Case Report

Cutaneous metastasis involving face in breast cancer: A series of three patients

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ABSTRACT

Breast carcinoma is the most common malignancy encountered in clinical practice presenting with cutaneous metastasis (CM). CM all over the body with involvement of eyelids is very rare. Here, we present a case series of three patients, two with common nodular metastasis to facial skin and one, a rare case of carcinoma breast with multiple diffuse CM all over the body and face involving eyelids.

Key words: Breast cancer, cutaneous metastasis, eyelids, facial involvement

INTRODUCTION

Breast cancer is the most common cancer in women and is the most common cause of cancer-related deaths among women worldwide. About 20% of women with early breast cancer will develop metastases most commonly to liver, lung, and bone.[1] Cutaneous metastases (CM) are one of the most distressing presentations of metastatic breast cancer.[2] The clinical diagnosis of cutaneous metastasis secondary to breast carcinoma is based on pathological reports of biopsy specimen. The prognosis of cancer breast with CM depends primarily on the pathology and biological behavior of the primary tumor and its response to treatment. CM from breast cancer usually occurs in advanced stages and the treatment outcome is poor. However, they can be the presenting lesions.[3] Histologically, these metastases usually show features reminiscent of the primary breast malignancy, but with variable degrees of differentiation.[4]

Access this article online	
Quick Response Code:	Website: www.ccij-online.org
	DOI: 10.4103/2278-0513.142668

CASE REPORT

Case report 1

A 45-year-old woman presented with 1-year history of progressive appearance of multiple nodular lesions all over the body except lower legs. The lesions were more concentrated over the face. Three years earlier, she was diagnosed with invasive ductal adenocarcinoma of the right breast with secondaries to axilla and spine (D4 vertebra). The stage was T4bN1M1 and estrogen receptor (ER) focally positive, progesterone receptor (PR) negative, and Her 2 neu negative. She was treated with chemotherapy and palliative radiotherapy was given to breast and spine. Physical examination revealed multiple round oval, nodular, flesh-colored exophytic lesions, with firm to hard consistency, smaller lesions were umbilicated. The lesions were scattered on the abdomen, back, shoulders, and face. On the face, lesions were more concentrated around eyebrow, eyelids, and lips [Figure 1]. The facial lesions were larger, harder, skin colored, and some lesions were covered with necrotic slough while some of them were ulcerated. The lesions were painless, non-pruritic. The skin around the nodules was firm and indurated on palpation. Dermatology opinion was taken and 5-day course of antibiotic and acyclovir was prescribed. She reported after 5 days with no change in the cutaneous lesions. An incisional biopsy of the infiltrated nodule was performed that revealed nodular aggregates of the tumor forming glandular structures and

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solid sheets in the deep dermis, consistent with metastatic adenocarcinoma [Figure 2]. Immunohistochemistry (IHC) from these lesions revealed positive staining for ER and gross cystic disease fluid protein (GCDFP) suggestive of metastatic breast adenocarcinoma [Figure 3]. The patient was prescribed taxane-based chemotherapy. After four cycles, the primary lesion is under control and facial lesions have regressed but not completely disappeared.

Case report 2

A 40-year-old female, a known case of infiltrating ductal breast carcinoma T2N1M0, ER, and PR positive was successfully treated by modified radical mastectomy (MRM) with axillary lymph node clearance. She also received chemotherapy (5-fluorouracil, adriamycin, cyclophosphamide (FAC regimen). and radiotherapy 1 year back. Now she presented with painless swelling over forehead, chest, back, and left supraclavicular area [Figure 4]. Biopsy was taken from the skin lesion which revealed metastatic adenocarcinoma. On IHC, staining for ER, PR, mammaglobin [Figure 5] and GCDFP were positive which confirmed metastasis from breast adenocarcinoma. A clinical diagnosis of cutaneous metastasis of breast carcinoma with secondary supraclavicular lymphadenopathy was made. She was given taxane-based chemotherapy.

Case report 3

A 43-year-old female post chemotherapy (FAC regimen), post radiotherapy, having infiltrating ductal carcinoma of right breast T3N1M0 presented with skin nodule over forehead for 1 month. Patient had also undergone MRM with axillary clearance before starting chemotherapy. Now, the patient was on tamoxifen. Biopsy of skin nodule showed features of metastasis from the primary site.

DISCUSSION

Cutaneous metastatic breast carcinoma must be distinguished from a wide variety of other malignant and benign neoplasms using histology. Breast carcinoma is the the most common malignancy with skin metastases encountered in clinical practice. Cutaneous metastases account for 0.7-9% of all metastases.[5,6] The lesions usually occur in close proximity to the area of primary tumor.

Figure 1: Photograph showing multiple nodular facial metastases involving all four eyelids

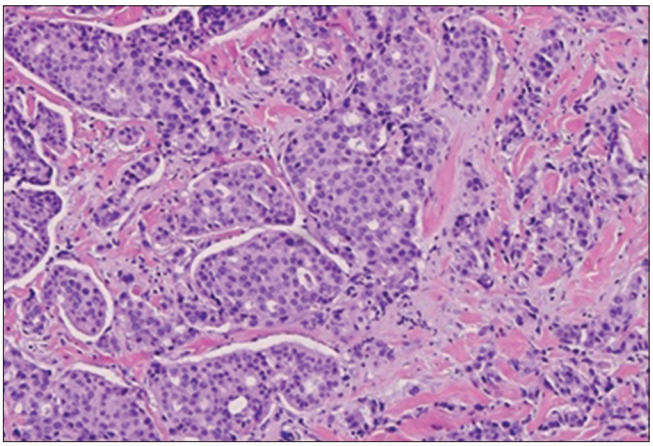

Figure 2: Photomicrograph showing glandular structures and solid sheets in the deep dermis, consistent with metastatic adenocarcinoma (H and E,×100)

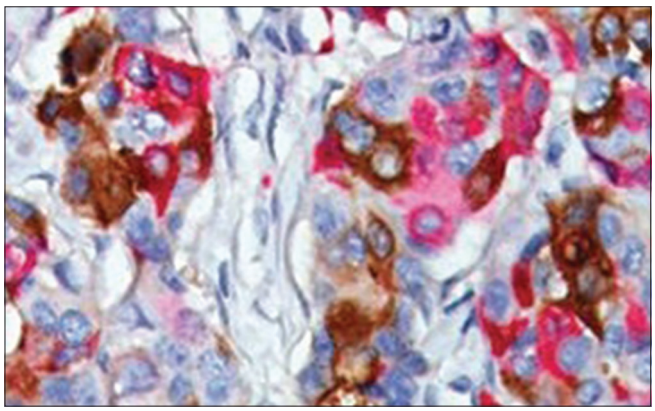

Figure 3: Positive immunohistochemistry staining for gross cystic disease fluid protein (GCDFP) suggestive of metastatic breast adenocarcinoma (×100)

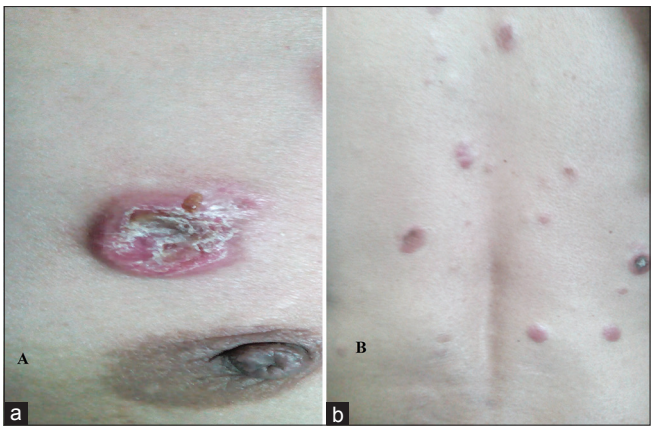

Figure 4: Clinical picture showing multiple cutaneous metastases over chest (4a) and back (4b)

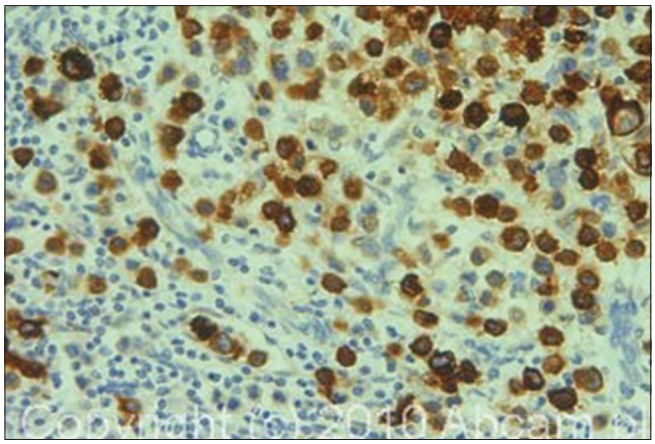

Figure 5: Positive immunohistochemistry staining for mammaglobin (×100)

Though there have been several reports of CM in breast cancer, diffuse CM scattered all over the body with nodular lesion on both eyelids is very rare. Raymond *et al.*, reported a case of carcinoma breast with CM to all four eyelids. Riley found eyelid metastases originating from breast or skin malignancies in 12-15 patients.[7] Usually, eyelid metastases occurred 2-10 years after treatment of primary cancer; however, it can be seen as early as 2 weeks. Majority of CM to eyelids are unilateral and treating physician usually suspects a dermatological lesion rather than a CM initially. In our 1st case, CM was present all over the body involving all four eyelids. CM from breast carcinoma are usually nodular or exophytic and appear within 5 years after the excision. Rarely, erysipeloid, telangiectatic, alopecia neoplastica, generalized erythematous patches, erythema annulare centrifugum-like, and bullous zosteriform metastases are reported.[5,6] Biological behavior of the primary tumor and its response to treatment are the key factors in the prognosis of cancer breast with CM. Cancer breast with CM occurs late and respond poorly to treatment. However, skin metastasis is the superficial expression of underlying widespread disease and in most cases it may be untreatable. Palliative treatment in the form of chemotherapy is usually the only option in such cases and the patient must be advised to keep lesions clean and dry. Debridement can be done if lesions bleed or crust. Other therapies that may be helpful include imiquimod cream, photodynamic therapy, carbon dioxide laser therapy, pulsed dye laser therapy, intralesional chemotherapy, and cytokines.[8] Electrochemotherapy, a new treatment that uses electrical impulses to enhance effectiveness of bleomycin or cisplatin injected into tumors. In many cases, skin metastasis causes disfigurement and discomfort. Removal of skin lesions by simple excision may enhance the patient's quality of life but has little effect on the final outcome that is decided by the primary cancer.

CONCLUSION

Cutaneous metastasis, though a common manifestation of breast cancer, involvement of whole body especially that of eyelids is very rare.

ACKNOWLEDGEMENT

The support of whole Department of Radiation Oncology, Acharya Tulsi Regional Cancer Treatment and Research Institute, Bikaner, Rajasthan, India is gratefully acknowledged.

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Cite this article as: Singh D, Kapoor A, Singhal MK, Singh P, Kumar V, Kumar HS. Cutaneous metastasis involving face in breast cancer: A series of three patients. Clin Cancer Investig J 2014;3:545-7.
Source of Support: Nil, **Conflict of Interest:** None declared.