CASE REPORT

Melanoma involving the mucosa on mandible and both maxilla simultaneously

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Summary
The condition of melanoma involving the mucosa on mandible and both maxilla simultaneously is very rare. This report presents such a case from a 72-year-old female.
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Introduction
Primary malignant melanoma on the head and the neck is rare, accounting for less than 1% of all melanomas.1 The condition of melanoma involving the mucosa on mandible and both maxilla simultaneously is very rare. We report such a case.

Case report
A 72-year-old female was referred to the Hospital of Stomatology, Wuhan University, China on May 12th, 2005. The patient complained that she had pigmented plaque lesions on right mandibular gingiva and on hard palate–maxillary gingiva without any pain for 10 months. Then 2 months ago, the pain came to her on right maxillary gingiva. An intra-oral examination showed that an extensive, bluish black, nodular mass (about 8 cm in diameter) was extended from the last right maxillary molar to the right maxillary incisor, covered by a swelling mucosa that was ulcerated in some areas (Fig. 1A). And two other separated black lesions (about 2 cm in diameter each) were located in lower gingiva (Fig. 1B). The lesions were highly suspected as melanoma. General physical examination did not show any contraindication, So a radical resection with 2-cm margin and supraomohyoid neck dissection was performed. Histopathologically, mitotic activity and pigmented areas were observed (Fig. 2A). Immunohistochemistry was used to establish the final diagnosis. The tumor cells strongly expressed S-100 protein and HMB-45 monoclonal antibody (Fig. 2B and C). The major pathological type of the lesions on mandible and both maxilla was superficial spreading melanoma while part of the maxillary lesion was nodular melanoma.
Discussion

Primary malignant melanoma on the head and the neck is rare, accounting for less than 1% of all melanomas.¹ Half of such melanomas occur in the oral cavity, and the most frequent sites of occurrence are the hard palate and the maxillary gingiva.² Melanoma may progress radially and/or vertically. Most lesions appear as asymmetric pigmented maculae of irregular shape. They may grow in a horizontal manner for some years prior to a phase of vertical growth and submucosal invasion.³ The progress of melanoma may go through three phases: a nodular phase usually affecting the centre, a flat or slightly elevated, deep brownish-black pigmented plaque phase, and a non-elevated, light-brown macular phase.⁴ In this case, the lesion occurred on mandible and both maxilla simultaneously but it grew faster obviously on maxilla than on mandible. And three progressing phases of melanoma existed simultaneously. Such a condition is very rare and the pathogenesis still remained to be investigated. Unlike cutaneous melanoma, mucosal melanomas do not have precursor lesions and risk factors, such as ultraviolet radiation, which is known as a major cause of cutaneous melanoma. This makes it difficult to prevent or detect at an early stage. It is usually diagnosed at a later stage with a poor prognosis. Even though there are no definitive precursor lesions identified, pre-existing melanocytic lesions are noted in about one third of cases of mucosal melanoma in the head and neck region.⁵ Suspicious lesions such as mucosal nevi and oral

Figure 1  (A) Lesion located at palatal and maxillary mucosa and an extensive nodular mass was seen on the maxillary gingiva. (B) Two separated lesions located at mandible mucosa.

Figure 2  (A) (HE; 40×) Histopathologically, mitotic activity and pigmented areas were observed. (B) S-100 protein was positively expressed by tumor cells (40×). (C) HMB-45 monoclonal antibody was positively expressed by tumor cells (40×).
pigmentation caused by amalgam should be biopsied and examined for possible malignancy. Whether such a lesion represents a precursor to oral mucosal melanoma or not is uncertain, excision is recommended.\(^6\) Despite the rarity of mucosal melanomas, their aggressive behavior and overall dismal prognosis warrants investigation in the hope of diagnosis at an earlier stage.

**Conclusion**

We report this case because it was special in two aspects: Firstly, the lesion involving the mucosa on mandible and both maxilla simultaneously. Secondly, two kinds of pathological type of melanoma exist together in one patient, one of them is superficial spreading melanoma, the other is nodular melanoma.

**References**