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REVIEW LITERATURE OF A CASE OF MULTIPLE DISTANT CUTANEOUS METASTASIS FROM CARCINOMA BREAST

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ABSTRACT: Multiple distant nodular cutaneous metastases from carcinoma breast is a very rare entity. In the English literature few references are present about this subject. Here we present a case of distant nodular cutaneous metastasis from carcinoma breast.

KEYWORDS: Carcinoma breast, distant cutaneous metastasis.

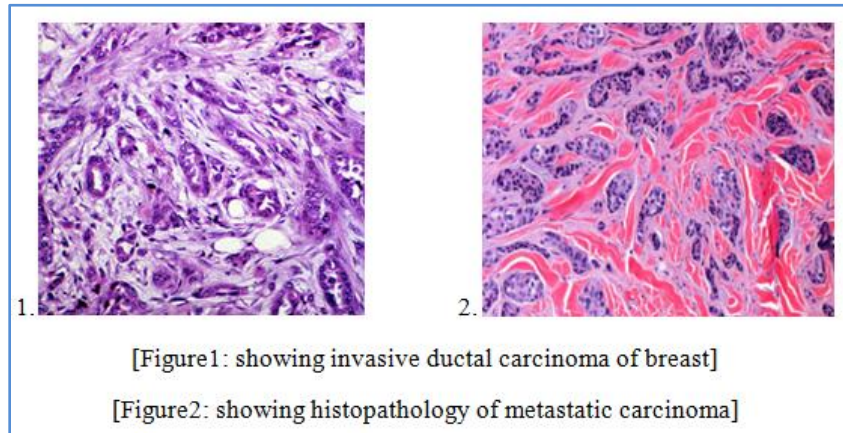
INTRODUCTION: Distant Cutaneous metastasis from carcinoma breast is a very rare entity. Often, the direct invasion of the anterior chest wall and/or local infiltration presenting as skin metastasis, although rarely seen in an area outside of the chest wall. Scalp involvement is very rare in breast cancer.^(1,2) We report a case of distant nodular cutaneous metastasis to scalp over frontal region and skin over the neck from carcinoma of left breast without local breast skin or chest wall involvement and without clinically palpable axillary lymph nodes.

CASE HISTORY: A 62 year old female presented to us with lump in the left breast of size 5*5 cm with cutaneous nodular lesions over the right side forehead and left side neck below angle of jaw. On FNAC breast lump turned out to be invasive ductal carcinoma. Clinically and on USG no axillary lymphadenopathy. Patient had undergone core needle biopsy of the lump and excision biopsy of the lesion over neck. Histopathology of breast shows ductal carcinoma and of the nodular metastasis as adenocarcinoma. Other distant metastatic workup is negative. ER/PR & her2neu was negative for breast specimen. Post op adjuvant chemotherapy given with AC Regimen.



[Figure showing (1)Hard lump in the breast. (2)Nodular distant cutaneous metastasis over the scalp. (A)Nodular distant cutaneous metastasis in the upper part of neck]

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DISCUSSION: Cutaneous metastasis may herald the diagnosis of internal malignancy. The breast, stomach, lung, uterus, large intestine, and kidneys are the most frequent internal organs to produce cutaneous metastases. Review of the literature indicates that the incidence of cutaneous metastases for all types of carcinomas ranges from 0.7% to 10.0%.^(3,4,5) Similarly, a more recent meta-analysis⁽⁶⁾ demonstrated the overall incidence to be closer to 5.3%.

Cancers that have the highest propensity to metastasize to the skin include melanoma (45% of cutaneous metastasis cases), breast (30%), nasal sinuses (20%), larynx (16%), and oral cavity (12%).^(1,2,7) Cutaneous metastases can occur either by lymphatic or hematogenous spread and is most commonly seen in the head and neck regions and trunk. Cutaneous metastases present most commonly a few months or years after the primary tumor has been diagnosed.⁽⁸⁾ There are rare reports of metastatic tumors arising decades after the diagnosis of the primary neoplasm.⁽⁹⁾ Cutaneous metastases develop most commonly at the same time as internal metastases.⁽¹⁰⁾ Less frequently, a metastasis is diagnosed concurrent with the primary tumor or represents the initial manifestation of the disease.⁽¹¹⁾ Skin metastasis in the later stages of the disease and often is seen after other organ metastasis was first seen as a rare skin involvement. Isolated scalp skin metastases is very little involvement.⁽¹²⁾ In general, eight specific clinical patterns associated with cutaneous breast cancer are known: cancer en cuirasse, inflammatory metastatic carcinoma (carcinoma erysipelatodes),^(1,13) carcinoma teleangiectaticum,⁽¹⁴⁾ alopecia neoplastica,^(15,16) Paget's disease,^(17,18) breast carcinoma of the inframammary crease,⁽¹⁹⁾ metastatic mammary carcinoma of the eyelid with histiocytoid histology,⁽²⁰⁾ nodular metastases,^(21,22) and mucinous adenocarcinoma metastatic to the skin⁽¹⁾. Skin metastases from breast carcinoma can also be present in a zosteriform distribution.

In a recent retrospective review by Mordenti et al,⁽²³⁾ 164 cases of skin metastases specifically from breast carcinoma were examined to determine the most common clinical and histopathological presentations. Skin papules and/or nodules were found in 80% of patients, telangiectatic carcinomas in 11%, erysipeloid carcinomas in 3%, 'en cuirasse' carcinomas in 3%, alopecia neoplastica in 2% and a zosteriform type in 0.8%.⁽²³⁾ Other clinical and pathological varieties of cutaneous metastases from breast carcinoma also exist. Nodular metastatic carcinomas can present as firm, solitary or multiple skin masses or lumps.^(24,25) This form can also be accompanied by pigmentation or irregular borders, which is suggestive of melanoma or pigmented basal cell carcinoma.⁽²⁴⁾ Histologically, they appear as atypical neoplastic cells arranged in small nests, islands or cords in single-file within the collagen bundles of the dermis.⁽²⁶⁾ En cuirasse metastatic carcinoma is rare, and usually begins as scattered,

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firm, lenticular papulonodules over an erythematous or red-blue smooth cutaneous surface. The nodules form a sclerodermoid plaque with no inflammatory changes.⁽²⁴⁾ Another form, telangiectatic metastatic carcinoma, is characterized by its purple colour due to blood in the dilated vascular channels. The lesions are papulovesicles appearing over an erythematous surface similar to inflammatory metastatic carcinoma. Patients often complain of intense pruritis.⁽²⁴⁾ Alopecia neoplastica is believed to be caused by hematogenous spread and appear as circular areas of alopecia on the scalp. The firm area of scalp skin associated with hair loss can be confused with alopecia areata; however, on palpation, alopecia neoplastica has marked induration.⁽²⁴⁾

In 2012 Kuruva Manohar et al⁽²⁷⁾ reported a case of 58 year old woman with distant asymptomatic cutaneous metastasis from ca breast which was found incidentally during sting workup using 18F-FDG PET SCAN.

In 2008 Borkar S et al⁽²⁸⁾ reported another case of distant cutaneous metastasis from ductal carcinoma left breast in a 73 year old female which was detected in 18F-FDG PET SCAN. SHELKE VN et al in 2012 reported a case of multiple distant cutaneous metastasis from ductal carcinoma of breast in a 47 year old male patient. They noted multiple non-ulcerated, papulonodular lesions over the skin of chest, abdomen, extremities and scalp. The papulonodular lesions were of varying sizes ranging from 0.3 to 1.4 cm and were firm to hard in consistency. Fine needle aspiration was performed from breast and one nodule each on the trunk and right forearm. Cytology findings were similar from all three sites. FNAC diagnosis was given as ductal carcinoma of breast with multiple cutaneous metastases. Histopathologic study of the resected breast specimen and nodule on right forearm confirmed the cytological diagnosis.

Lookingbill DP et al 1990⁽²⁹⁾ in their systematic review of 7316 cancer patients have found that among 7316 cancer patients, 367 cases (5.0%) with skin involvement. Skin involvement was present at the time of presentation in 92 patients (1.3%), only 26 of whom had remote metastases. Skin involvement was the first sign of cancer in 59 patients (0.8%); 22 had direct extension of their tumor into the skin, 20 had local metastases, and 17 had distal metastases.

Kuwayama T et al in 2011⁽³⁰⁾ reported a case of 62-years-old woman who had presented with a 3 cm hard, alopecic mass at her scalp. Skin biopsy and histopathological examination showed adenocarcinoma. Immunohistochemically, estrogen receptor was positive. It was suspected that breast cancer could be metastasized to the scalp, but mammography, ultrasound, and positron emission tomography showed no particular metastases in her breast and other organs. Magnetic resonance imaging showed enhanced lesions in her bilateral breast. Needle biopsy was done and pathological findings showed bilateral breast carcinoma and metastases to the scalp. So they started endocrine therapy using letrozole, the mass was shrunk to 1 cm after 6-month. It is rare that breast cancer was metastasized to the scalp. But Conner et al. reported that 84% of metastatic scalp carcinoma was from the breast, so we should examine the breast more carefully.

In our present case we report a very rare case of distant cutaneous metastasis from carcinoma of breast which was present at the time of diagnosis of primary tumor.

CONCLUSION: Though cutaneous metastasis of chest wall from carcinoma breast is a common condition, distal cutaneous metastasis without involving the skin over the chest is a rare condition and many reports have come with asymptomatic cutaneous metastasis from carcinoma breast which can alter the staging. This report highlights the need for thorough work up for distant metastasis even in early stages of breast cancer.

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