**Poorly Differentiated Cutaneous Adenocarcinoma Masquerading as Scrofuloderma**

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**Abstract**

We report the case of a 60-year-old male presented with axillary swelling of 18 months duration with ulceration and cervical lymphadenopathy of 3 months duration with a clinical diagnosis of scrofuloderma. Histopathology showed dermis infiltrated by sheets, nests, and clusters of polygonal cells with markedly pleomorphic mitotically active nuclei suggestive of a more sinister condition, poorly differentiated cutaneous adenocarcinoma either primary or metastasis from breast. The condition is reported for its rarity from male breast and the need to consider it as a differential diagnosis in similar clinical presentation.

**Keywords:** Adenocarcinoma, cutaneous, scrofuloderma

**INTRODUCTION**

Cutaneous apocrine adenocarcinoma can be primary or can arise secondary to metastasis from breast. Differentiation of primary cutaneous apocrine adenocarcinoma from cutaneous metastases from breast carcinoma is difficult based on histology as both share overlapping immunohistochemical profiles. Primary cutaneous apocrine adenocarcinoma arises from apocrine glands or modifies apocrine glands such as Moll’s and ceruminous glands. Cutaneous metastases from breast can result from contiguous, hematogenous, lymphatic spread, and direct implantation during surgery. The most common clinical presentation is nodule arising from thoracic wall and abdomen which can ulcerate due to pressure of tumor on skin surface. In most cases, cutaneous metastasis usually occurs late in the disease course but, at times, can be the presenting sign of the underlying undetected malignancy. It can mimic a wide variety of clinical conditions. Hence, a thorough clinical examination coupled with histopathology and imaging studies helps in its detection.

**CASE REPORT**

A 60-year-old male from Tripura, India, presented with painless swelling in the right axilla for 18 months and ulceration of size 5 cm × 4 cm for 6 months [Figure 1]. There was also right cervical lymphadenopathy of 3 months duration, which was nontender and firm in consistency. He was treated at his local place as hidradenitis suppurativa (HS) with oral antibiotics and retinoids with minimal benefit. Our clinical diagnosis was scrofuloderma based on ulceration preceded by axillary swelling and associated cervical lymphadenopathy. Skin biopsy from ulcer edge showed dermis infiltrated by sheets, nests, and clusters of polygonal cells with markedly pleomorphic mitotically active nuclei suggestive of primary cutaneous apocrine adenocarcinoma or metastatic cutaneous adenocarcinoma from the breast [Figure 2]. Immunohistochemistry showed positivity for pancytokeratin and estrogen receptor [Figure 3]; and negative staining for HMB45 and Melan A. Mycobacterial culture from tissue was negative.

Ultrasound of the right axilla showed a relatively well-defined heterogeneous lesion with irregular margins with hypoechoic internal areas suggesting necrotic component. On color Doppler, there was significant internal vascularity within the lesion. These imaging features represent metastatic lymphadenopathy. The patient was not willing for further investigations to stage the disease and was started on oral tamoxifen by medical oncology department.

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Primary cutaneous apocrine adenocarcinoma arising from areas rich in apocrine glands has to be differentiated from neoplasms with apocrine differentiation, viz., metastatic apocrine breast carcinoma, apocrine carcinoma from ectopic breast tissue, mucinous carcinoma, and apocrine adenoma. Immunohistochemistry is an adjunctive tool to differentiate primary apocrine adenocarcinoma from metastatic apocrine breast carcinoma. Immunophenotype of estrogen receptor+ or progesterone receptor+ or herceptin+ would favor a metastasis, whereas primary invasive apocrine neoplasms are triple negative; however, profiles can be overlapping.

Metastasis to skin occurs in about 10% of patients with internal malignancies and sometimes can be the presenting sign. Usually, they portend a poor prognosis. However, in comparison to metastasis from other internal organs, prognosis of breast secondaries is relatively better. The various clinical presentations of breast secondaries include nodules, ulceration, cancer en cuirasse, inflammatory carcinoma, sclerodermiform plaques, erysipeloid infiltration, palpebral nodules, and alopecia. Hence, it can mimic a wide range of clinical conditions. Our case was treated as HS at his local place as the disease presented as subcutaneous nodules in axilla, a site for apocrine glands. Our first diagnosis was scrofuloderma as there was associated cervical lymphadenopathy which is usually absent in HS. Scrofuloderma is caused due to direct skin invasion of bacilli arising from tuberculosis of the underlying lymph nodes, epididymis, or bones. Scrofuloderma masquerading as HS has been reported in literature. We report this case as cutaneous adenocarcinoma can mimic many clinical conditions and needs a high index of suspicion. Histopathological confirmation is essential in these cases as it can reveal a more sinister condition beneath.

**Declaration of patient consent**
The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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**Conflicts of interest**
There are no conflicts of interest.

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