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Case Report

Synchronous Vulvar- Breast Cancer Metastasis: Case Report and Review of the Literature

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Abstract

Background: Breast cancer is categorized as a systemic disease for many decades. Its potential tendency to metastasize was the initiator for the multidisciplinary combined efforts in management. Common sites for metastasis include: liver, lung, bones and brain. Atypical breast metastases are of rare occurrence.

Case report: This report presents a case breast cancer with metastasis to Vulva.

Conclusion: Breast cancer has the free tendency to metastasize to any remote site. Thorough clinical assessment and combined care is the essence of the diagnosis and management.

Keywords: Breast cancer, Metastasis, Vulva

Case Report

A 55 years old pre- menopausal housewife with pure Yemeni ancestry and negative history of breast cancer, presented with slow growing right breast mass discovered six months prior to the presentation. She denied any history of other associated lesions or symptoms.

Clinical examination of the breast revealed an ill-defined lobulated firm fixed 4x4 cm. mass in the upper outer quadrant with skin attachments and palpable multiple matted axillary lymph nodes. A concealed history of an ulcerating lesion on the vulva of two years duration was revealed during the examination. It was an ulcerating bleeding mass localized to the right side of the labia major with palpable firm mobile bilateral inguinal lymph nodes.

There was no other gross abnormality detected on the remaining clinical evaluation (Figure 1).

Bilateral mammograms

Bilateral mammograms confirmed the clinical findings and reported a right breast lesion with classical findings of malignancy with skin attachment, BIRADS 5 (Figures 2 and 3).

Biopsy from both the right breast and the vulvar lesion revealed the diagnosis of Invasive ductal carcinoma. Grade II. Estrogen(ER), Progesterone (PR) and Her2 were positive. In addition to ER, PR, and Her2 positivity for the vulvar lesion Mammoglobin Positive, CPDF-!5 focally positive, Pan CK positive , HM45, Mart-1 and P63 were negative, thus the diagnosis of metastatic breast cancer to the vulva was confirmed (Figures 4-7).

CAP-CT-Scan revealed suspicious sub-centimeter multiple subcutaneous nodules Suggestive of subcutaneous metastatic deposits affecting the trunk and lower back otherwise no other metastasis were detected (Figures 8a and 8b).

In view of the Patient's condition she was labeled T4 N2 M1.

Patient progress

Based on the Multidisciplinary team decision the patient received 8 cycles of Neo-adjuvant chemotherapy with excellent clinical response to all gross lesions, except

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Figure 1: Vulva lesion with ulceration

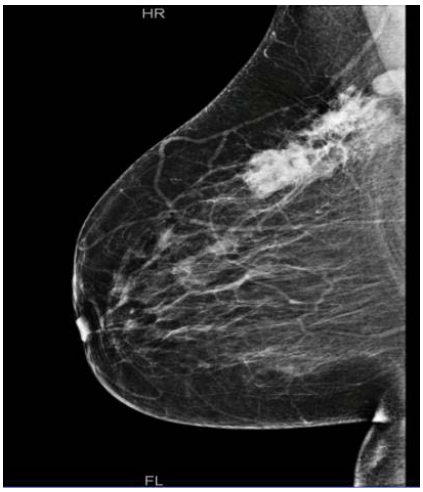

Figure 2: Right Mammogram RMO view

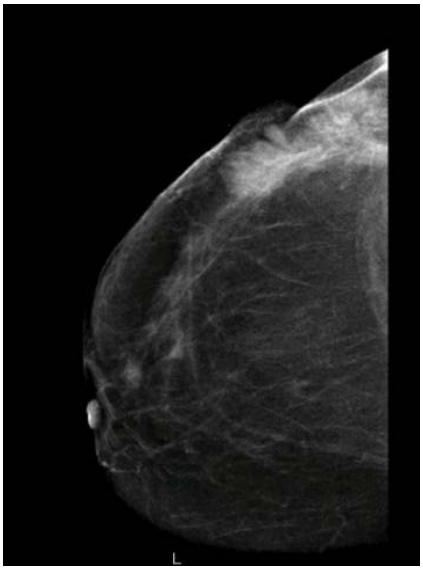

Figure 3: Right Mammogram RCC view

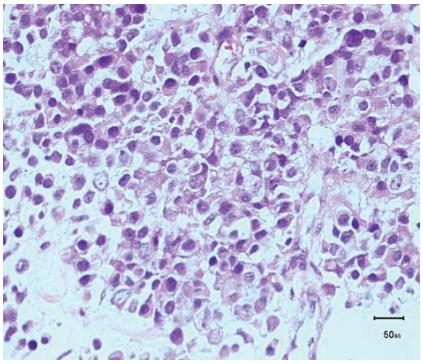

Figure 4: (high power) Right Breast Biopsy showing IDC Vulvar lesion showing IDC

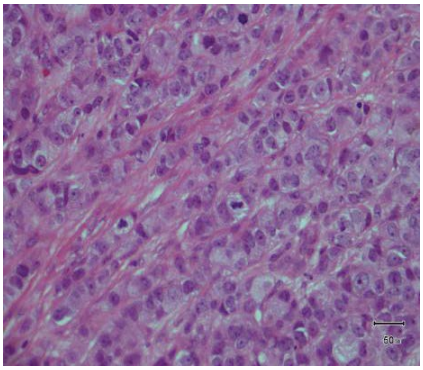

Figure 5: (high power) Vulvar lesion showing IDC

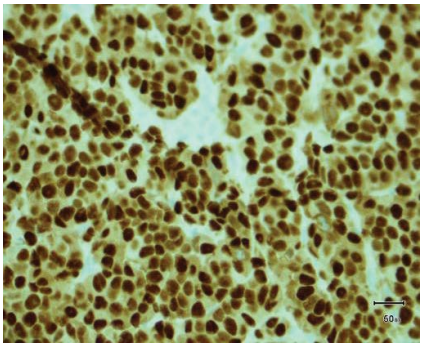

Figure 6: (high power) Right Breast ER positive

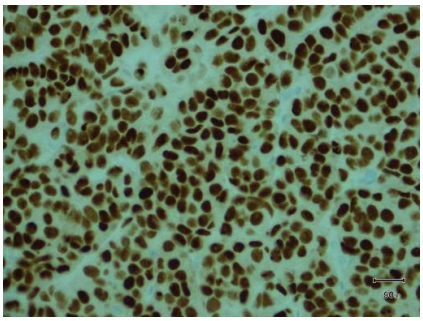

Figure 7: (high power) Vulvar lesion ER positive

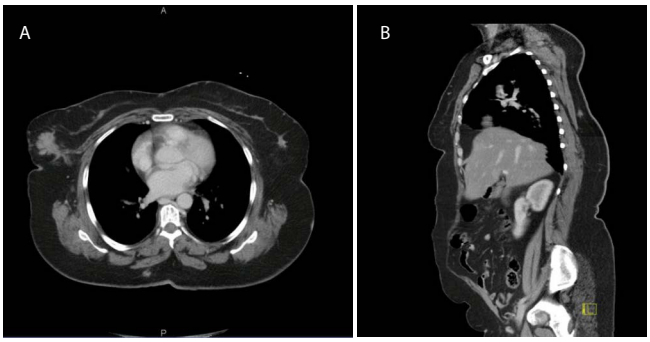

Figure 8a: CT-CAP. Coronal **8b:** Sagital Views showing the subcutaneous metastatic nodules

Figure 9: Complete clinical response to Neo- adjuvant chemotherapy

for the matted palpable right axillary nodes which showed mild reduction in size. Right mastectomy and node picking of the grossly affected nodes revealed 14\14 nodes with metastatic deposits. The gynecologist opted for local radiotherapy on no surgical intervention at this time. Patient is currently on hormonal therapy. On six months follow up patient remained well with no evidence of relapse or recurrence (Figure 9).

Breast cancer is the commonest malignancy among females worldwide and in particular is of more prevalence in the developed world [1,2]. It poses tremendous burden on the health services especially in countries with limited resources.

Its potential tendency to metastasize was the main initiator for the multidisciplinary combined efforts in modern medicine. Common sites for metastasis include: liver, lung, bones and brain. Atypical breast metastases are of rare occurrence and these include the peritoneum, hollow viscera, and internal reproductive organs [3].

Primary cancers of the vulva are rare accounting for less than1%, with metastatic vulvar cancer account for 5-8% of all vulvar cancers rendering it an extremely rare event [4].

Embryological description of the mammary line states that it extends from the axilla to the groin. Rudimentary breast tissue may fail to absorb in utero and remain along the line as accessory breasts or accessory nipples. Cancers originating from remnant of ectopic breast tissue may create a challenge in the diagnosis. A reliable method of differentiation between the primary breast cancer arising in ectopic tissue of the vulva or metastatic carcinoma is generally based on histo-pathological diagnosis of normal mammary tissue coexisting with the carcinoma [5].

Hartnug, et al. in 1872 reported the first case of mammary-like glands in the vulvar region, many reports of various breast lesions in the genital region emerged since, the first case reported of Vulvar breast cancer metastasis was in 1964 as a metachrenous metastatic lesion discovered six years after her initial presentation [5,6].

Approximately 3.5-10% of patients with newly diagnosed breast cancer present with concurrent metastatic disease [7].

Tumors such as Phyllodes of the breast are rare yet there has been a report as metastatic phyllodes tumor of the vulva [5].

Reported metastatic tumors of the vagina are more common than the primary ones, mostly due to direct local invasion from the female urogenital tract. Breast cancer metastasis to the vagina is also of rare occurrence [8,9].

Patients with metastatic breast cancer have traditionally been considered incurable with conventional treatment. They are usually spared many modalities of treatment and direct treatment to pain control and palliative care. Emerging encouraging reports documenting improved survival in metastatic disease in 5-10% with more than 5 years survival, and 2-5% with more 10 years survival [10].

Conclusion

Breast cancer has the free tendency to metastasize to many remote sites. Thorough clinical assessment and combined care is the essence of diagnosis and management. Clear and well planned management of metastatic breast cancer improve local control and disease free survival.

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