Axillary breast cancer in a Nigerian woman

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Abstract

Ectopic breast cancer is rare and diagnosis is commonly delayed. We report the case of a 34-year-old Nigerian woman with a locally advanced invasive ductal carcinoma in the axillary breast. She underwent an axillary mastectomy and is due to receive adjuvant chemotherapy and radiotherapy. The management of this patient is discussed in relation to existing medical literature on the subject.

Ectopic breast cancer arises from aberrant tissue or supernumerary breasts. Ectopic tissue occur along any point of the mammalian ridge following failure of the mammalian ridge regression in embryologic development.\(^1\) It has been estimated that such breast tissue occurs in up to 6% of the general population.\(^2\) It commonly occurs in the axilla and may include pectoral breast components of the glandular tissue, nipple and areola.\(^1,2\) These areas are subject to all the physiological changes and diseases of the normal breast including malignant change.\(^3\)

Ectopic breast cancer is rare and estimated at 0.3% of all breast cancers.\(^4\) An increased risk for ectopic breast cancer from aberrant breast tissue was suggested by one study.\(^1\) This increased risk has not being reproduced in other studies.\(^5,6\)

Case report

A 34-year-old southern Nigerian lady presented with a left axillary swelling of 4 months’ duration. The swelling was initially painless but became painful in the last 2 months. Her menarche, age at first confinement, parity, and breastfeeding histories could not be ascertained from the records. She did not use oral contraceptive pills.

There was no family history of breast cancer. The patient had previously received antibiotics for an axillary abscess but with no effect. General examination was unremarkable. She had bilateral axillary breasts with a hard swelling in the left axillary breast (Figure 1).

Swelling involved the entire axillary breast, which was 6 cm in largest diameter, hard, and with some tenderness and fixity. There were palpable axillary lymph nodes around the tumour. An axillary mastectomy with lymph nodes excision was done. Histology showed an invasive ductal carcinoma (Figures 2A and 2B) with positive axillary lymph nodes. Hormonal therapy with tamoxifen was commenced.

The patient will receive chemotherapy and radiotherapy.
Figure 1. Clinical picture of axillary breast cancer

Figure 2A. Malignant epithelial neoplasm with glandular differentiation

Figure 2B. Foci of sweat gland acini and ducts as well as adjacent breast lobular acini
Discussion

The relatively obscure location of ectopic breasts is a contributory factor in the delayed diagnosis of ectopic breast cancer. Its rarity also contributes to a low index of suspicion for the physician. Instead, benign diagnoses of axillary swellings including axillary lymph node, sebaceous cyst and lipoma are commonly entertained.

In our case, an earlier diagnosis by a primary care physician of an axillary abscess caused a delay in her referral to us. We advocate a low threshold for fine needle aspiration cytology or biopsy for swellings occurring in an ectopic breast to curb delayed diagnosis: as singular reliance on clinical diagnosis may cause delay.

The tumour commonly presents with axillary lymph node metastases exemplified in our case. This is explained by early dissemination to axillary lymph nodes due to close proximity and delayed diagnosis of this obscure and uncommon disease.

Evans et al analysed 82 reported cases spanning nearly 6 decades out of which 45 were followed up, half of these patients had recurrences within a year. Only 4 long-term survivors were reported, one of whom had adjuvant chemotherapy. Although this review series had largely dismal outcomes, the relative absence of adjuvant chemotherapy in this series must be considered when reporting the high recurrence and low survival. Comparable outcomes are obtained when ectopic breast cancer is matched stage for stage with breast cancer.

The primary breasts in our case were normal bilaterally. Axillary breast cancer usually occurs at the exclusion of the primary breast. However, subsequent cancer in the ipsilateral pectoral breast was noted in three patients previously diagnosed with axillary breast cancer in a series by Marshal et al. Although the nature of relationship between the disease entities was not concluded in these cases, the occurrences were exceptionally noted.

The tumour in our case was attached to the axillary floor and skin with lymph node involvement indicating local advancement. The history indicated an observed duration of 4 months. This brings to the fore the early lymph node involvement and thus metastatic potential of the disease. This is attributed to its proximity to axillary lymph nodes with associated prognostic implications.

Our case had an axillary mastectomy with excision of lymph nodes. The primary breast was spared. In the large series by Evans et al, radical mastectomy involving the axillary and primary breast did not confer any survival advantage over a more limited axillary mastectomy with lymph node dissection/radiotherapy. This usually correlates with non-involvement of the ipsilateral primary breast. However screening of the ipsilateral breast using mammography and MRI is advised.

Adjuvant chemotherapy is due for this case. Although its role has not being studied in large series, the treatment model for axillary breast cancer is fashioned after that for primary breast cancer, as they are embryologically related. The axillary lymph node involvement in our case necessitated systemic treatment. However chemotherapy and radiotherapy adjuvants has also been advised for node-negative disease.

Radiotherapy to the breast with a boost to the axilla has been advised by some workers. Its significance in the management of this rare cancer is yet to be determined.
Conclusion

Axillary breast cancer awareness should be promoted among healthcare professionals and the lay public. We advocate a low threshold for fine needle aspiration cytology or biopsy for axillary lumps. Singular reliance on clinical diagnosis may cause delay in diagnosis.

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References:


