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Rare Metastatic Lesion Affecting the Mouth: Case Report and Review

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Abstract

The presence of metastases in the oral cavity is considered quietly rare in the literature. Considering metastasis of hepatocellular carcinoma, the occurrence occurs in approximately 1% of cases. The objective of this study was to report a case of metastasis of hepatocellular carcinoma in gingiva, in a patient with a previous diagnosis of cancer presenting a poor prognosis. Furthermore, a review of reported cases has already been performed and found only 20 reports. This case report emphasizes the importance of including metastases in soft tissue of the mouth, in the differential diagnosis of lesions with benign aspect.

Keywords

Metastasis in the Oral Cavity, Hepatocellular Carcinoma

1. Introduction

Hepatocellular carcinoma (HCC) is considered the sixth most common malignant neoplasm in the world, with 748,000 cases per year [1]. Its etiology is associated with hepatitis A, hepatitis B, hepatitis C and alcohol consumption [2]. Extra-hepatic metastases occur in 50% of cases, predominantly affecting the lung, diaphragm, abdominal lymph nodes and bones [1]. In the oral cavity, metastases are extremely rare [2] and are usually found at an advanced stage of cancer [3]. The first report of oral HCC metastasis was described by Dick *et al.*, in 1957 [4] and to date only 20 cases of gingival metastasis have been found in the literature (**Table 1**) [1]-[21]. This article has reported an additional case report of oral HCC metastasis in gingiva and a literature review.

Table 1. Case reports of Hepatocellular Carcinoma affecting the gingival tissue.

Patient n°.	Studies	Year	Age	Sex	Site
1	Lapeyrolerie and Manhold [7]	1964	56	M	Gingiva (maxilla)
2	Radden and Reade [8]	1966	51	M	Gingiva (maxilla)
3	Lund *et al.* [9]	1970	52	M	Gingiva (maxilla)
4	Kuga *et al.* [10]	1976	65	M	Gingiva (maxilla)
5	Yoshida *et al.* [11]	1976	46	M	Gingiva (maxilla)
6	Wedgwood *et al.* [12]	1979	56	M	Gingiva (maxilla)
7	Morishita and Fukuda [13]	1984	64	M	Gingiva (maxilla)
8	Tokuyama *et al.* [14]	1984	44	F	Gingiva
9	Kanazawa and Sato [15]	1989	78	F	Gingiva (maxilla)
10	Llanes *et al.* [12]	1996	66	M	Gingiva (mandible)
11	English *et al.* [17]	2000	44	M	Gingiva (maxilla)
12	Maiorano *et al.* [18]	2000	70	M	Gingiva
13	Papa *et al.* [19]	2001	55	M	Gingiva (mandible)
14	Pires *et al.* [5]	2004	60	M	Gingiva (mandible)
15	Ramon *et al.* [20]	2003	65	M	Gingiva (maxilla)
16	Arai *et al.* [3]	2004	72	F	Gingiva (maxilla)
17	Friedrich *et al.* [3]	2010	72	M	Gingiva (maxilla)
18	Tadashi Terada [2]	2011	55	M	Gingiva (maxilla)
19	Greenstein *et al.* [6]	2013	68	M	Gingiva (maxilla)
20	Alrumaih *et al.* [1]	2015	73	M	Gingiva (maxilla)
21	The present case report	2015	58	M	Gingiva (mandible)

2. Case Report

A 58-year-old male patient reported pain in the gingiva, which impaired chewing. The patient had a history of hepatitis C infection and an advanced Hepatocellular Carcinoma with pulmonary metastasis 4 months ago. In the intraoral physical examination, there was a vegetative nodular lesion of at least 2 cm, pedunculated, in the gingiva between the teeth 37 and 38, which presented severe mobility. One part of the lesion presented an ulcerated surface, covered by necrotic tissue and, another part, was being traumatized during occlusion (**Figure 1**). Computed tomography, in a soft tissue window, revealed a well-circumscribed lesion in the premolar and molar region on the left side. It was also possible to see the juxtaposition of the lesion to the teeth and mandible (**Figure 2**). The patient presented an advanced stage of Hepatocellular Carcinoma and a pet-scan examination showed hypercaptation in the primary lesion of the liver and areas of lung and jaw metastases (**Figure 3**). In an MRI, it was possible to identify lesions in the liver and, through a bronchoscopy, pulmonary metastases (**Figure 4**).

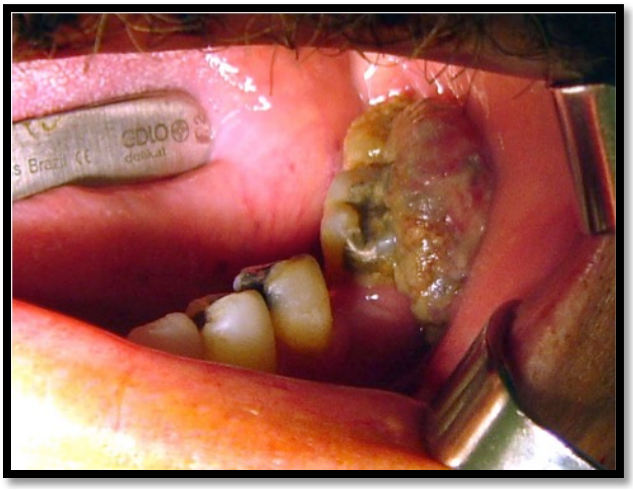
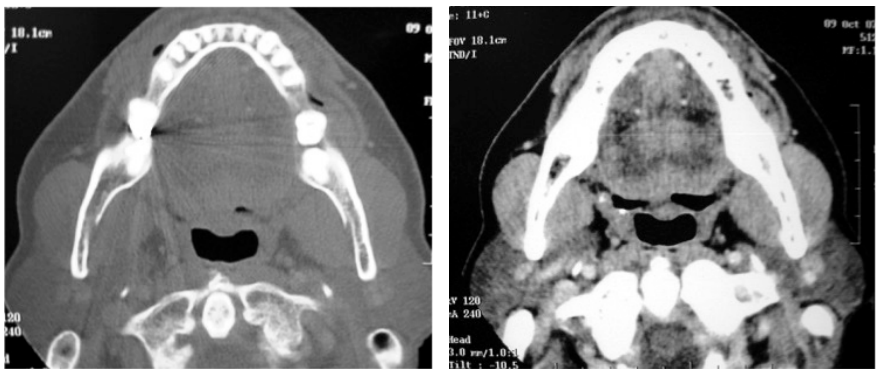


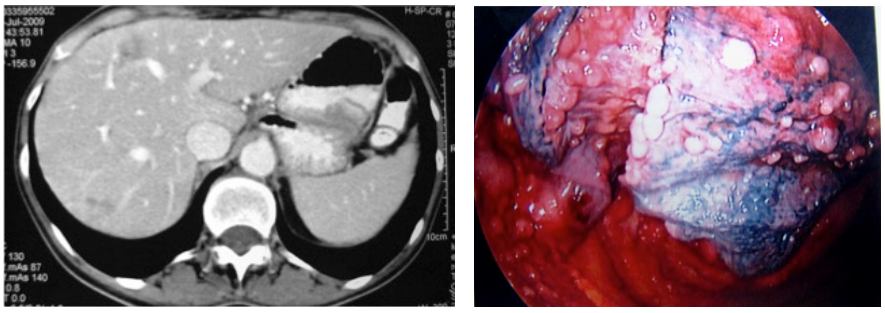
Figure 1. Nodular lesion vegetative with ulcerated surface, pedunculated in the gingiva of the region of the teeth 37 and 38 with severe mobility.



(a) (b)

Figure 2. Computed tomography axial sections. (a) There is a well-defined lesion in the posterior region of the mandible on the left side; (b) In the window for bone tissue, there is absence of bone involvement.

Figure 3. Pet-Scan examination, representing hypercaptation of the primary lesion in the liver, and metastases in the lung and mandible.



(a) (b)

Figure 4. (a) Magnetic resonance imaging reveals hepatic impairment; (b) Bronchoscopy revealing many metastases in the pleura and lungs.

Facing the clinical, imaging findings and the systemic conditions of the patient, the diagnostic hypotheses were: Hepatocellular Carcinoma Metastasis or non-neoplastic proliferative lesion. The proper conduct for the oral lesion would be an incisional biopsy, but since the patient had a prognosis of 2 months of life, the medical and dental team chose to completely remove the lesion and extract the involved teeth, so that the patient could have a better quality of life. The microscopic findings were compatible with malignant neoplasm, demonstrating neoplastic hematogenous infiltration, and epithelial tissue with severe epithelial dysplasia (**Figure 5(a)**). In order to determine the tissue origin of the lesion, an immunohistochemical examination was performed, in which the result was positive for Hepatocellular Carcinoma metastasis (**Figure 5(b)** and **Figure 5(c)**).

3. Discussion

Hepatocellular carcinoma is the sixth most common malignant neoplasm, being more frequent in men than in women [3]-[22]. Chronic infection with hepatitis B virus (HBV) and/or hepatitis C virus (HCV) infection are the main risk factors for the development of this cancer [23]. Extra-hepatic metastasis is a fairly common occurrence, affecting more than 50% of patients frequently in the lungs, abdominal lymph nodes, diaphragm and bone [4]. Metastases in the oral cavity are rare and, when they occur the most common primary site is lung carcinoma, followed by breast carcinoma and renal cell carcinoma. Considering hepatocellular carcinoma, its metastasis to the mouth region is even rarer, accounting for approximately 1% of the cases, the most affected mandibular and gingival tissues [2] [3] [4] [5].

The clinical presentation of soft tissue metastases is generally similar to the characteristics of benign or reactive proliferative lesions, such as pyogenic granuloma, and peripheral giant cell lesion [3]. However, the microscopic examination is fundamental to define the final diagnosis. In the present case, although the history of cancer was known and the main suspicion was of an oral metastasis, the microscopic examination was fundamental to confirm the diagnosis. In addition, even the microscopic appearance of a malignant neoplasm, the immunohistochemical examination was performed to confirm the origin of the lesion.

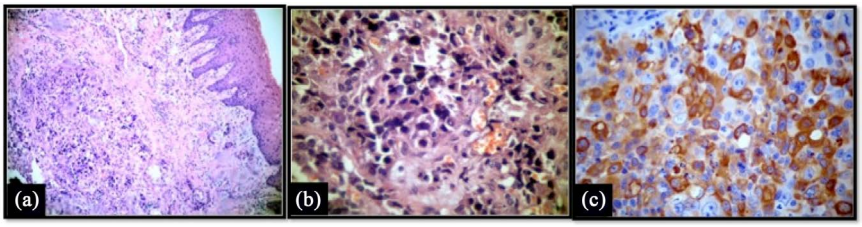


Figure 5. Microscopic examination compatible with malignant neoplastic infiltration. (a) The epithelial tissue is observed to be smaller, reacting with a severe dysplasia and below the infiltration of neoplastic cells; (b) A detail of altered cellularity, with nuclear hyperchromatism, mitoses and cellular bizarreism; (c) Immunohistochemical examination revealing the positivity for CEA.

Due to the presence of multiple metastases in vital organs, such as the lungs, the conduct of an excisional biopsy, even if the main diagnosis was a malignant lesion, was taken to offer better quality of life of the patient. We consider maintenance of oral functions fundamental in the palliative phase.

4. Conclusion

As conclusion, it is worth emphasizing in this work that although the present case already presented the recognized primary disease, some cases of metastatic oral lesions may manifest firstly than the primary site of the neoplasia, and it is important never to neglect any lesion removed. During the clinical examination process, anamnesis is fundamental in the differential diagnosis and the conduct of each case.

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