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The Fate of a Rare Case of Colon Adenocarcinoma and Misdiagnosis with Delayed Treatment of Second Primary Squamous Cell Carcinoma of the Tongue: A Case Report

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ABSTRACT

Multiple primary malignancies (MPMNs) pose a diagnostic challenge, particularly when a second primary tumor is mistaken for metastasis or a benign lesion related to a known malignancy. This case report highlights the clinical consequences of delayed diagnosis in a patient who developed a second primary squamous cell carcinoma (SCC) of the tongue in the setting of colon adenocarcinoma. A 74-year-old female with a history of colon adenocarcinoma presented with a persistent ulcerative lesion on the left lateral border of the tongue. The lesion was initially managed with topical corticosteroids under the presumptive diagnosis of aphthous ulceration or localized inflammation. Over seven months, the lesion progressively worsened. Incisional biopsy eventually revealed poorly differentiated squamous cell carcinoma. Subsequent PET/CT imaging demonstrated ipsilateral cervical lymph node involvement, consistent with advanced disease. Owing to progression of the malignancy and the patient's deteriorating systemic condition, definitive surgical treatment could not be performed, and the patient subsequently died. This case demonstrates the critical risk of diagnostic overshadowing and emphasizes the necessity of a strict clinical protocol: any persistent or non-healing oral mucosal ulceration exceeding 2 weeks in oncology patients must mandate an immediate diagnostic biopsy rather than prolonged empirical treatment.

Keywords: Multiple primary malignancies; Squamous cell carcinoma; Tongue; Oral cancer; Delayed diagnosis; Colon adenocarcinoma.

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Introduction

Multiple primary malignancies (MPMNs) are a well-recognized clinical phenomenon. Distinguishing a true second primary malignancy from metastasis of an existing tumor remains a critical diagnostic challenge in oncology [1]. Shared genetic susceptibility, including alterations in DNA repair pathways and microsatellite instability (MSI), may contribute to the development of multiple primary cancers in some patients [2]. In the head and neck region, second primary squamous cell carcinomas (SCC) may present with subtle and nonspecific clinical features that mimic benign inflammatory lesions. Persistent oral ulcers may represent oral squamous cell carcinoma and should be promptly investigated, particularly when they fail to resolve after short-term management or removal of potential local causes [3]. Misdiagnosis and subsequent treatment delays not only jeopardize the patient's prognosis but also increase the burden on the healthcare system [4,5]. This report describes the clinical course of a patient whose second primary oral malignancy was misdiagnosed for several months, leading to a fatal outcome.

Case Presentation

The patient, a 74-year-old female, had a documented history of colon adenocarcinoma. She presented to the dental clinic with a persistent, painful ulceration on the left lateral border of the tongue.

Clinical Timeline

Month 1–6: The lesion was initially characterized as a solitary, shallow ulcer. Based on the clinical appearance and the patient's history, it was managed conservatively with topical corticosteroids. No significant healing was observed, but the patient did not report rapid expansion.

Month 7: Upon follow-up, the lesion had progressed to a deep, indurated ulcer with irregular borders, measuring approximately 2.5 cm in its largest dimension. Figure 1.

Biopsy and Histopathology: An incisional biopsy was performed. Histopathological examination revealed poorly differentiated squamous cell carcinoma (SCC).

Staging: A PET/CT scan was conducted, which demonstrated involvement of the ipsilateral cervical lymph nodes, indicating advanced-stage SCC (Figures 2 and 3). Due to the rapid progression of the disease and the patient's declining systemic status, surgical resection and adjuvant therapy were deemed high-risk, and the patient passed away shortly thereafter.



Figure 1. Preoperative clinical intraoral photograph showing the persistent, indurated mass with deep ulceration and irregular borders on the left lateral border of the tongue prior to incisional biopsy.

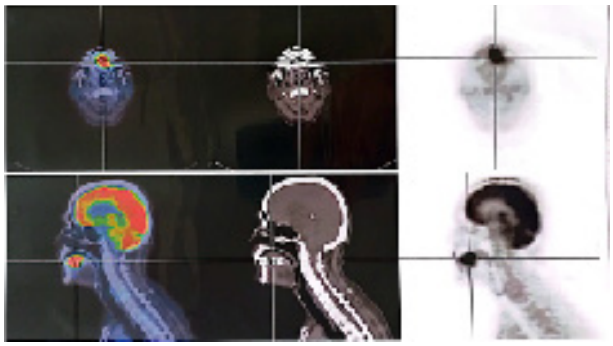


Figure 2. PET/CT scan image showing intense hypermetabolic uptake in the primary tongue lesion with ipsilateral cervical lymph node involvement.

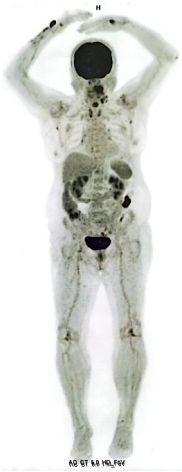


Figure 3. Whole body 18F-FDG PET/CT scan demonstrating hypermetabolic activity in the primary tongue lesion and ipsilateral cervical lymph nodes, with no evidence of distant metastatic disease.

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Discussion

This case highlights the challenges of managing mucosal lesions in oncology patients. The primary issue in this case was diagnostic overshadowing, where the presence of colon adenocarcinoma contributed to underrecognition of a separate primary tumor in the oral cavity.

Diagnostic Criteria and Pitfalls

According to the Warren and Gates criteria, a second primary tumor should be distinguished from metastasis based on histopathological differences, anatomical separation by normal mucosa, and the absence of metastatic spread from the original site [1]. In the present case, the clinical progression from a superficial ulcer to an indurated mass should have prompted earlier biopsy. The seven-month delay allowed the SCC to progress from a potentially treatable lesion to advanced disease.

Clinical and Economic Implications

Delayed diagnosis in cancer patients has profound implications. Research indicates that later-stage cancer diagnosis can increase first-year monthly healthcare costs by approximately US4,916"-" US19,036, depending on cancer type and stage, due to the need for more intensive treatment and management of advanced complications [4]. Beyond economic burden, delayed diagnosis may also worsen survival and limit therapeutic options [5].

Genetic Considerations

The coexistence of colorectal and head and neck malignancies may raise suspicion regarding shared molecular susceptibility. Alterations in DNA mismatch repair pathways and microsatellite instability have been implicated in subsets of patients with multiple primary malignancies [2]. Although genetic profiling was unavailable in this patient, mismatch repair immunohistochemistry and/or MSI testing could have provided additional insight into a potential hereditary cancer predisposition.

Limitations

This report is limited by its retrospective nature and the absence of MSI or broader genetic testing. These data might have provided additional information regarding the molecular relationship between the two primary tumors.

Conclusion

Misdiagnosis of a second primary squamous cell carcinoma of the tongue in a patient with colon adenocarcinoma underscores the severe hazards of diagnostic overshadowing and empirical treatment delays. To prevent similar outcomes, clinicians must adhere to a mandatory biopsy protocol: any unexplained, solitary, or non-healing oral mucosal lesion persisting beyond two weeks in patients with a history of malignancy warrants prompt diagnostic biopsy. Timely histopathological verification remains essential to improve survival outcomes and reduce healthcare burden.

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Conflict of Interest

There is no conflict of interest to declare.

References

[1] Warren S, Gates O. Multiple primary malignant tumors: a survey of the literature and statistical study. Am J Cancer. 1932; 16:1358-1414.

[2] Lu M, Zhang X, Chu Q, Chen Y, Zhang P. Susceptibility genes associated with multiple primary cancers. Cancers (Basel). 2023; 15(24):5788. doi:10.3390/cancers15245788.

[3] González-Moles MÁ, Aguilar-Ruiz M, Ramos-García P. Challenges in the early diagnosis of oral cancer, evidence gaps and strategies for improvement: a scoping review of systematic reviews. Cancers (Basel). 2022; 14(19):4967. doi:10.3390/cancers14194967.

[4] McGarvey N, Gitlin M, Fadli E, Chung KC. Increased healthcare costs by later stage cancer diagnosis. BMC Health Serv Res. 2022; 22:1155. doi:10.1186/s12913-022-08457-6.

[5] Su WWY, Lee YH, Yen AMF, Chen SL, Hsu CY, Chiu SY, Fann JCY, Lee YC. Impact of treatment

delay on survival of oral/oropharyngeal cancers: results of a nationwide screening program. Head Neck. 2021; 43(2):473-484. doi:10.1002/hed.26504.

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