

## Maxillary Gingival Metastasis from Adenocarcinoma Colon

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### Abstract

**Background:** Oral cavity metastasis from colorectal cancers is rare. Among these gingival metastases are extremely rare. Few cases of metastasis to mandibular gingiva have been reported. Here we report a rare case of maxillary gingival metastasis from adenocarcinoma colon. **Case Report:** A fifty-year-old gentleman underwent emergency laparotomy and sigmoid resection for obstructive growth in sigmoid colon and was diagnosed as adenocarcinoma colon, pT4N1. He received twelve cycles of adjuvant chemotherapy. After a disease-free interval of four years, he developed multiple visceral metastases along with an ulcero-proliferative lesion in maxillary gingiva, biopsy from which was reported as adenocarcinoma metastasis from carcinoma colon. He received palliative radiotherapy to the gingival lesion and is on systemic chemotherapy for disseminated disease. **Conclusion:** Gingiva being a rare metastatic site, a biopsy is warranted to differentiate it from second primary malignancies of oral cavity.

**Keywords:** Adenocarcinoma, Biopsy, Gingiva, Neoplasms, Sigmoid Colon.

### Introduction

Oral cavity forms a rare site of distant metastasis and it forms 1% of all oral cavity neoplasms [1]. Oral cavity metastasis from colorectal cancers are rare. Most of the metastatic lesions occur in jaw bones [2], but cases of gingival metastasis also have been reported [3-12]. Most of the reported cases of gingival metastases are from mandibular gingiva. Here we report the second case of maxillary gingival metastasis from adenocarcinoma colon.

### Case Report

A fifty-year-old gentleman presented with features of intestinal obstruction. Computed Tomography (CT) scan revealed obstructive growth in sigmoid colon and he underwent emergency laparotomy with sigmoid resection and transverse loop colostomy. Histopathological examination showed moderately differentiated adenocarcinoma, infiltrating serosa with metastasis in lymph node (PT4N1). Metastatic work up showed no evidence

of distant metastasis and patient received twelve cycles of adjuvant chemotherapy with modified FOLFOX regimen. After a disease-free interval of four years, he presented with serial rise in CEA values.

PET-CT showed FDG avid lung, liver, adrenal and vertebral metastases. He was started on second line chemotherapy with single agent irinotecan and completed 2 cycles when he presented with a proliferative lesion in the right upper gingiva [Fig.1]. Incision biopsy from the lesion showed moderately differentiated adenocarcinoma, morphologically resembling colonic adenocarcinoma [Fig.2]. Tumor cells were positive for CDX2 and negative for CK7 [Fig.3]. Findings were consistent with metastasis from primary in the sigmoid colon. CT scan showed soft tissue density lesion in maxillary gingiva with underlying bone erosion and progression of lung, liver and adrenal lesions [Fig.4]. Patient received palliative radiotherapy to gingival lesion 30Gy in

10#, 3Gy per fraction, one fraction per day, five fractions per week over two weeks. The proliferative component decreased after radiotherapy and the size of the lesion remained stable after three months. In view of the disseminated systemic disease, he was started on third line chemotherapy with oral capecitabine and has completed two cycles.

## Discussion

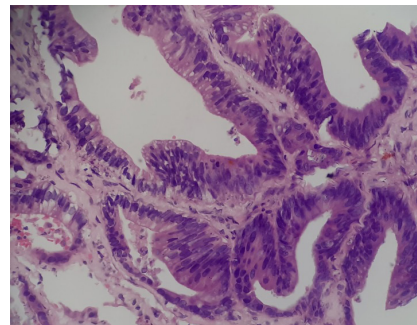
Jaw bones are the common site for metastasis to oral cavity. Metastases to oral soft tissues are rare, gingiva and tongue being the most common sites [1,13-14]. The mechanism of metastasis to gingiva is not known, but proposed mechanism includes hematogenous route. Gingival inflammation is common; the capillaries proliferate and their basement membranes become leaky and makes tumor penetration easy [14].

In the present case, the clinical presentation was an ulcero-proliferative lesion mimicking a second primary in the oral cavity. But biopsy turned out to be adenocarcinoma metastasis from carcinoma colon. Though oral cavity is a rare site of metastasis, all suspicious lesions should be biopsied and metastasis from other primaries should be ruled out. Adenocarcinoma metastatic to the gingiva should be differentiated from primary adenocarcinomas of minor salivary gland origin. Immunohistochemistry may be useful in such situations. Tumor cells of metastatic colonic adenocarcinoma are usually positive for CK 20, CDX2 and CEA and negative for CK7.

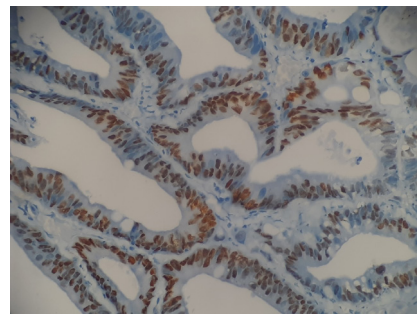
Oral cavity metastasis usually occur with other sites of metastasis and prognosis is very bad [3,6-11]. In the present case, the lesion progressed over two weeks and patient developed cheek swelling, pain, bleeding and difficulty in mastication. He was treated with palliative radiotherapy similar to some previously reported cases [10-11]. He had other sites of metastases including lung, liver, adrenals and has been started on systemic therapy also.



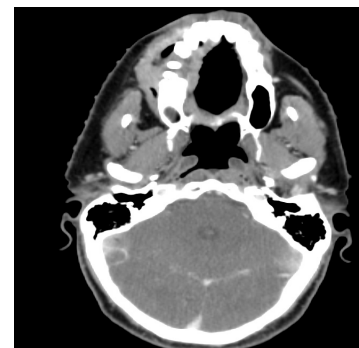
**Fig.1:** *Ulucero-proliferative lesion in right upper gingiva.*



**Fig.2:** *Gingival biopsy: Adenocarcinoma (H&E × 400).*



**Fig.3:** *Gingival biopsy: Adenocarcinoma immunostaining for CDX2 (× 400).*



**Fig.4:** *Enhancing soft tissue density lesion in maxillary gingiva with underlying bone erosion.*

## Conclusion

This is the second reported case of maxillary gingival metastasis from carcinoma colon. Index of suspicion is required to identify such rare metastatic sites and should be differentiated from second primary neoplasms. Gingival metastasis usually occurs as part of disseminated metastases and prognosis is poor.

*Contributors:* LMN: manuscript writing, patient management; AM, AMP: manuscript editing, patient management; AS: critical inputs into the manuscript. LMN will act as a study guarantor. All authors approved the final version of this manuscript and are responsible for all aspects of this study.

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