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Original Research Paper

Oncology

SARCOMATOID CARCINOMA OF BUCCAL MUCOSA WITH FULMINANT BREAST METASTASIS- A CASE REPORT

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ABSTRACT Sarcomatoid carcinoma is one among the rare variants of Squamous cell carcinoma. It is a biphasic tumor whose line of management is considered in similar lines of squamous cell carcinoma. This variant is notorious for lymph node and lung metastasis. Here, we report a case of sarcomatoid variant who underwent surgery and reported with breast metastasis. This case report is a first such reported instance. The diagnostic overlaps, aggressive nature and metastatic tendencies warrant's that we assess and treat this variant grade with a revised strategy and rethink the existing norms.

KEYWORDS : Biphasic tumor, Sarcomatoid Cancer, Immunohistochemistry , breast metastasis.

INTRODUCTION

Sarcomatoid carcinomas (Spindle cell carcinoma) are biphasic tumors which is one among the variants of Squamous Cell Carcinoma.[1]

It was first described by Martin and Stewart in 1935. Many a terms have been used to describe this confounding variant which includes carcinosarcoma, pseudosarcoma, squamous cell carcinoma with pseudosarcoma, Lane tumor and collision tumor.[2] A pathological diagnosis can be delayed or even misguided as they share significant histological and IHC features with other benign and malignant tumors.[3]

This variant is commonly reported in the larynx but though less common also seen in other mucosal sites such as gingiva, tongue, hypopharynx and nasal cavity.[4]

This article is a case report of a rare and first reported event in scientific literature in which Sarcomatoid carcionoma of buccal mucosa metastasizing to the breast.

CASE REPORT-

A 45 year old female patient, presented to the OPD, complaining of an Ulcer on the left side of oral cavity since 1 month. The lesion was initially small in size which gradually progressed to the present size. The lesion was associated with pain and was relieved by analgesics. On examination, the lesion measured approx. 3x4 cm, on the left labial and left buccal mucosa abutting the mandible. The lesion was polypoidal with ulcerative surface and reddened margins. Extraorally, diffuse erythema was noted on the skin surface.

On palpation, induration was noted intraorally along the margins of the ulcer, and the skin overlying the ulcer was indurated and involved. Level 1b nodes were palpable with associated tenderness.

Incisional biopsy reported as suggestive of Sarcomatoid Carcinoma and IHC was advised. The report showed CK and Vimentin positive while S100, CD31 and HMB 45 negative.

The patient underwent wide excision with left segmental mandibulectomy and Modified radical neck dissection type II(preserving IJV, XI Nerve) followed by bipaddle PMMC repair.

The post-op period was uneventful. The post-op HPE report showed a 4x4x2 cm ulceroproliferative growth with pleomorphic spindle cells accompanying small areas of neoplastic epithelial cells arranged in sheets and islands suggestive of sarcomatoidcarcinoma . PNI +,LVE –ve. All cut margins and underlying bone is free of tumor While undergoing Radiotherapy (1 month post-op) the patient complained of a swelling at the left breast region. On examination, a 5x5 cm, tender lump was noted at the left breast in upper outer quadrant. The mass was hard, mobile, tender with skin fixity. The operated site, flap, oral cavity, bilateral axilla and opposite breast were normal.

B/L mammogram showed a BIRADS score 5. Tru-cut biopsy from breast lesion proved to be metastatic sarcomatoid carcinoma.

CT scan thorax and abdomen were normal

DISCUSSION-

Saracamatoid Carcinoma is a biphasic variant of squamous cell carcinoma which has surface epithelial changes (dysplasia to invasive carcinoma) and an underlying spindle-shaped neoplastic proliferation. [1,2]

Among the variants of squamous cell carcinoma, it comprises only 3 percent. There is a profound male to female ratio (11:1) and generally the tumor occurs in individuals in their seventh decade of life, although patients can present within a wide age spectrum.[3,4]

The patient was a 45 year old lady, with a positive history of tobacco chewing. The risk factors for SpCC has been associated with alcohol consumption, tobacco use and previous radiotherapy.[5]

The most common sub site of involvement in the oral cavity is the buccal mucosa which is similar in our case.[2]

The sarcomatous as well as the conventional squamous carcinoma component arises monoclonally from a single stem cell and the sarcomatous component is the result of dedifferination of the squamous component[6-8]

The degree and intensity of epithelial markers can vary as

reported in various analysis. This can be due to the reporting on a limited biopsy specimen prior to definite surgical exicison. It has also been noted that the epithelial marker expression can decrease as the degree of epithelial differentiation decreases which in turn can give a negative result during IHC(3). Hence, a negative immunopositivity doesn't warrant the diagnosis of sarcomatous carcinoma.[1]

The epithelial cells expresses phenotypic plasticity (interconversion of epithelial cells to mesenchymal cells) which is microscopically noted with the loss of intercellular cohesion , elongation of cells , loss of basement membrane , production of connective tissue (collagen) and invasion into stroma. The extent of mesenchymal metaplasia and the expression of respective immunohistochemical markers can vary greatly within the tumor.[5]

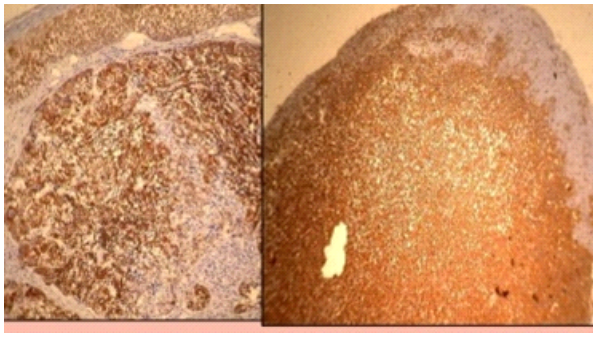
The differential diagnosis of sarcomatoid carcinoma includes mucosal spindle cell melanoma, leiomyosarcoma and myoepithelial carcinoma. A osteosarcomatous lesion eroding the bone and involving the mucosa is not uncommon and in this instance an imaging will help in guiding the diagnosis. [2,1]

The clinical behavior was found to be extremely aggressive with breast metastasis being noted within 1 month post surgery during adjuvant radiotherapy period. This finding was against many studies which depicts that Sarcomatoid Squamous cell carcinoma behaves similarly to squamous cell carcinoma.[5,10] A 2006 study , reported the disease specific survival for Sarcomatoid carcinoma of oral cavity is 43%, 36% and 24% for 1st, 2nd and 3rd year respectively.[4] This study included patients with habit of betel nut chewing, a practice more common in India and hence can throw a better light on the grave nature of the disease compared to the other studies. Bice et.al carried out a retrospective study in 2015, which showed a increasing tumor stage and age has a negative impact on disease specific survival. They concluded that the Sarcomatoid variant is a negative prognostic factor in squamous cell carcinoma.[11]

The disease progression in sarcomatoid variant can result from recurrences or metastasis. Thompson et.al mentioned lung to be the most common site of metastasis[3], while a 2010 study by S. Viswanathan et al. reported the lymph nodes as the most frequent site. In our patient, the metastasis was to the breast which is a first of its reported instance.[12]

It's necessary to reassess this variant tumor extensively as the tumor behavior and biology is not in consensus with its parent Squamous cell carcinoma type. The overlapping of its clinical presentation, Immunohistochemistry and swift metastasis warrants greater attention. In fact, the postoperative histopathology report on which adjunct treatment is advised needs to be reassessed for features suggestive of aggressiveness and early metastasis in sarcomatoid carcinoma.

FIGURES



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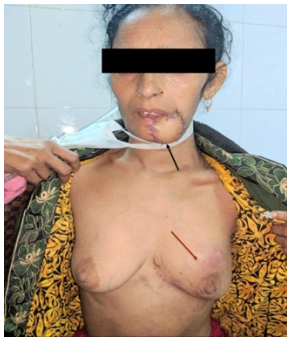

2)

FIGURE I -View after immunohistochemical staining (CK and Vimentin positive while S100, CD31 and HMB 45 negative).

FIGURE II – Post –op clinical picture of metastatic disease at left breast

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