Palatal Melanoma: Clinical Characteristics and Therapeutic Approaches (a case repport)

Case Report

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ABSTRACT

Introduction Oral cavity melanoma is a tumor with a high metastatic potential. Once diagnosed, a locoregional and distant staging is necessary. The therapeutic management of this tumor is difficult. Radical surgery with clear margins is the cornerstone of treatment. This therapeutic option is not always possible, due to anatomical and functional constraints. The use of lymph node dissection is still controversial, especially if there is no evidence of lymph node involvement. Other therapeutic modalities can be used, such as chemotherapy and radiotherapy, immunotherapy, and targeted therapy.

Observation A 54-year-old patient presented with a multi-lobulated blue-black mass originating from the alveolar mucosa of the upper maxilla. This tumor extends posteriorly to invade the hard palate evolving for 14 months with the appearance of cervical lymphadenopathy. Biopsy performed and the diagnosis of nodular melanoma was made. Staging revealed pulmonary metastases. The patient received two courses of chemotherapy combining cisplatin-dacarbazine, followed by surgical excision with ipsilateral lymph node dissection. The margins of resection were clear with nodal metastases and capsular breach, indicating three sessions of radiotherapy.

Discussion Melanoma of the oral cavity is a rare, aggressive malignant tumor arising from clonal proliferation of melanocytes. The pathophysiology remains unclear, and the tumor often remains asymptomatic for a long time, leading to delayed diagnosis and worsening prognosis. Diagnosis is based on histopathological examination of biopsy or surgical specimens and immunohistochemistry. Once diagnosed, staging with local, regional, and distant evaluation is necessary to determine the disease stage and choose the appropriate therapeutic strategy.

Key Words: Melanoma, mucosal melanoma, palate .

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INTRODUCTION

Melanoma is a malignant tumor that results from the malignant transformation of melanocytes. Cutaneous melanoma is by far the most common type; however, melanomas can also occur in other, much rarer locations. The rarest subtype of melanoma is mucosal melanoma [1, 2] .

It is a malignant tumor developed from melanocytes originating in mucous membranes.

Most mucosal melanomas occur in the head and neck region, with melanoma of the oral cavity constituting (25%). Oral cavity melanoma is an extremely rare but highly aggressive tumor. It represents 0.5% of all tumors of the oral cavity and 0.2 to 8% of all malignant melanomas [3]. Nearly 80% of oral melanomas develop in the palate and lower gum [4].

Unlike cutaneous melanoma, the etiology of oral cavity melanoma is not yet understood. Risk factors have been identified: smoking, alcohol consumption, increased tooth mobility, and exposure to other environmental

carcinogens [6], [7].

Clinically, it presents as macules, nodules, or large exophytic lesions, more or less pigmented, ulcerated or not [6]. These lesions are initially asymptomatic [8]; they progress quietly, leading to a delay in consultation and therefore management, which worsens the prognosis.

It is therefore imperative to perform a biopsy for every suspicious lesion of the oral cavity, especially in the elderly, who have risk factors.

Oral cavity melanoma is a tumor with a high metastatic potential. Once diagnosed, a locoregional and distant staging is necessary. The therapeutic management of this tumor is difficult. Radical surgery with clear margins is the cornerstone of treatment. This therapeutic option is not always possible, due to anatomical and functional constraints. The use of lymph node dissection is still controversial, especially if there is no evidence of lymph node involvement. Other therapeutic modalities can be used, such as chemotherapy and radiotherapy, immunotherapy, and targeted therapy.

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OBSERVATION

A 54-year-old patient presented with a multi-lobulated blue-black mass originating from the alveolar mucosa of the upper maxilla. This tumor is responsible for the loss of teeth numbers 11, 12, 21, 22, and extends posteriorly to invade the hard palate (Fig. 1) evolving for 14 months with the appearance of cervical lymphadenopathy.

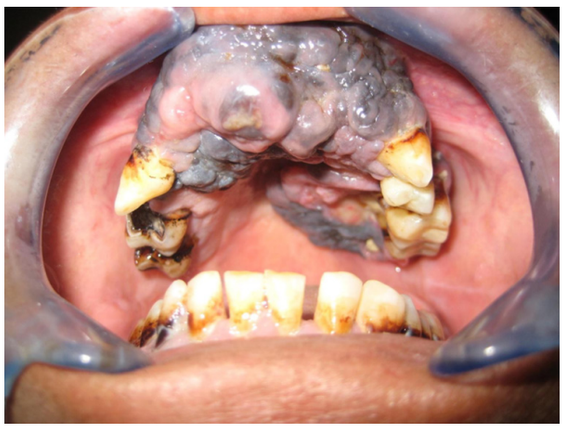

Figure 1: Endobuccal examination upon admission revealed the presence of a dark, multi-lobulated mass developed at the expense of the upper maxilla.

The medical history and clinical examination ruled out a primary skin tumor.The panoramic dental radiograph and CT scan showed bone erosion of the upper maxillary bone with a localized, hyperdense, malignant-looking tissue process (Fig.2).

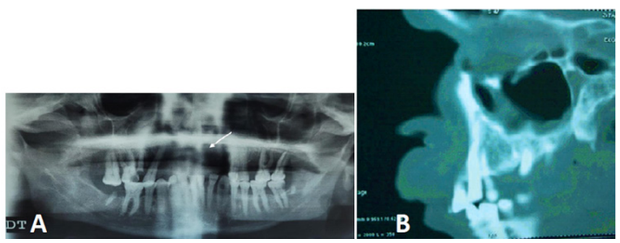

Figure 2: panoramic dental radiograph (A) and CT scan (B) showed bone erosion of the upper maxillary bone with a localized, hyperdense, malignant-looking tissue process.

Biopsy revealed a malignant tumor proliferation consisting of sheets and clusters with ulceration of the surface lining (Fig.3).

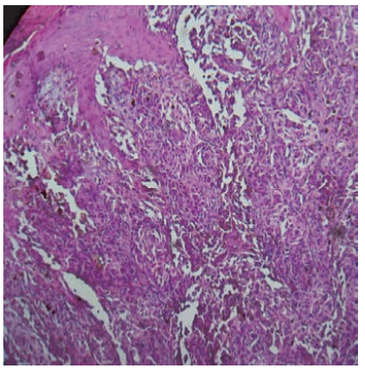

Figure 3: Malignant tumor proliferation consisting of sheets and clusters of pigmented melanocytic cells, infiltrating the surface lining (HE x 100)

The tumor cells were pigmented, large in size, undifferentiated in places (Fig.4), with eosinophilic cytoplasm and nuclei showing moderate to marked cytonuclear atypia, prominently nucleolated with mitotic figures.

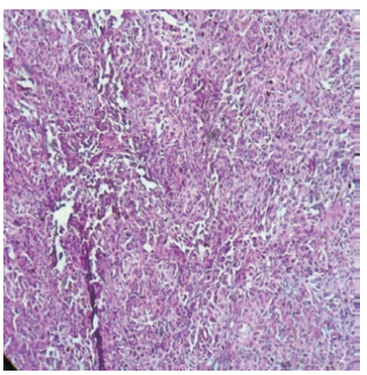

Figure 4: Pigmented tumor cells of large size, exhibiting undifferentiated characteristics in places (HE x 200).

Immunohistochemical analysis showed positivity of these cells to the HMB45 antibody and Melan-A. The diagnosis of nodular melanoma was made. Staging revealed pulmonary metastases. The patient received two courses of chemotherapy combining cisplatin-dacarbazine, followed by surgical excision with ipsilateral lymph node dissection. (Fig.5)

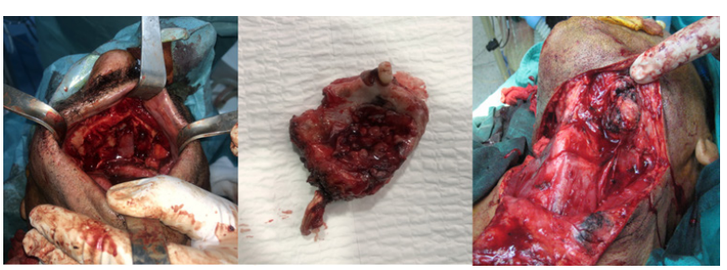

Figure 5: Surgical procedure consisting of a maxillectomy followed by ipsilateral cervical lymph node dissection.

The margins of resection were clear with nodal metastases and capsular breach, indicating three sessions of radiotherapy.
The patient died 9 months after the surgical intervention.

DISCUSSION

Mucosal melanomas are rare, primarily occurring in the oral cavity and nasosinusal tract. [9,10] Palatal melanoma accounts for 1% of all melanomas and 0.7% of all cancers of the oral cavity [9]. Typically asymptomatic, it is often detected late, worsening its prognosis, as illustrated by the clinical case reported in this article. Compared to cutaneous melanoma, palatal involvement tends to occur in older patients [9]. There appears to be a slight male predominance. The etiology of palatal melanoma is not yet known, but risk factors may include tobacco use, trauma, and formaldehyde exposure [9, 13, 14].

Clinically, it often presents as a pigmented lesion. In 30% of cases, pigmentation precedes tumor formation [11]. The tumor lesion can be smooth or ulcerated, and there may be bleeding or pain. Diagnosis is confirmed only through histology and immunohistochemical study. Specific markers for melanoma are HMB45 and Melan-A [9, 10,12].

Staging includes a CT or MRI of the head and neck, thoracoabdominal CT, bone scintigraphy, and possibly a PET scan. About a quarter of cases present with cervical lymphadenopathy. Distant metastases typically involve the lungs, brain, liver, bones, and rarely adrenal, thyroid, or pancreatic glands [15]. Standard skin melanoma classifications are challenging to apply.

The poor prognosis of these melanomas appears to be due to late diagnosis and the proximity to bony and muscular structures. Tumor thickness, ulceration, necrosis, location, vascular invasion, lymph node involvement, and tumor cell polymorphism may play varying roles [10]. Treatment is not standardized, and regardless of the approach, prognosis is poor. Five-year survival rates range from 5 to 15% [9, 17,18].

Wide excision, with or without cervical lymph node dissection, is often recommended. Although these tumors are not very sensitive to radiation, radiotherapy may be used in cases of nodal involvement with capsular breach. Chemotherapy protocols do not currently seem to be curative.
Given the risk of melanoma, strict surveillance and biopsy excision at the slightest suspicion of any pigmented lesion in the oral mucosa, particularly on the palate or upper gingiva, are becoming increasingly important for early management [19].
Our article presents the case of a 54-year-old patient followed at our institution for a painless swelling on the palate. CT showed a localized, malignant-looking tissue process.

Biopsy with histological study and immunohistochemical analysis confirmed the diagnosis of malignant melanoma. Staging revealed pulmonary metastases. Our management plan, following possible multidisciplinary consultation, consisted of chemotherapy followed by wide surgical excision with cervical lymph node dissection and adjuvant radiotherapy.

Less than 1% of melanomas affect the palate. Their prognosis is grim in the majority of cases, despite good locoregional control, with a 5-year survival rate ranging between 5 and 15%. They affect men more between the ages of 50 and 60. The etiopathogenesis remains unknown; however, there may be a genetic predisposition, although no well-defined precursor has been isolated.

The very high malignancy, aggressivity, and grim prognosis of this tumor make it an entity where early diagnosis improves patient survival rates.

CONCLUSION:

Melanoma of the oral cavity is a rare, aggressive malignant tumor arising from clonal proliferation of melanocytes. The pathophysiology remains unclear, and the tumor often remains asymptomatic for a long time, leading to delayed diagnosis and worsening prognosis. Diagnosis is based on histopathological examination of biopsy or surgical specimens and immunohistochemistry. Once diagnosed, staging with local, regional, and distant evaluation is necessary to determine the disease stage and choose the appropriate therapeutic strategy.

CONFLICT OF INTEREST

the authors declare that there are no conflict of interest.

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