

A Rare Case of Eccrine Carcinoma Arising From Breast Skin With Review of Literature

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Abstract:

Malignant sweat gland tumors are rare, can arise from both eccrine and apocrine glands. Eccrine gland carcinoma arising from skin of breast is very rare rather than primary breast carcinoma. We have come across a patient, who presented patchy erythematous hard indurated mass with a size 5 X 3 cm on the right lateral aspect of the right breast. Provisional diagnosis was chronic inflammatory swelling such as hidradenitis or apocrine degenerative cyst. Excision biopsy was done and the mass sent for histopathological examination. Histopathological diagnosis was sweat duct carcinoma. Eccrine sweat gland carcinoma from skin of breast was not reported in the literature. We are presenting this case to emphasize the tumor nature with review of literature. It is locally infiltrating tumor causing destruction of deeper structure and disseminates early to lymph nodes and distant organs. It is difficult to treat the disseminated disease.

Key words: Sweat gland carcinoma, Ultra Violet Rays (UVR), hidradenocarcinoma, Fine needle aspiration cytology (FNAC).

Introduction:

Sweat glands tumors are rare, can arise from both eccrine and apocrine glands which show ductal or glandular differentiation. Sweat gland neoplasms comprised 0.05 % of all pathological specimens; only 12 % of them are malignant. Carcinoma arising from eccrine sweat gland is locally infiltrative causing destruction of deeper structures and capable of metastasizing early. Regional lymph nodal spread is early. High recurrence rate has been reported followed by conventional surgical excision. Various chemotherapeutics have been tried but results are not encouraging. In literature some cases are reported from or nearby axilla which were mistaken for secondary nodes from primary breast cancer.

Case report:

A 59-year-old female presented with 4 x 2 cm firm indurated erythematous lesion on the lateral aspect of skin of right breast. Two small bluish nodules were present on the surface and nodules were soft in the centre (Figure 1). The mass was present for last twenty years but it was increasing in size for last two years. Mass was not adherent to underlying breast tissue. Axillary lymph nodes were not palpable. Provisional diagnosis was apocrine degenerative cyst. On FNAC, it was reported as hidradenitis suppurativa/apocrine degenerative disease. The lesion was excised and sent for histopathological examination (Figure 2). On histopathological examination, a subcutaneous circumscribed lesion exhibiting tumor cells arranged in lobules

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separated by thick collagenous stroma was seen. The tumor cells showed clear cell change, squamoid differentiation surrounded by incomplete fibrous bands (Figure 3). Tumor cells revealed abundant eosinophilic cytoplasm with large vesicular nuclei and prominent nucleoli. Glandular/ductular pattern lined by cuboidal to columnar cells was seen in focal areas (Figure 4). Excised margins were free from cancer. Histopathological diagnosis was sweat duct carcinoma of the breast skin

Discussion:

Tumors arising from skin appendages like sweat gland, hair follicle and sebaceous glands are rare but steadily increasing in recent times [1]. Exposure to UVR has been suggested as etiological factor [2]. Sometimes immune suppression also has been suggested as an etiological factor for development of eccrine carcinoma [3]. Most of the tumors present like benign swellings “and frequently present a diagnostic challenge”.

Eccrine carcinoma is reported equally in both sexes [4], but one report says men are more likely to develop sweat gland cancer than females [1]. Upper age group is most commonly involved (5th to 8th decade). The average age incidence is 53 years. In our case patient was 59 years old.

The tumor is usually small sized, presents as a solitary nodule or plaque. Occasionally tumor may grow large in size and ulcerate. In our case the lesion was 4 x 2 cm in size, present for last twenty years. Difficulty in diagnosis is that the lesion looks like benign growth, since it grows slowly for a long period. Recent history of rapid growth tempts the clinician to think of a possible malignancy. Similar history was present in our case. Patient may delay in reporting to a clinician probably assuming that it is a benign swelling because of indolent behaviour.

Tumor is known for its potential infiltration and destruction of local tissue and also capable of metastasizing early, both by lymphatic and haematogenous routes. Sweat gland cancer is restricted to those tumors showing aggressive character like histological evidence of anaplasia, infiltrating growth with destruction of underlying tissue, local recurrence after excision [5]. Usual differential diagnoses are basal cell carcinoma, metastatic carcinoma of the skin, rarely squamous cell carcinoma.

FNAC may not be helpful in diagnosis. Wide excision biopsy is diagnostic and curative. There is high rate of local recurrence after wide excision and reexcision is mandate to eradicate the disease along with lymph node dissection, because of high incidence of local recurrence following surgical excision (10-70%) and subsequent metastasis (60%).

Moh’s micrographic surgery appears to be a better choice [6]. Surgical excision followed by radiation, improved the results in selected cases [7]. Chemotherapy is not used extensively probably due to lack of efficacy [8]. Tumor responds poorly for radiation once metastasis occurs.

Prognosis is good with localized disease; patient can live 5-10 years. Five year survival rate is 99% for localized disease. Prognosis is grim once there are distant metastases. This reduces 5-year survival rate to 43% [1].

Conclusion:

Eccrine sweat gland carcinoma is an uncommon tumor particularly in skin over the breast. Diagnosis is delayed because of its indolent behavior. Being small sized and painless in nature it is suspected to be a benign lesion. Surgical excision with lymph node dissection is the treatment of choice. Radiation is useful in selected cases. It responds poorly to radiotherapy once distant metastases are present.



Figure 1: Lesion on the right breast



Figure 2: Specimen of sweat gland carcinoma arising from breast skin

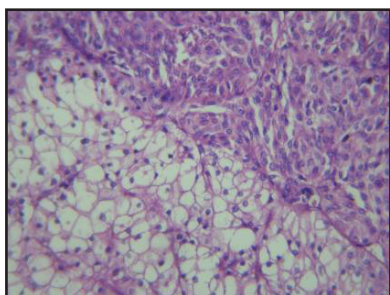


Figure 3: Photomicrograph [40 x] showing tumor cells with clear cell change, squamoi differentiation

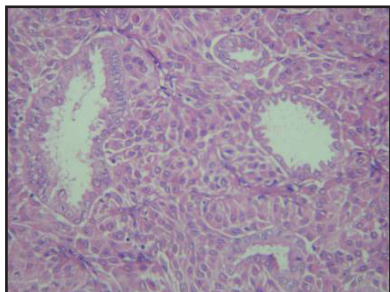


Figure 4: Photomicrograph [40x] showing tumor cells having focal areas of glandular pattern lined by cuboidal to columnar cells

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