

## Keratoacanthoma-like cutaneous metastases in a case of squamous cell carcinoma of the tongue

Sir,

Cutaneous metastases from internal malignancies account for approximately 5% of all metastases.<sup>1</sup> Metastases to the skin from primary cancers of the upper aerodigestive tract are relatively rare.<sup>2,3</sup> Of these, cutaneous metastases with a keratoacanthoma-like morphology are unusual.<sup>2,4</sup>

A 50-year-old male presented with a painless nodule over the cheek of one-month duration and a single papule over the neck of 15 days duration. He had been diagnosed with squamous cell carcinoma of the base of the tongue (stage IV grade) 2 to 3 years ago, and had undergone tracheostomy and concurrent chemoradiotherapy for the same. He reported regrowth of the tumor at the base of his tongue over the past 6 months.

The cheek lesion was a hemispherical, firm, non-tender nodule, measuring 1.5 × 1.5 cm with a central crateriform depression filled with keratin [Figure 1]. The clinical picture was suggestive of a keratoacanthoma. On the neck, changes of chronic radiation dermatitis in the form of atrophy, fibrosis and hyperpigmentation were present [Figure 2].

Histopathology of the cheek lesion revealed a thinned-out epidermis with flattened rete ridges, with no evidence of cellular atypia and an intact dermoepidermal junction. The dermis showed presence of numerous atypical, large, polygonal cells displaying nuclear pleomorphism, with altered nuclear-cytoplasmic ratio, with no connection to the epidermis. In addition, a few dilated lymphatic channels showing presence of tumor emboli were present. A few horn pearls with incomplete keratinization were also evident. There was no invasion of the epidermis by the tumor cells [Figure 3 and 4]. Immunohistochemistry of the nodule could not be performed.

Fine needle aspiration cytology of the enlarged cervical lymph nodes revealed deposits of tumor cells. Chest X-ray and abdominal ultrasound were normal.



**Figure 1:** Nodule on the cheek with central crateriform depression

Based on the clinicopathological findings of this rapidly growing nodule filled with central keratin debris in the radiation port site, along with lack of epidermal involvement, maintenance of the integrity of the dermoepidermal junction and presence of a few dilated lymphatic channels showing evidence of tumor cells, a diagnosis of keratoacanthoma-like cutaneous metastases from primary squamous cell carcinoma of the base of tongue was made upon an increase in the size of the primary tumor.

Cutaneous metastases are markers of poor prognosis.<sup>3</sup> The average interval between the diagnosis of primary malignancy and the appearance of cutaneous metastases is

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36 months.<sup>3</sup> In this case, the patient presented with cutaneous metastases after 31 months of detection of the primary cancer. The interval between stoppage of treatment and appearance of cutaneous metastases was approximately 29 months. The primary tumor had been slowly increasing in size for the past two years.

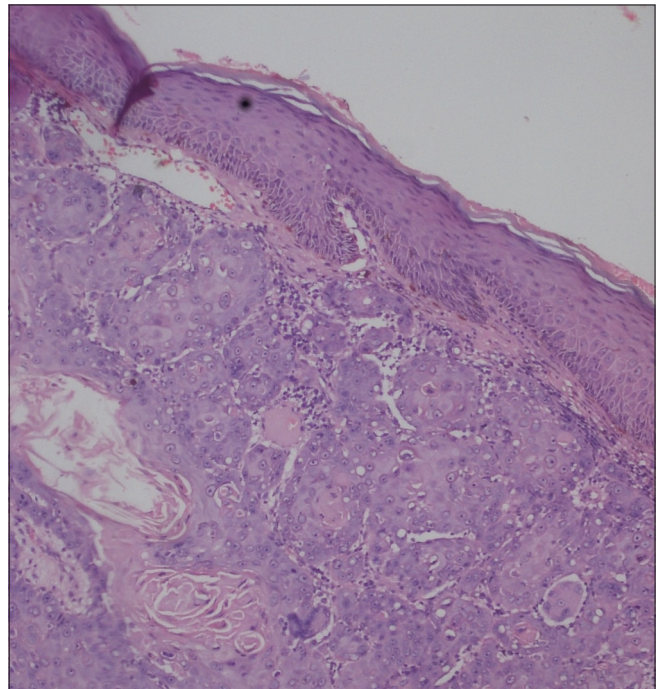
The morphology of cutaneous metastases can vary, ranging from asymptomatic papulo-nodules to erysipeloid, sclerodermoid and zosteriform lesions and even alopecia neoplastica.<sup>3</sup> Cutaneous metastases with keratoacanthoma-like morphology are unusual, with fewer than 20 cases reported till date [Table 1].<sup>2,4-15</sup> It has also been reported to occur in the radiation port site in a

patient with laryngeal carcinoma.<sup>2</sup> It is thought to be due to the localized alteration in the skin of the irradiated site, predisposing it to the deposition of tumor cells. The likely way of spread to the site on the right cheek was postulated to be through the lymphatics. A few malignancies associated with keratoacanthoma-like secondaries are those of the lung, bronchus, esophagus and breast.<sup>5</sup> Other presentations of cutaneous metastases from squamous cell carcinoma of the base of tongue include ulcerated papulonodules appearing over the face, lesions at distant sites such as thigh, forearm, abdomen and even acrometastases.

The histopathology of cutaneous metastases varies according to the nature of the primary tumor.<sup>3</sup> Here, the histopathology



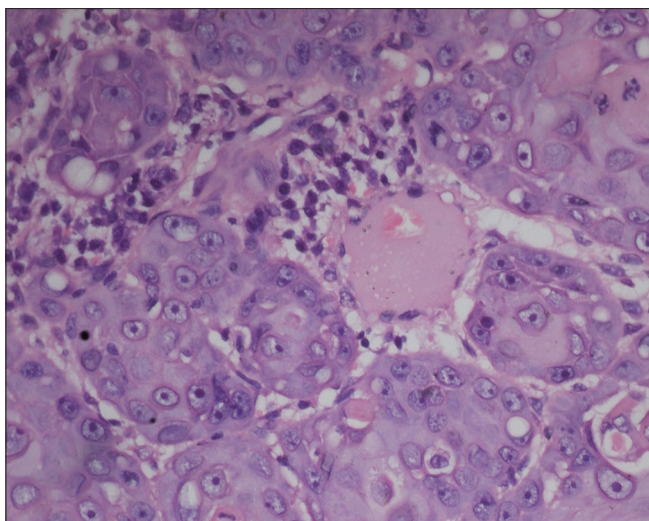
**Figure 2:** Changes of chronic radiation dermatitis in the form of cutaneous atrophy, fibrosis and pigmentation



**Figure 3:** Flattened rete ridges with an intact dermoepidermal junction. Thinned-out epidermis with dermis showing tumor cells, along with formation of horn pearls with incompletely keratinizing centres (H and E, ×10)

**Table 1: Reports with keratoacanthoma like cutaneous secondaries<sup>2,4-15</sup>**

Author	Year	Primary malignancy	Initial presentation: Yes/no	Site of metastases	Single/multiple lesions
Aguiar, <i>et al.</i>	2016	Oesophagus	No	Scalp, neck	Multiple
Ellis, <i>et al.</i>	2014	Larynx	No	Neck	Multiple
Sreedevan, <i>et al.</i>	2009	Lung	Yes	Scalp	Multiple
Slawinksa, <i>et al.</i>	2017	Lung	No	Scalp	Multiple
Riahi, <i>et al.</i>	2012	Oesophagus: Adenocarcinoma	No	Lip	Single
Reich, <i>et al.</i>	2006	Lung	Yes	Scalp	Single
Sariya, <i>et al.</i>	2007	Lung	No	Thorax	Single
Jatti	2015	Kidney	No	Lip	Single
Cotton <i>et al.</i>	1985	Breast	-	Lip	Single
Cassarino <i>et al.</i>	2003	Mesothelioma	-	Lip	Single
Dessinioti, <i>et al.</i>	2011	Lung	-	Chin	Single
Reed, <i>et al.</i>	2012	Larynx	-	Neck	Multiple
Aramburu-Gonzalez, <i>et al.</i>	1999	Chondrosarcoma	-	Face	Single



**Figure 4:** The tumor cells exhibit cellular atypia, nuclear pleomorphism and altered nuclear–cytoplasmic ratio (H and E,  $\times 100$ )

was that of moderately differentiated squamous cell carcinoma, reflecting the primary tumor.

The median survival time after the diagnosis of cutaneous metastases is approximately 6 months.<sup>16</sup> The treatment plan for our patient included six cycles of cyclophosphamide, doxorubicin and docetaxel. The patient was doing well for two months and was subsequently lost to follow-up.

This case is being reported for its unusual morphologic presentation of cutaneous metastases. The presence of keratoacanthoma-like lesions should alert the physician towards the possibility of cutaneous metastases.

#### Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form, the patient has given his consent for his images and other clinical information to be reported in the journal. The patient understands that name and initials will not be published and due efforts will be made to conceal identity, but anonymity cannot be guaranteed.

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#### Conflicts of interest

There are no conflicts of interest.

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