

Case Report

Oral Malignant Melanoma- A Case Report

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Abstract: Malignant melanoma of the oral cavity is a rare neoplasm that arises from a benign melanotic lesion within normal mucosa. Malignant melanomas of the oral cavity are extremely rare, accounting for 0.2% to 8% of all malignant melanomas. It occurs approximately four times more frequently in the oral mucosa of the upper jaw usually on the palate or alveolar gingiva. Oral malignant melanoma is caused by unknown factors; benign pigmentation may precede the neoplasm by several years. The malignant transformation of benign melanosis is associated with poor prognosis. Tumor size and metastases are prognostic tools for the disease. Therefore dental clinician must carefully examine the head, neck, oral cavity, or any pigmented lesion that exhibit growth potential. Here, we are presenting a case of oral malignant melanoma located on maxillary gingiva in a 52 year old female patient.

Keywords: Malignant melanoma, gingiva, palate.

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INTRODUCTION

Oral malignant melanoma (OMM) was first described by WEBER IN 1859[1]. Oral mucosal melanoma is a malignant neoplasm of melanocytes and extremely rare constitute only 0.5% of all malignant melanomas [2]. The most common site is the palate followed by the buccal gingival. Other sites include buccal mucosa, floor of the mouth, tongue, lips. Rapini *et al.* found that the highest percentage of oral melanomas occurred in the age range of 41 to 60 years [3]. Males are affected three times as frequently as females. Greene *et al.* described the criteria for primary oral melanoma which includes demonstration of melanoma in the oral mucosa, presence of junctional activity, and inability to demonstrate extra oral primary melanoma [4]. These lesions remain asymptomatic and detected only when there is ulceration or hemorrhage of the overlying epithelium. It is characterized by proliferation of malignant melanocytes along the junction between the epithelial and connective tissues as well as within the connective tissue [4]. Oral malignant melanoma (OMM) has poor prognosis with 5 years survival rate, metastasis has also been frequently reported in most cases [5].

CASE REPORT

A 52-year-old female patient reported to the Department of Oral Medicine and radiology with the chief complaint of swelling and pain in upper front

region of jaw, swelling which started as a small grayish pigmentation present on labial mucosa 4 months back (as described by the patient) which was gradually increasing in size and pain since last 2-3 days which was sudden in onset & intermittent in nature. She gave the past dental history of trauma 20 years back, which led to exfoliation of #11. There was no relevant past medical history. Intraoral examination revealed a diffuse grayish black pigmentation involving labial mucosa in relation to #13 to #23 and extends to the posterior part of the hard palate (Fig. 1); there was a nodular swelling measuring about 1×3 cm on the labial mucosa extending from 12 to 21 with a sessile base and single round nodular growth was present over the crestal region of the edentulous region of 11 tooth. This growth was erythematous with area of ulceration and erosion (Fig.2). On Palpation swelling was soft to firm in consistency and non-tender. The regional lymph nodes were not palpable. Correlating all these clinical features, a provisional diagnosis of oral malignant melanoma of the oral cavity was made with differentials of nevi, amalgam tattoos, Kaposi sarcoma and the patient was then referred for further investigations.

Maxillary occlusal radiograph showed missing #11 tooth and no involvement of the underlying bone was detected (fig: 3). Panoramic radiograph revealed generalized bone loss. No distant metastatic bone involvement was found (Fig: 4). Incisional biopsy of

the lesion was done under local anaesthesia and the specimen was sent for histopathological examination.

Microscopic sections revealed tissue with surface ulceration lined by stratified squamous epithelium with stroma showing atypical round cells disposed in sheets and nests. Tumor cells display epitheloid morphology with vesicular nuclei, chromatin, presence of nucleoli and moderate amount of cytoplasm. Some of the atypical cells contain melanin pigments within the cytoplasm. Mitoses were noted. Area of mixed inflammatory infiltrate and hemorrhage were seen (Fig: 5). Thus, correlating all these clinical features, histopathological report we are confirming the diagnosis of malignant melanoma.



Fig-1: Diffuse grayish black pigmentation involves labial mucosa in relation to #13 to #23 teeth and extends to the posterior part of the hard palate

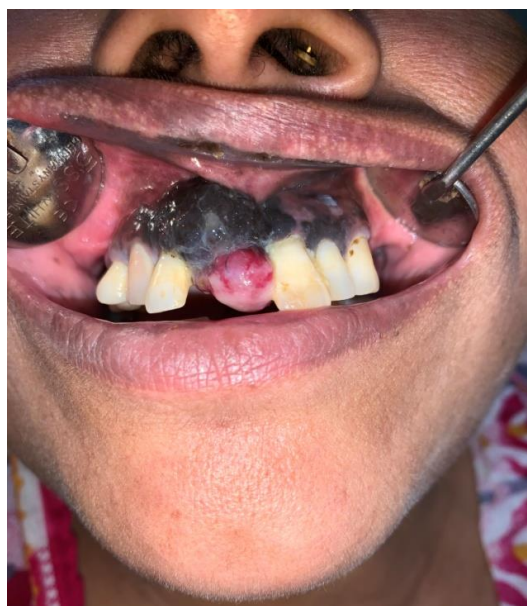


Fig-2: A nodular swelling measuring about 1×3 cm on the labial mucosa extending from 12 to 21 with a sessile base and single round nodular growth was present over the crestal region of the edentulous region of 11 teeth.



Fig-3: Occlusal radiograph showed missing #11 teeth and no involvement of the underlying bone was detected

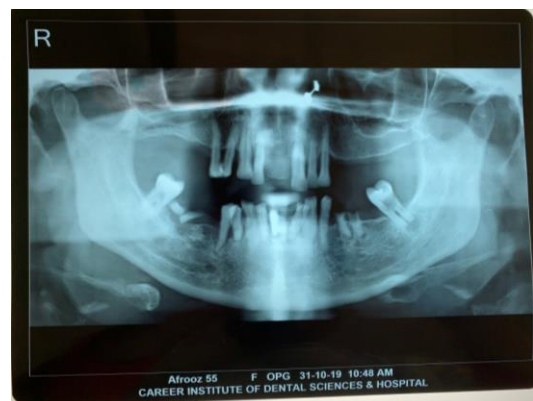


Fig-4: Panoramic radiograph revealed generalized bone loss

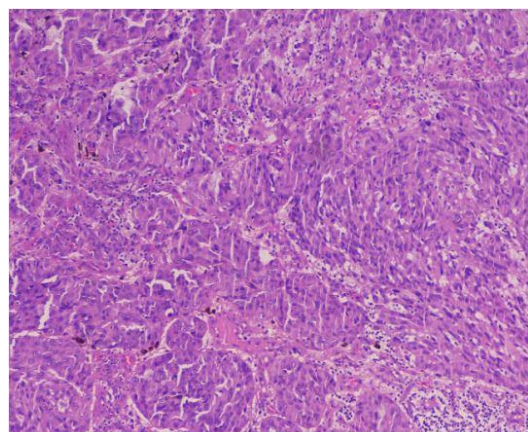


Fig-5: Microscopic sections revealed tissue with surface ulceration lined by stratified squamous epithelium with stroma showing atypical round cells disposed in sheets and nests. Some of the atypical cells contain melanin pigments within the cytoplasm. Mitoses were noted. Area of mixed inflammatory infiltrate and hemorrhage were seen

DISCUSSION

Oral malignant melanomas are extremely rare, accounting for approximately 2% of all malignant melanomas [4]. The etiology is unknown. It can occur due to various risk factors, like tobacco use and chronic irritation. The most common locations are the palate and maxillary gingiva. There is a slight male predominance, and the median age is 55–66 years. According to Tanaka *et al.*, oral melanomas could be classified into five types based on their clinical appearance: pigmented nodular, non pigmented nodular, pigmented macular, pigmented mixed and none pigmented mixed [8]. Axel and Hedin have suggested the physical and chemical stimulation can lead to the increased production of melanocytes which in turn may result in oral pigmented lesions [6]. Oral malignant melanoma is usually painless. It is often described as a uniformly pigmented black or brown lesion [2]. Because most melanomas are painless in their early stages, the diagnosis is often delayed until symptoms resulting from ulceration, growth, and /or bleeding are noted. Westbury describes a clinical classification as follows: I-only primary tumor present. II-metastasis present (IIa-adjacent skin involved, IIb-regional lymph nodes involved, II ab adjacent skin and regional lymph nodes involved), and III-metastasis beyond regional lymph nodes [3]. It is accepted that clinical evaluation of cutaneous melanocytic lesions is guided by ABCDE criteria. The guidelines evaluate for asymmetry, border irregularity, color variegation, a lesion that exceeds a diameter OMM may demonstrate significant heterogeneity in morphological features, developmental process and biological behavior that could render the clinical diagnosis extremely difficult [2]. The differential diagnosis includes melanotic macule, smoking associated with melanosis, post-inflammatory pigmentation, melanoplakia, melanoacanthoma, nevi, Addison's disease, Peutz-Jegher syndrome, amalgam tattoo, Kaposi's sarcoma and many other conditions sharing macroscopic characteristics and drug induced pigmentation more often the culprit is azidothymidine [7,6]. Although there is no guideline or consensus for the treatment of oral malignant melanoma, surgical intervention remains the treatment of choice. Umeda *et al.* suggested a surgical protocol: (1) primary lesion should be excised with a 15mm safe margin by an intraoral approach, (2) metastatic lymph nodes should be excised, (3) adjuvant immunochemotherapy should be considered [9]. The prognosis of oral malignant melanoma (OMM) is poor with a five year survival rate of 0-55% of cases. The

median survival of malignant melanoma at the time of diagnosis is more than two years depend on whether there is lymph node involvement or not.

CONCLUSION

Oral malignant melanoma is a rare tumor with poor prognosis. Clinicians must carefully examine the oral cavity and any growing pigmented lesion must be biopsied. Advanced Disease at time of diagnosis is the only sure predictor of outcome. So, any suspected melanotic lesion should undergo histological analysis to diagnose oral malignant melanoma (OMM) in its early stages or to rule out premalignant pigmented lesions

REFERENCES

1. Auluck, A., Zhang, L., Desai, R., & Rosin, M. P. (2008). Primary malignant melanoma of maxillary gingiva--a case report and review of the literature. *Journal of the Canadian Dental Association, 74*(4).
2. Mellouli, N., Sioud, S., Garma, M., Chokri, A., Hamdi, H., & Selmi, J. (2019). Oral malignant melanoma: History of malignant degeneration of a pigmented lesion. *Journal of Oral Medicine and Oral Surgery, 25*(2), 19.
3. Ebenezer, J. (2006). Malignant melanoma of the oral cavity. *Indian Journal of Dental Research, 17*(2), 94.
4. Padhye, A., & D'souza, J. (2011). Oral malignant melanoma: A silent killer?. *Journal of Indian Society of Periodontology, 15*(4), 425.
5. Shrivastava, H., Kumar, N., Chhimwal, P., & Shah, N. Malignant Melanoma: A Case Report.
6. Fauzdar, S., Rao, D. D., Arthanari, K. K., Krishnan, G., Naikmasur, V. G., & Revanappa, M. M. (2010). Malignant melanoma of the mandibular gingiva. *Rare tumors, 2*(2), 68-70.
7. Manigandan, T., Sagar, G. V., Amudhan, A., Hemalatha, V. T., & Babu, N. A. (2014). Oral malignant melanoma: A case report with review of literature. *Contemporary clinical dentistry, 5*(3), 415.
8. Elomrani, F., Mouzount, H., Ouziane, I., Khmamouch, R., Boukir, A., ElKabous, M., & Errihani, H. (2013). Melanoma of the oral cavity: About two cases and review of literature.
9. Hsiao, K. Y., Liu, C. S., Wong, T. Y., Huang, J. S., Chen, K. C., & Huang, T. T. (2015). Oral Mucosa Malignant Melanoma: Clinical Features, Diagnosis, Treatment, and a Case Report. *J Dent Probl Solut 2* (2): 019, 24(019), 1-2.