Carcinoma en cuirasse with Zosteriform Metastasis-A Rare Presentation of Breast Carcinoma

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Abstract
Carcinoma en cuirasse is a form of cutaneous metastasis of breast carcinoma. Although a rare condition, it is most commonly associated with breast carcinoma with local recurrence after mastectomy and metastasis occurs a few months to years after primary has been diagnosed. Less frequently a metastasis is diagnosed at the same time as primary tumour is diagnosed. We report a case of carcinoma en cuirasse in a 60 year old female who presented with elevated nodular indurated skin lesions on anterior and posterior left chest wall and axillary region. FNAC of lesions was performed. It was diagnosed as metastatic deposits of Duct Cell Carcinoma. It was followed by histopathology and the diagnosis was confirmed. Hence it is very important to investigate thoroughly keloid like or indurated patches on skin of long duration.

Keywords: Carcinoma en cuirasse; Carcinoma Breast; Cutaneous Metastasis; Zosteriform

Introduction
Carcinoma en cuirasse (Ca en cu) is a form of metastatic cutaneous carcinoma [1]. Cutaneous metastasis occurs infrequently and is rarely present at the time, when cancer is initially diagnosed. Incidence varies from 0.6- 10% [2]. Skin metastasis is presenting signs of disease in 37% of men and 6% of women [3]. Carcinoma cells disseminate along tissue spaces or through lymphatics. Usually it appears in cases of local recurrence after mastectomy. It very rarely presents as a first feature of carcinoma breast. Our case is rare in the context that the first presenting feature of our patient was the cutaneous metastasis, which was initially diagnosed clinically as Herpes Zoster.

Case report
A 60 year old post-menopausal woman presented to our dermatology OPD with painful erythematous lesions over left side of her chest for the last six months (Figure 1). There was no lymphadenopathy. Numerous firm to hard erythematous papules and few indurated coalescent plaques with superficial ulceration and crusting were present in the dermatomal distribution. She was treated for herpes zoster for a few months and there was no symptomatic relief. There was burning pain along the distribution of lesions. The lesions did not disappear and became more prominent. FNAC was performed from multiple sites. Giemsa stained smears revealed similar morphological features in the aspirate from all slides. Smears were highly cellular and arranged in clusters, sheets, acini and as well as discrete. There was moderate to severe pleomorphism and anisomorphosis. Nuclei were large hyper chromatic with coarse clumped chromatin and prominent nucleoli. Cytodiagnosis was made as suggestive of metastatic deposits of duct cell carcinoma which was later confirmed by histopathology.

Discussion
Carcinoma en cuirasse is a very rare condition. En cuirasse metastatic carcinoma is characterized by diffuse morphea- like induration of skin [4]. It is a fibrotic process resembling an encasement in an armour of a cuirassier (cavalry soldier) [5]. It evolves from firm papules and nodules overlying an erythematous base to a sclerodermoid plaque. Pain and pruritus may be associated features. This may be explained on the basis of perineural involvement of nerves. Induration could be related to chronic lymphatic obstruction as proposed by Hanley [6]. It is of diagnostic importance as it may be first manifestation of an unknown primary malignancy or first indication of metastasis of treated malignancy.

Bill et al in his study of 7316 patients with internal malignancy 5% were found to have skin involvement [7]. The most common sources of
cutaneous metastasis in males includes lungs (24%), large intestine (19%), melanoma (13%), squamous cell of oral cavity (12%), kidney (6%) and stomach (6%). In females, primary tumour site is breast (69%) while other sites include gastrointestinal (9%), ovaries (4%) and cervix (2%).

Eight clinicohistopathological types of skin involvement are seen with metastatic breast carcinoma which includes carcinoma en cuirasse, inflammatory telangiectatic, and nodular type, alopecia neoplastica, carcinoma of infra mammary crease, metastatic carcinoma of eyelid with histiocytoid histology and pagets disease [8].

Mechanism of zosteriform appearance of metastatic disease has been postulated to occur as a koebner phenomenon to recent herpes zoster [9]. Peri-neural lymphatic metaststatic dissemination has also been suggested and is likely to be the cause of our patient having dermatomatal distribution of skin lesions associated with burning pain [10]. Skin lining with underlying cells showing metastatic deposits are shown in figure 2.

Figure 2: Skin lining with underlying cells showing metastatic deposits od DCC: 20X.

Mordenti et al studied 164 cases of cutaneous metastasis from carcinoma breast, clinically presented as papules and nodules in 80%, telegentatic carcinoma 11.2%, carcinoma encuraise in 3 and zosteriform in 0.8%. All these lesions were not seen as first sign of disease in any patients.

Breast carcinoma is common in women and its metastasis involving with skin in one-quarter of patients, accordingly metastatic breast cancer shown to be cutaneous through histologically must be differentiated from other neoplasms as well as the diverse morphologic variants of breast cancer itself [11]. Cutaneous metastasis of cancer are encountered in 0.7%-0.9% of all the patients in general [12]. The location of skin metastasis depends on location of primary malignancy, mechanism of metastasis spread and gender of the patient. Some skin metastasis may mimic benign dermatological conditions like haemangioma, alopecia patches, erysipelas and herpes zoster eruption as in our case.

Cutaneous metastases from the internal malignancy or primary skin cancers are uncommon and zosteriform patterns are very rare [13]. 39 cases were revived from literature to illucidate the characteristics of zosteriform metastasis. The most frequent site of primary tumour was the breast (7 cases) and the most common site of skin metastasis was chest wall (21 cases). This review highlights the importance of including cutaneous metastasis within the differential diagnosis of zosteriform metastasis. Skin metastasis should be considered and a skin biopsy is necessary to confirm the diagnosis [14].

Chisti et al concluded that the breast cancer is the second most common cancer in women after non-melanoma skin cancers and excluding melanoma, the most common tumour to metastasis to skin in women [15]. Cutaneous metastasis of breast carcinoma has varied presentations but there is no well-established classification which includes them all.

Prognosis of the patients with cutaneous metastasis depends on type & biological behaviour of underlying tumour. In breast carcinoma with skin metastasis presents as advanced tumour and show very poor prognosis, hence skin duration of long duration (months to years) are to be thoroughly investigated particularly in elderly patients (Figures 3A and 3B).
References