nodal axillary metastasis.[10]

CONCLUSION

ABT is a rare condition, accounting for less than 1% of breast cancers. The diagnosis of this rare condition is often missed, so we recommend comprehensive breast examinations up to the milk line and triple diagnostic assessments for cases of axillary masses. The management of accessory breast cancer follows the same principles as that of breast cancer consisting surgery, radiotherapy and chemotherapy. This case report contributes to the limited literature on accessory breast cancers, emphasizing the need for increased awareness and prompt detection of this rare condition amongst clinicians.

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