



RARE CASE OF INFLAMMATORY CARCINOMA BREAST MISDIAGNOSED AS BREAST ABSCESS

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ABSTRACT

Breast carcinoma which imitates an abscess is very rare and accounts for 1-5 % of all cases of breast carcinomas – this is frequently inflammatory carcinoma¹. Such a manifestation of a neoplasm may provoke a late diagnosis and treatment.

KEYWORDS : Breast carcinoma, breast abscess, Inflammatory carcinoma breast

INTRODUCTION

A breast infection, also known as breast abscess is most common amongst women who are breastfeeding. This is also known as lactation mastitis. Mastitis also occurs in women who aren't breastfeeding, but this is not as common. Other known types of mastitis include granulomatous mastitis and tuberculous mastitis of breast. However both of these conditions are rare. Very rarely carcinoma of breast may present as an abscess.

CASE REPORT

52 year old lady wife of railway clerk, resident of Govandi, Mumbai had history of fever and left breast lump and fever since the last 15 days. Patient was evaluated in a private hospital considering a diagnosis of left breast abscess. Pre operative routine blood investigations were within normal limits except elevated total leukocyte counts. Pre operative ultrasonography of left breast was suggestive of a large mass lesion in left breast measuring 7 cms x 6 cms x 7 cms with a large area of central liquefaction with internal septations and minimal vascular in its peripheral region, left nipple retraction with inflammatory skin changes around the lesion. Also presence of bilateral multiple enlarged lymph nodes. A final conclusion of possibility of neoplastic etiology was drawn based on ultrasonography findings. FNAC was done from the lump was suggestive of left breast abscess with atypical ductular lesion. Patient subsequently underwent incision and drainage of left breast abscess along with wide local excision of left breast lump. Final histopathology reports were suggestive of infiltrating duct carcinoma NOS type III, margins of excision are 0.5 to 1 cm away and overlying skin was not involved by tumour with areas of haemorrhage and necrosis. On immunohistochemistry a triple negative disease was noted. Patient then presented to surgical opd at central railway hospital byculla with a large wound over the left breast. On clinical examination patient was conscious and well oriented, afebrile and vitally stable. On examination of breast, there was a large open wound 15 x 10 x 8 cms in size with presence of minimal slough and pale granulation tissue and seropurulent foul smelling discharge. Presence of left multiple axillary lymph nodes was noted. Right breast and axilla were unremarkable. Systemic examination was within normal limits. Patient was subsequently evaluated further for metastasis considering a provisional diagnosis of locally advanced breast cancer. Metastatic workup was done in the form of pet CT which was negative for any systemic metastasis. After obtaining fitness patient was planned for completion left modified radical mastectomy. Post operative recovery was uneventful and drains were removed on post operative day 13. Final histopathology report was negative for any residual tumor and 15 axillary lymph nodes were detected, all negative for malignancy. Patient is now being planned for adjuvant chemotherapy and radiotherapy.



Clinical Photo 1. Wound on admission (frontal view)



Clinical Photo . Wound on admission (lateral view)

DISCUSSION

Inflammatory breast cancer is a rare and very aggressive disease in which cancer cells block lymph vessels in the skin of the breast. This type of breast cancer is called “inflammatory” because the breast often looks swollen and red, or inflamed and is often mistaken to be an infective rather than neoplastic condition².

Epidemiology

Inflammatory breast cancer is rare, accounting for 1 to 5 percent of all breast cancers. It may occur in all adult age groups, however majority of patients lie between 40 and 59 years old, The overall rate is 1.3 cases per 100000, black women (1.6) have the highest rate, Asian and Pacific Islander women the lowest (0.7) rates³.

Most known breast cancer risk predictors do not apply for inflammatory breast cancer.

Signs and Symptoms

Symptoms of inflammatory breast cancer include edema and erythema that affect a third or more of the breast. In addition, peau d'orange may be noted. More often than not a tumor may not be clinically palpable, hence requires an imaging modality for diagnosis such as ultrasonography or mammography⁴.

Other symptoms of inflammatory breast cancer may include, however not necessarily all of the following, i.e. rapid increase in breast size; sensations of heaviness, burning, or tenderness in the breast; or inverted nipple, dimpling, axillary lymphadenopathy.

Minimum criteria for a diagnosis of inflammatory breast cancer include the following:

- A rapid onset of erythema covering atleast 1/3rd of breast ,breast edema, and a peau d'orange appearance.
- The above-mentioned symptoms have been present for less than 6 months.
- Initial biopsy samples from the skin showing invasive carcinoma is the most reliable method for diagnosis

Mammography, MRI or ultrasound often show suspicious signs; however in a significant proportion of cases they would miss a diagnosis. Above mentioned Clinical presentation is typical only in 50-75% of cases; and many other conditions such as mastitis or even heart insufficiency can mimic the typical symptoms of inflammatory breast

cancer.

Further examination of tissue from the affected breast should include testing to see if the cancer cells have hormone receptors (estrogen and progesterone receptors) or if they have greater than normal amounts of the *HER2* gene and/or the HER2 protein (HER2-positive breast cancer).

Imaging and staging tests include a diagnostic mammogram and an ultrasound of the breast and axillary lymph nodes. A PET scan or a CT scan may be done to assess for systemic metastasis.

Pathological characteristics

Inflammatory breast cancer shows a high grade of aneuploidy, with mutations and overexpression of p53, high levels of E-cadherin and abnormal cadherin function and is often considered to be systemic cancer. A large number of IBC cases present as triple negative breast cancer (TNBC). Also, there is a high rate of relapses and metastases due to its aggressive nature and corresponds with poor survival. It is also associated with loss of LIBC and WISP3 expression. Also, the tumors are highly angiogenic and vascular, with high levels of VEGF and bFGF expression^{6,7,8,9}.

Staging

The hallmark of inflammatory breast cancer is the presence of cancer cells in the subdermal lymphatics on skin biopsy. Consequently, it is always staged at stage IIIB or above as locally advanced disease.

IBC is typically diagnosed in one of these stages:

- Stage IIIB - at least 1/3 of the skin of the breast is affected, and may have spread to tissues near the breast, such as the skin or chest wall, including the ribs and muscles in the chest. The cancer may have spread to lymph nodes within the breast or under the arm.
- Stage IIIC - N3 nodal involvement with an inflamed breast will upgrade the disease from Stage IIIB to Stage IIIC.
- Stage IV means that the cancer has spread to other organs. These can include the bones, lungs, liver, and/or brain⁶

Treatment

Surgery has a limited role in the treatment of IBC because it is considered essentially a systemic cancer. The standard treatment for newly diagnosed inflammatory breast cancer is to receive systemic therapy prior to surgery. Achieving no disease in the surgical samples gives the best prognosis. Surgery is modified radical mastectomy. Lumpectomy, segmentectomy, or skin sparing mastectomy is not recommended. Immediate reconstruction is not recommended. Upfront surgery is contraindicated. After surgery, all cases are recommended for radiation therapy unless it is contraindicated¹¹.

CONCLUSION

Breast carcinoma is the most common malignancy in females in India. Despite the high prevalence rates, it largely remains undiagnosed or diagnosed at an advanced stage. The reason behind this remains largely due to patient ignorance in the form of "no pain, no problem!" as usually it is not associated with pain in early stages. Also a small number of cases may be misdiagnosed due to an enigmatic presentation in the form of an abscess, as with the patient discussed above. In such cases where a history of lump in an elderly female preceding an abscess is elicited, our approach should be towards considering malignancy unless proved otherwise. Patient should be subjected to "triple assessment" i.e. thorough clinical examination along with imaging and histopathology examination.

High risk patients should be counselled regarding risks and regular follow ups. Screening should be done for all females above the age of 40 years.

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