

Carcinoma buccal mucosa with cutaneous metastasis: An unusual presentation

Lalita Singhal¹, Rishi Kumar Gupta², Mohit Bhatnagar³, Brij Paul¹, Diksha Agrawal⁴

From ¹Senior Consultant, Department of Radiation Oncology, ²Senior Consultant, Department of Clinical and Radiation Oncology, ³Senior Consultant, Department of Surgical Oncology, Shri Jagannath Charitable Cancer Institute and Research Center, Ghaziabad, ⁴Assistant Professor, Department of Dermatology, Venereology, Leprosy, Venkateshwara Institute of Medical Science, Amroha, Uttar Pradesh, India

ABSTRACT

Head-and-neck cancer is a common cancer in India. Oral cavity cancer accounts for 50% of all head and neck sites. The most common sites of distant metastasis are the lung, liver, and bone. The incidence of cutaneous metastasis is a very rare site. We report a case of early-stage carcinoma buccal mucosa post-surgery and adjuvant radiotherapy developed skin metastasis shortly after completion of treatment. A 37-year-old female non-smoker, non-alcoholic diagnosed with early-stage carcinoma right buccal mucosa cT1N0M0. She underwent surgery of wide local excision with marginal mandibulectomy and extended supra-omohyoid neck dissection. In post-surgery, the histopathological report was moderately differentiated squamous cell carcinoma, pT2N1Mx. She completed her adjuvant radiotherapy 59.4Gy/33 fractions with six cycles of concurrent chemotherapy cisplatin 40 mg/m². She developed difficulty in swallowing, increased oral secretions, and thickening over right-sided scar marks shortly after 10 weeks of completion of treatment. Rapidly, she developed multiple cutaneous nodules over both sides of the entire face and neck. Dermal biopsy reveals metastatic squamous cell carcinoma. Skin metastasis from head-and-neck malignancy is an uncommon entity and in the early stage, it is very rare. Initially, it is difficult to diagnose as it looks like some disseminated bacterial or fungal infection but we should always keep in mind this entity as cancer can metastasize and present in any atypical forms.

Key words: Carcinoma buccal mucosa, Cutaneous metastasis, Head-and-neck cancer

Head-and-neck malignancies are the seventh most common cancer worldwide. In head-and-neck cancers, locoregional failure is the most common site of recurrence. In locally advanced disease, 5-year local control is 50%, whereas, distant control is 85% [1]. The overall incidence of metastasis is 7–15%. The most common sites of distant metastasis are the lung, bone, and liver. Incidence of cutaneous metastasis is very rare, accounting for 1.2% [2]. Oral cavity cancer accounts for 50% of all head-and-neck cancers [3]. There are various risk factors associated with distant metastasis including the size of the tumor, grade, number of lymph node involvement, lymphovascular invasion, extracapsular extension, and perineural invasion [1]. The patient with distant metastatic squamous cell carcinoma has a dismal prognosis. Overall survival is about 10% with systemic palliative chemotherapy [4].

Hereby, we present the case of carcinoma of the buccal mucosa in a 37-year-old female. The case presents early-stage metastasis to the skin which is a rare presentation.

CASE HISTORY

A 37-year-old female presented with a non-healing ulcer of the right buccal mucosa from the last 6 months. The patient was non-smoker and non-alcoholic. There was no history of hypertension, diabetes, any other comorbidity, or family history of malignancy.

Biopsy showed moderately differentiated squamous cell carcinoma. Clinically, a 2 × 2 cm ulcer was present in the right buccal mucosa, near the lower gingival-buccal sulcus.

After metastatic workup, she underwent surgery-wide local excision with marginal mandibulectomy and right extended supra-omohyoid neck dissection. The histopathology report was suggestive of moderately-differentiated squamous cell carcinoma. The tumor size was 2.5 × 1.8 × 1 cm, the depth of invasion was 5 mm and there was no perineural invasion and lymphovascular invasion. Distance from the tumor margin was superiorly 1 cm, inferiorly 5 mm, anteriorly 8 mm, and posteriorly 5 mm. One lymph node was positive out of eleven lymph nodes dissected without extra-nodal extension. The pathological stage was pT2N1Mx.

She was planned for adjuvant radiotherapy and concurrent chemotherapy with cisplatin. She completed external beam

Access this article online	
Received - 30 May 2024 Initial Review - 17 June 2024 Accepted - 08 August 2024	Quick Response code 
DOI: ***	

Correspondence to: Lalita Singhal, Department of Radiation Oncology, Shri Jagannath Charitable Cancer Institute and Research Center, NH-58 Meerut Road Duhai, Ghaziabad, Uttar Pradesh, India. E-mail: lalitasinghal16@gmail.com

© 2024 Creative Commons Attribution-NonCommercial 4.0 International License (CC BY-NC-ND 4.0).

radiotherapy 59.4 Gy in 33 fractions with conventional technique on BHABHATRON II along with six cycles of concurrent cisplatin 50 mg weekly. She tolerated the treatment well.

She started complaining of difficulty in swallowing, increased pain and nodular swelling over the face and neck, and breathing difficulty 10 weeks after the completion of radiotherapy. On examination, there were 1–2 cm multiple discrete nodules with mild tenderness on both sides of the face and neck (Fig. 1). Her vitals were within normal limits. She was put on Ryle's tube feeding due to dysphagia even with liquids and severe pain. Rapidly, she developed some pus discharge and ulceration with necrosis over the skin of the neck.

Positron emission tomography-contrast enhanced computed tomography showed an enhancing soft-tissue lesion with necrosis 4.6×3.4 cm at the right side of the oropharynx region (SUV 10.6). Multiple soft-tissue deposits were seen in the right intra-parotid, submental, and pre-laryngeal region with increased uptake likely metastatic deposits. Right cervical level IV nodular lesion infiltrating right side of the thyroid gland. There was no abnormal uptake at post-operated site (Fig. 2). She was advised for direct laryngoscopy and biopsy from the base of the tongue but she refused. Biopsy from the skin lesions on both sides of the face was done suggestive of metastatic squamous cell carcinoma (Fig. 3).

She was planned for palliative chemotherapy with paclitaxel and carboplatin weekly. She could receive only one cycle of chemotherapy and then stopped in view of poor tolerance. She was advised only for the best supportive care. Her condition deteriorated day by day and she could not survive.

DISCUSSION

Skin metastasis from head-and-neck cancers can present either at initial presentation or post-definitive treatment. Overall prognosis



Figure 1: (a and b) Multiple papulonodular skin lesion on both side of face and neck with skin ulceration over neck region

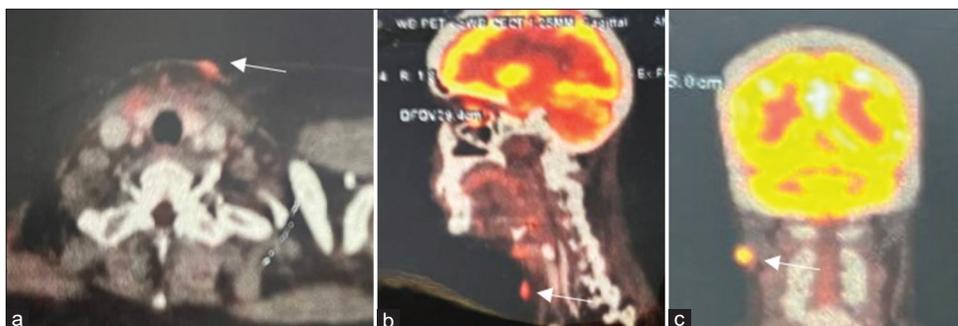


Figure 2: (a-c) Positron emission tomography-contrast enhanced computed tomography showing multiple skin nodules over face and neck region

remains poor, treatment is palliative chemotherapy and best supportive care. There is no clear guideline for management as very few cases reported with skin metastasis from head-and-neck malignancy. The possible mechanisms for cutaneous metastasis are direct spread, local spread, or distant spread as suggested by Kmucha and Troxel [5].

Krathen *et al.* did a meta-analysis of 20,380 patients after excluding cutaneous primary neoplasms, lymphomas, and leukemias. They found cutaneous metastasis from various sites of primary malignancies such as breast (24%), renal (4%), ovarian (3.8%), bladder (3.6%), lung (3.4%), colorectal (3.4%), and lowest is prostate (0.7%) They concluded that overall incidence of cutaneous metastasis is 5.3%. The chest and abdomen are the most common cutaneous site of skin metastasis, whereas, the face and scalp are the least common [6]. In another large series published by Brownstein and Helwig, 724 patients presented with cutaneous metastasis from different visceral sites. Lung cancer was most common (24%), followed by cancer of the large intestine (19%), melanoma (13%), kidney (6%) and esophagus (3%), sarcoma (3%), and pancreas (2%), breast (2%), urinary bladder (2%), salivary glands (2%), and prostate (1%) among men. Metastasis from the oral cavity was 12% in men and 1% in women [2]. Schultz and Schwartz reported a rare presentation of cutaneous metastasis from hypopharyngeal malignancy [7]. Srinivasan *et al.* reported a case of carcinoma of the left buccal mucosa developing distant cutaneous metastases to the right-side chest wall, post-treatment at 4 months [3]. Prakash and Upadhyay published a rare presentation of skin metastasis 78-year-old male from carcinoma buccal mucosa early-stage post-wide local excision and supra-omohyoid neck dissection, pT1N0Mx.

The present patient was on follow-up, he developed local recurrence after 1½ months. He developed skin nodules over his lower neck and trunk which was confirmed by biopsy [8]. Rahman *et al.* reported a rare case of cutaneous metastasis from the base of the tongue soon after the completion of definitive chemoradiotherapy. This suggests that there was an occult skin metastasis at the time of diagnosis or during the course of the treatment. Skin nodules mimicked an inflammatory subcutaneous lesion [9]. El Khoury *et al.* studied a clinicopathological parameter in 72 patients (50 females and 22 males). The mean age at diagnosis was 55.2 years. The most common primary cancer

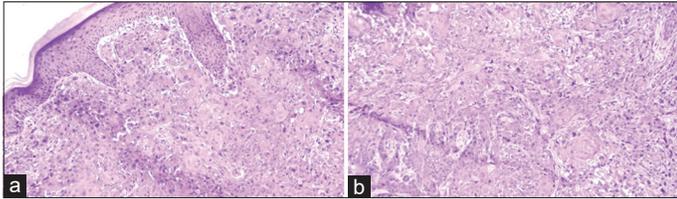


Figure 3: (a and b) Section shows keratinized epidermis with maintain basal layer. The dermis layer shows sheets of dysplastic squamous cell with mitosis and foci of keratin pearl formation

was breast cancer in women and laryngeal cancer in men. The most common clinical presentation was a single nodule in 27% of cases, followed by multiple nodules in 23% and the majority of skin lesions were asymptomatic. The chest was the most commonly affected site and adenocarcinomas (74%) were the most common histological type [10]. Kumar *et al.* describe a case report of carcinoma supraglottic larynx 2 years after completion of definitive radiotherapy and chemotherapy treatment. The patient develops cutaneous metastasis involving all five distal phalanges of the left hand which is the rarest presentation [11]. Verma *et al.* published a case report of a 46-year-old patient with carcinoma tongue post glossectomy with radical neck dissection followed by chemotherapy and radiotherapy. He developed skin metastasis over the chest region after the 4-year completion of treatment [12]. A 55-year-old female with carcinoma floor of the mouth presented with metastatic skin nodules over the neck and chest at diagnosis case reported by Priya *et al.* [13]. Shahzad *et al.* described a rare case of a 45-year-old lady with hypopharyngeal carcinoma who developed skin nodules 1 month after the completion of treatment [14].

CONCLUSION

Skin metastasis from head-and-neck malignancy is an uncommon entity and in the early stage, it is very rare. Initially, it is difficult to diagnose but we should always keep in mind that cancer can have any unusual presentation. The prognosis of a patient with distant metastasis is dismal. Treatment guidelines are not well defined due to the rarity of cases.

ACKNOWLEDGMENT

I am thankful to all supporting staff of Shri Jagannath Charitable Cancer Institute and Research Center for their support.

REFERENCES

1. Duprez F, Berwouts D, De Neve W, Bonte K. Distant metastases in head and neck cancer. *Wiley Online Libr Head Neck* 2017;39:1733-43.
2. Brownstein MH, Helwig EB. Metastatic tumors of the skin. *Cancer* 1972;29:1298-307.
3. Srinivasan S, Leekha N, Gupta S, Mithal U, Arora V, De S. Distant skin metastases from carcinoma buccal mucosa: A rare presentation. *Indian J Dermatol* 2016;61:468.
4. Vermorken JB, Mesia R, Rivera F, Remenar E, Kawecky A, Rottey S, *et al.* Platinum-based chemotherapy plus cetuximab in head and neck cancer. *N Engl J Med* 2008;359:1116-27.
5. Kmucha ST, Troxel JM. Dermal metastases in epidermoid carcinoma of the head and neck. *Arch Otolaryngol Head Neck Surg* 1993;119:326-30.
6. Krathen RA, Orengo IF, Rosen T. Cutaneous metastasis: A meta-analysis of data. *South Med J* 2003;96:164-7.
7. Schultz BM, Schwartz RA. Hypopharyngeal squamous cell carcinoma metastatic to skin. *J Am Acad Dermatol* 1985;12:169-72.
8. Prakash A, Upadhyay A. Cutaneous metastasis of carcinoma buccal mucosa: A rare presentation. *Cureus* 2022;14:e25812.
9. Rahman T, Krishnatreya M, Sarma A, Kumar M, Kataki AC. Cutaneous metastasis from squamous carcinoma of the base of tongue. *N Am J Med Sci* 2015;7:24-6.
10. El Khoury J, Khalifeh I, Kibbi AG, Abbas O. Cutaneous metastasis: Clinicopathological study of 72 patients from a tertiary care center in Lebanon. *Int J Dermatol* 2014;53:147-58.
11. Kumar N, Bera A, Kumar R, Ghoshal S, Angurana SL, Srinivasan R. Squamous cell carcinoma of supraglottic larynx with metastasis to all five distal phalanges of left hand. *Indian J Dermatol* 2011;56:578-80.
12. Verma K, Gupta M, Gulati A, Sharma RK. Cutaneous metastasis of carcinoma tongue: A rare case report. *J Dermatol Dermatol Surg* 2019;23:99-101.
13. Priya S, Grover RK, Garg P, Goyal N. Cutaneous metastasis in a case of carcinoma floor of mouth-a rare case report. *IP Int J Med Paediatr Oncol* 2024;9:147-9.
14. Shahzad R, Anjum T, Shahid AB. Cutaneous metastasis in hypopharyngeal carcinoma: A case report. *Asian Biomed (Res Rev News)* 2024;18:30-4.

Funding: Nil; Conflicts of interest: Nil.

How to cite this article: Singhal L, Gupta RK, Bhatnagar M, Paul B, Agrawal D. Carcinoma buccal mucosa with cutaneous metastasis: An unusual presentation. *Indian J Case Reports*. 2024; August 16 [Epub ahead of print].