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An Unusual Case of Aggressive Squamous Cell Carcinoma of the Upper Alveolus with Metastasis to Bones and Skin – ReportOf a Case

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Abstract: *Oral Squamous cell carcinoma, though a common neoplasm, is infrequently associated with distant metastasis. Increasing numbers are being reported with improved locoregional control at the primary site. In this article, we report a case of aggressive squamous cell carcinoma of the upper alveolus which presented with distant metastasis to the hip bone and multiple cutaneous metastases in the scalp after wide excision of the primary.*

Keywords: *Bone, Metastasis, Oral, Squamous cell carcinoma*

I. Introduction

Squamous cell carcinoma (SCC) is the most frequent malignant tumour of the head and neck region[1], being the 6th leading cause of cancer [2]. In India, tobacco chewing accounts for 90% of oral cancers in women [3]. In the western world, head and neck SCC is more often associated with HPV infection [4]. Oral SCC metastasises to regional lymph nodes in the neck and distant metastases are seen late in disease progression and survival of these patients has not improved significantly[5, 6].We are reporting a non-tobacco and non-HPV related aggressive case of SCC of upper alveolus and hard palate which had unusual distant metastasis in the scalp and pelvic bones.

II. Case history

A 79 year old female presented with swelling of the upper alveolus on the left side for three months. Patient was an edentulous woman with history of wearing dentures for the past one year.She was a non-smoker and there was no history of chewing betel nut or tobacco.

On examination an ulceroproliferative lesion in the upper alveolus was seen measuring 3.5x3x3 cm crossing the midline anteriorly. CT scan showed the lesion eroding theunderlying bone and no significant cervical lymphadenopathy was seen.Biopsy of the lesion showed moderately differentiated squamous cell carcinoma with infiltrating borders(Figure 1).Immunohistochemistry for p16, a surrogate marker for HPV infection was negative. EGFR mutation analysis on the tissue block showed only wild type EGFR gene with absence of mutations.Patient underwent partial maxillectomy and histological examination showedsquamous cell carcinoma, moderately differentiated with clear surgical margins. Patient developed clinically palpable level 2 lymph nodes on the contralateral side two and a half months later and PET CT at that time showed FDG avid bilateral level 2 lymph nodesonly(figure 2) indicative of metastasis and no other lesions were seen.Patient underwent bilateral modified neck dissection, which was followed by radiation therapy to neck (50Grays in 23 fractions). A month after completion of radiotherapy, patient developed 3 cutaneous nodules over the scalp which ranged in size from 1 cm to 2.5 cm (figure 3) and severe pain in the left hip. FNAC of scalp nodules showed metastatic carcinoma. CT scan showed metastatic deposits in the alae of ilium on both sides(figure 4) for which she received palliative radiotherapy. She developed lung metastasis shortly and succumbed to the disease 10 months after the initial diagnosis was made.

III. Discussion

Squamous cell carcinoma of upper alveolus is commonly seen in elderly individuals with a female predominance[7]. Loco regional control of the disease with surgery and/or radiotherapy forms the mainstay of the standard treatment[7].Despite progress in radiotherapy and chemotherapy, the survival of patients with metastatic head and neck squamous cell carcinomas has not improved significantly [5,6] with dismal survival in most cases.

The frequency of distant metastasis varies from10%-17% in head and neck SCC and is around 12% for oral cancer [8,9]. The most frequent sites of metastasis are the lungs, bone and liver [8,9]. The frequency of metastasis is higher [29%]with locoregionalfailure[9,10]. In a study of 502 patients by Takahashi et al,factors contributing to distant metastasis included advanced stage, positive nodes, lower histologic grade and higher score in YK classification[8,11].

Metastasis to skinfrom oral cancer is even rarer. In a study of 735 patients by Hsu et al, only 1.7% developed cutaneous metastasis[9], and is associated with poor prognosis [12].The incidence of bone metastasis varies in different studies ranges from 1% to 5%[8,13]. Its incidence is lower with locoregional control, and is also associated with poor survival [10].

In the present case, the patient had no loco regional failure, but developed metastasis in the skin in the form of scalp nodules, followed by metastasis in the iliac bones and lungs, following surgery and radiotherapy. The disease pursued an aggressive course and due to poor general condition of the patient, chemotherapy was deferred and only palliative treatment was given.

Figures

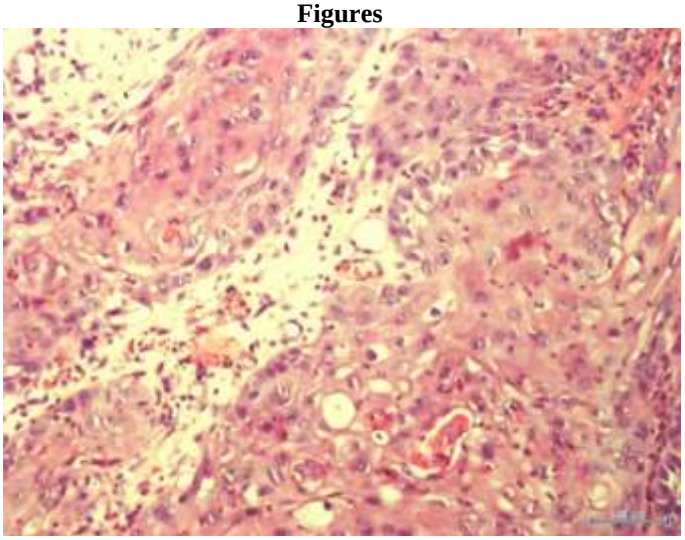

Figure 1: Histopathology section from oral lesion shows squamous cell carcinoma, moderately differentiated, hematoxylin and eosin stain, 100x

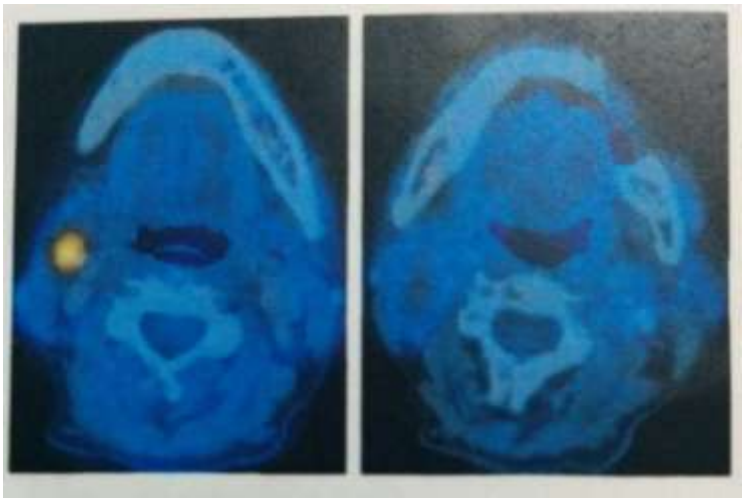

Figure 2: PET CT showing metastatic deposits in contralateral level 2 neck lymph nodes

Figure 3: Shows cutaneous metastasis in the scalp

Figure 4: CT scan of the pelvis shows metastases in alae of both iliac bones

IV. Conclusion

We present a rare case of aggressive squamous cell carcinoma of the oral cavity with rapidly fatal progression and distant metastasis to the skin, bones and lungs. This indicates that there is a need to identify a subset of aggressive squamous cell carcinoma which may not respond to conventional surgery and radiation and newer treatment modalities like chemotherapy and targetedtherapy may have to be tried in these cases.

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