

Primary Breast Carcinoma in Accessory Axillary Breast Tissue: A Case Report

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ABSTRACT

Accessory axillary breast carcinoma is unusual, with an incidence of 0.2 to 0.6%. It is commonly located in the axilla; however, it may be seen anywhere along the milk line. Development is hormone-dependent, similar to normal breast tissue. Here, a 65-year-old postmenopausal multiparous woman presented at the Surgery Outpatient Department (OPD) with a complaint of a lump in her left axilla with multiple overlying skin ulcers for the past four months. A routine bilateral mammogram was performed, which showed a well-defined hypoechoic area measuring 1.2×1.0 cm with no lymph nodes and calcification over the left accessory breast tissue. A wedge biopsy of the lesion revealed Invasive Ductal Carcinoma (IDC). She underwent a left modified radical mastectomy with an extended incision to the left axilla. She also received neoadjuvant chemotherapy with close follow-up. Recent studies suggest that there is no additional advantage with mastectomy over total excision of accessory breast tissue. Axillary clearance is performed if preoperative lymph node biopsy is positive. Early diagnosis and differentiation of accessory breast cancer are the keys to the effective management of the cancer.

CASE REPORT

A 65-year-old postmenopausal multiparous woman presented to the surgery OPD with a complaint of a lump in her left axilla with multiple overlying skin ulcers for the past four months. The patient stated that the axillary mass had been present since puberty and had been gradually increasing in size for four months. There was no history of any comorbidities or family history of malignancy. It was first encountered when the patient experienced sudden pain and tenderness over the left axillary region. No palpable lump was present over the normal breasts.

On examination, she had a 3×2 cm lump in her left axilla with a palpable, mobile, and ipsilateral axillary lymph node. There were two ulcers present over the axillary region- 2×1 cm and 1×1 cm in oval shape, with everted margins, sloughed off floor, fixed to deeper structures, and palpable in the left axilla [Table/Fig-1]. Systemic examination was normal.



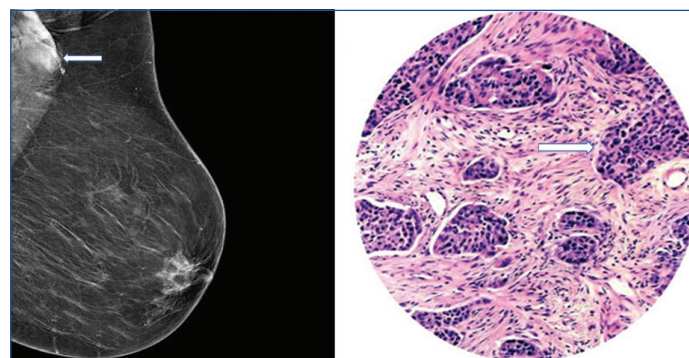
[Table/Fig-1]: Clinical photograph-left axillary lump with ulcerations as depicted by arrow.

Routine bilateral mammogram showed a well-defined hypoechoic area measuring 1.2×1.0 cm with no lymph nodes and calcification over the left accessory breast tissue [Table/Fig-2]. Magnetic Resonance Imaging (MRI) of bilateral breasts was done, revealing bilateral accessory breasts: (a) Breast Imaging Reporting and Data System-2 (BIRADS-2), a benign finding with left accessory breast

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with associated mild focal skin thickening and mild disruption of the skin; (b) BIRADS-4c lesion and enlarged left axillary lymph nodes with foci of calcifications.

A confirmatory wedge biopsy of the left axillary lesion was taken and sent for histopathological examination, suggesting IDC of no special type [Table/Fig-3]. Immunohistochemistry analysis was also performed, which included Oestrogen receptor (ER), Progesterone Receptor (PR), and Her2neu markers. ER came positive in 20% of cells, whereas PR and Her2 receptor markers were negative [Table/Fig-4].



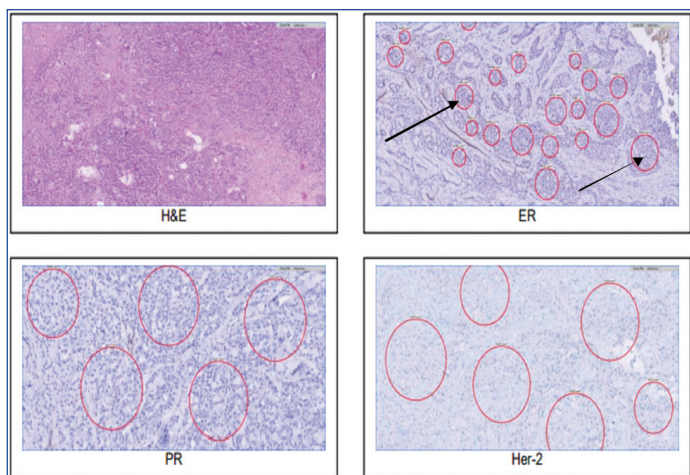
[Table/Fig-2]: Left breast and axilla mammogram (mediolateral oblique) showing a well-defined hypoechoic area and calcification over left accessory breast tissue depicted by arrow.

[Table/Fig-3]: H&E-stained histopathology slide (400x) of IDC of accessory breast showing pleomorphic tumour cells depicted by arrow. (Images from left to right)

Following staging work-up, a diagnosis of carcinoma in the left accessory axillary breast, T4N1M0, was given. She received three cycles of neoadjuvant chemotherapy every three weeks. She was counselled, and consent for modified radical mastectomy was taken over wide local excision as the patient lives far away from the hospital and may have poor follow-up. Hence, the patient underwent a left modified radical mastectomy extended to the left axilla, and follow-up was planned.

DISCUSSION

The 'milk line,' which runs bilaterally on the ventral aspect from the anterior axillary fold to the groin, normally rolls during embryogenesis except in the thoracic region to give rise to breast tissue [1]. Accessory mammary carcinoma is very rare, accounting for 0.3-0.6% of all



[Table/Fig-4]: H&E stained Immunohistochemistry slides (100x) of specimen showing ER, PR, H&E status. The red circle here depicts tumour cells exhibiting nuclear staining for ER (20%), PR (0%), and HER-2 with no staining of cells.

breast cancer cases [2]. The most common pathology is IDC (50-75%). It is commonly located in the axilla (60-70%), infra-mammary region (5-10%), and infrequently found in the thighs, perineum, groin, and vulva [2].

Cancers arising from accessory breast tissue can have poor outcomes. This may be attributed to delayed presentation and diagnosis due to unclear investigative pathways. Therefore, axillary breast tissue should always be assessed through triple assessment, which includes careful clinical examination, mammogram or ultrasound scan, and biopsy when indicated [3]. Routine mammograms can miss accessory breast tissue; therefore, we performed an MRI scan, which is a useful modality for excluding occult breast cancer [4]. MRI can also help differentiate accessory breast cancer from carcinoma of the axillary tail of the breast and axillary lymph node metastasis, rather than primary breast cancer. MRI should also be considered in patients with very dense anatomical breasts where a mammogram may not provide a complete diagnosis. Additionally, the presence of breast glandular tissue and the absence of lymphoid tissue in histopathology can help rule out metastatic lymph nodes [5].

A metastatic work-up is completed once a diagnosis has been established through core biopsy. It includes a Computed Tomography (CT) scan and a bone scan to rule out distant metastasis from another primary cancer. In our case, Contrast-Enhanced Computed Tomography (CECT) of the chest and abdomen showed no evidence of metastasis elsewhere in the body.

The delay in diagnosing primary axillary breast carcinoma can also delay treatment because there are no standard treatment strategies [5]. Operable tumours can be well managed through wide local excision with or without axillary dissection [6,7]. Sentinel Lymph Node Biopsy (SLNB) is performed to determine the need for axillary dissection [7]. Evans DM and Guyton DP observed that patients undergoing wide local excision alone showed no signs of disease postoperatively [8]. They also found that early reappearance was similar between patients undergoing wide local excision and radical

mastectomy, and patients who developed distant metastasis did not have any evidence of the lesion in the ipsilateral breast. Adjuvant chemotherapy and hormonal therapy are considered in the same way as for normal breast carcinoma. In the present case, the patient was counselled about the surgery and given the choice between wide local excision and modified radical mastectomy. She opted for radical modified mastectomy due to her remote residence and potential challenges with follow-up. As part of the procedure, Axillary Lymph Node Dissection (ALND) was performed. However, ALND can be avoided in patients who meet the ACOSGZ0011 criteria, which state that it is safer to omit ALND in cases with 1-2 positive lymph nodes [9]. According to Giuliano AE et al., ALND can be avoided if the tumour is T1 or T2 or if there are 1-2 positive nodes on SLNB [9]. Radiotherapy plays an important role in the management of locally advanced breast cancer. Postmastectomy, it reduces the risk of loco-regional failure and improves disease-free survival in high-risk women with breast cancer [10].

Due to the low incidence of the disease and the resulting lack of clinical awareness, appropriate disease management is often delayed. Accurate identification of accessory breast tissue is important in the differential diagnosis of axillary tumours. Early identification of this disease by clinicians, pathologists, and radiologists, as well as effective communication among them, are important factors in preventing misdiagnosis of malignancy and unnecessary extensive surgery.

CONCLUSION(S)

Primary carcinoma in accessory breast tissue is a rare condition. Wide local excision, with or without axillary dissection, is considered an effective surgical management approach, thus avoiding the need for ipsilateral mastectomy. Additionally, modified radical mastectomy with extended excision of accessory breast tissue can be performed in such patients; however, it does not provide any additional benefits and is typically reserved for patients who may have poor follow-up for adjuvant chemotherapy and radiotherapy.

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