CASE REPORT

INFILTRATING DUCTAL CARCINOMA OF THE BREAST PRESENTING AS BREAST ABSCESS

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ABSTRACT

Invasive ductal carcinoma, also known as Infiltrating Ductal Carcinoma (IDC) is the most common form of breast cancer. IDC starts in the breast's milk ducts and invades the surrounding breast stroma. Breast cancer usually present as a: swelling of all or parts of breast, skin irritation or dimpling, breast pain, nipple pain or retraction, redness or scaliness or thickening of the nipple or breast skin, nipple discharge other than breast milk, or a lump in the axilla. We present a case of a 40 year old female, with no family history of malignancy, who underwent Incision and Drainage (I &D) for Right Breast Abscess 2 months back followed by a non-healing wound at the I & D site, associated with fungating growth and Right axillary lymph node enlargement, diagnosed as IDC with Axillary lymph node metastasis. Immunohistochemical studies showed deficient basement membrane and myoepithelial layer confirming the infiltrative nature.

Keywords: Breast Cancer, Infiltrating Ductal Carcinoma, Breast Abscess, Axillary lymph node metastasis, Triple negative breast carcinoma.

INTRODUCTION

Breast cancer is one of the leading cause of death among women and threatens the lives of 1 - 2 million women worldwide[1]. IDC is the most common type of the breast cancer and constitutes approximately 70% - 85% of all invasive breast cancers[2]. The presentation of malignancy as a breast abscess is well described, however to our knowledge, this is the first case of pure IDC presenting as breast abscess. We report a case of IDC with axillary metastasis which initially presented as breast abscess.

CASE REPORT

A 40 year old non-lactating female with no family or past history of malignancy and blessed with 3 children, presented with rapidly progressing lump along with a non-healing previous I & D site wound in the right breast for the past 2 months. She had underwent I & D for right breast abscess which presented as a painful breast swelling associated with fever and diagnosed on Ultrasound as 9.5 x 5 cm heteroechoic lesion in the upper medial and lateral quadrant with shaggy walls and internal liquefaction along with multiple evolving abscess in upper and lower lateral quadrants.

On local examination, 23x20x15 cm lump in right breast along with fungating wound of size 10 x 8 cm in upper outer quadrant with multiple dilated veins over the entire right breast with 3x2 cm hard, fixed lymph node in the Right axilla (anterior group)(figure 1). USG right breast showed a large heterogeneous mass with internal vascularity, suggestive of breast carcinoma with axillary lymphadenopathy.

Fig 1: A fungating growth in the post I&D wound site with multiple dilated veins over the right breast

Toilet Mastectomy and axillary lymph node dissection was done. Histopathology revealed specimen measuring

25x23x12 cm with tumor measuring 20x18x12 cm showing infiltrating ductal carcinoma (figure 2).

Immunohistochemical (IHC) study showed deficient basement membrane and myoepithelial layer. ER and PR negative and Her 2 protein negative (Triple negative breast cancer).It also revealed a single Axillary lymph node with metastasis. Patient was referred to Department of Medical Oncology for Chemotherapy.

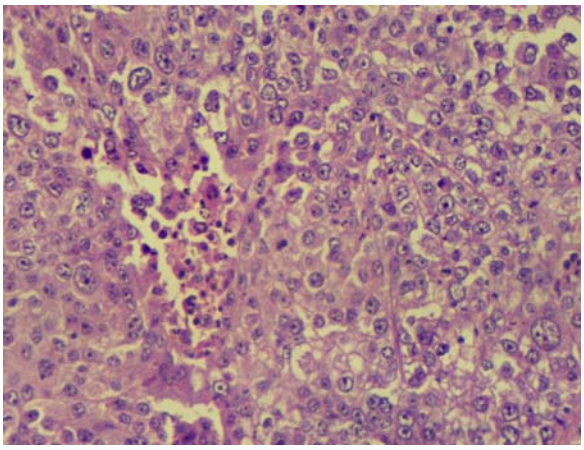

Fig 2: Infiltrating ductal carcinoma of breast with Modified Bloom Richardson Grade 3.

DISCUSSION

Malignant breast tumors are broadly divided into epithelial tumor of the cells lining the ducts and non-epithelial malignancy of the surrounding stroma. IDC is the commonest pathological type accounting for over 70% of invasive breast cancers. Infiltrating lobular, medullary and colloid carcinoma, paget's disease and other pure and combined types constitute the remaining 30%[3].

Most of the breast cancer will present as a hard lump, which may be associated with indrawing of the nipple. As the disease advances locally there may be skin involvement with peau d'orange or frank ulceration and fixation to the chest wall[4].

It should also be remembered that though breast infections may sound simple, more serious conditions such as primary squamous cell carcinoma and primary breast lymphoma have been reported to present initially with breast abscess masking the original diagnosis[5,6].

IHC is very useful in assessment of invasion. In the ideal world, invasive cancers are characterised by lack of both basement membrane and myoepithelial cells. A number of myoepithelial markers including S100, Alpha smooth muscle actin, smooth muscle myosin heavy chain (SMM-HC), Calponin and High molecular weight Cytokeratin (HMW- CK) are available with different sensitivities and specificities. SMM-HC is thought to be the most specific while other though quite sensitive but are less specific. Some other myoepithelial markers include Maspin, CD10 and p63. Amongst these markers p63 is partially useful as it stains the myoepithelial nuclei only with high sensitivity and specificity[7].

Mammography can show, skin thickening, and asymmetric density, a mass, or distortion ; these signs are not specific for carcinoma and may reflect only the underlying infection and breast abscess. On the other hand, the presence of suspicious micro-calcification is a more specific sign and should lead to biopsy to rule out carcinoma[8,9].

Since this tumor lacked expression of Estrogen receptor (ER), Progesterone receptor (PR) and Human Epidermal Growth factor- 2 (HER-2), (Triple negative) there is no role for hormonal or HER-2 directed therapy. Triple negative breast cancer is generally sensitive to chemotherapy, but patients with these tumor have a worse survival compared to patients with ER- positive subtypes[10].

In conclusion, it is important to consider IDC in the differential diagnosis of breast abscess when there is no initial clinical response to drainage of abscess or to the administration of broad spectrum antibiotics. Complicated cysts and breast abscess should always be evaluated through histopathological examination. It is important to develop a strategy for its early detection and treatment.

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