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CASE REPORT **OPEN ACCESS**

Oral Malignant Melanoma –An Evil in Disguise

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A B S T R A C T

Merely 0.05% of oral malignancies are oral mucosal melanomas (OMMs). The infrequency of OMM, the variation in clinical and histopathologic features, and the scarcity of genetic and molecular research to date have restricted our understanding of the etiopathogenesis of these tumors. A 67-year old male patient from a semi urban area presented for evaluation of swelling and occasional pain in the maxillary alveolar ridge and palatal area. A presumptive clinical diagnosis of mucosal melanoma was made, which was confirmed by incisional biopsy with subsequent histopathologic evaluation as well as immunohistochemical analysis. Microscopically H&E stained sections revealed the presence of stratified squamous epithelium extensively infiltrated by nests of large spindeloid cells with pleomorphic vesicular and hyperchromatic nuclei, prominent nucleoli, and abundant cytoplasm with brown pigment suggestive of malignant melanoma. IHC revealed intense immunopositivity of the atypical melanocytes towards HMB 45 and S100. The entire clinic-pathological gamut of oral mucosal Melanoma has been presented through this case report.

Keywords: Oral malignant lesion, Oral pigmented lesion, Melanoma, Melanoacanthoma, Atypical melanocytes ,Spindeloid cells, HMB45

INTRODUCTION

Melanoma in the oral cavity is a rare malignant neoplasm which accounts for 0.2 - 8% of all melanomas. Most of the cases occur in 4th to 7th decade of life with male predilection. Lack of symptoms, cause delay in diagnosis and ultimately carries a poor prognosis and unfavourableoutcome.The real challenge lies in differentiating it from other pigmented lesions of oral cavity like Kaposi sarcoma, Oral melanotic macule, Smoking associated melanosis and Physiologic pigmentation or Melanoacanthoma and Melanocytic nevus. High index of suspicion is required for early detection and initiation of treatment.

Case Report

A 67-year old male patient from a semi urban area presented with the chief complaint of swelling and occasional pain in the upper jaw. The swelling was present for the last six months while pain at the site present from two weeks. On clinical examination, a large, blackish, exophytic (approximately 7.5 × 5.0 cm^2), irregular growth with few haemarrhagic

spot over alveolar ridge in relation to 13 to 16 with surface indentation. The bulk of the growth was seen more in buccal alveolar sulcus area than the palatal area. The diffused lesion extends bilaterally over alveolar mucosa in relation to 13 to 16 and 25 to 27 (Fig 1A,1B). Teeth 13 to 16 and 25 to 27 was found missing clinically. On palpation the lesion was slightly tender, soft in consistency and fixed to underlying structures and bleeds on provocation. Based on the clinical findings provisional diagnosis of pigmented lesion involving maxillary alveolus & palate was given. Differential diagnosis of any vasoformative tumors was kept in the list.

Radiographically, PNS view revealed no significant involvement of the underlying bone (Fig 1C).

An incisional biopsy of the lesion was performed from the representative site of the lesion under local anaesthesia and the biopsized specimen was sent for histopathological evaluation. The H&E stained sections revealed the presence of atypical melanocytes infiltrate into underlying connective tissue stromafollowing a streaming pattern, focal areas being characterized by nests of large spindeloid cells with pleomorphic vesicular and hyperchromatic nuclei, prominent nucleoli, and abundant cytoplasm with brown pigment suggestive of malignant melanoma (Fig 2A,B,C).

IHC revealed intense immunopositivity of the atypical melanocytes towardsMelan A, HMB 45 and S100 (Fig 3A,B,C,D).

Therefore, based on clinicopathological and IHC findings the case was confirmly diagnosed as melanoma. The patient was then referred to medical oncologist for treatment and management.

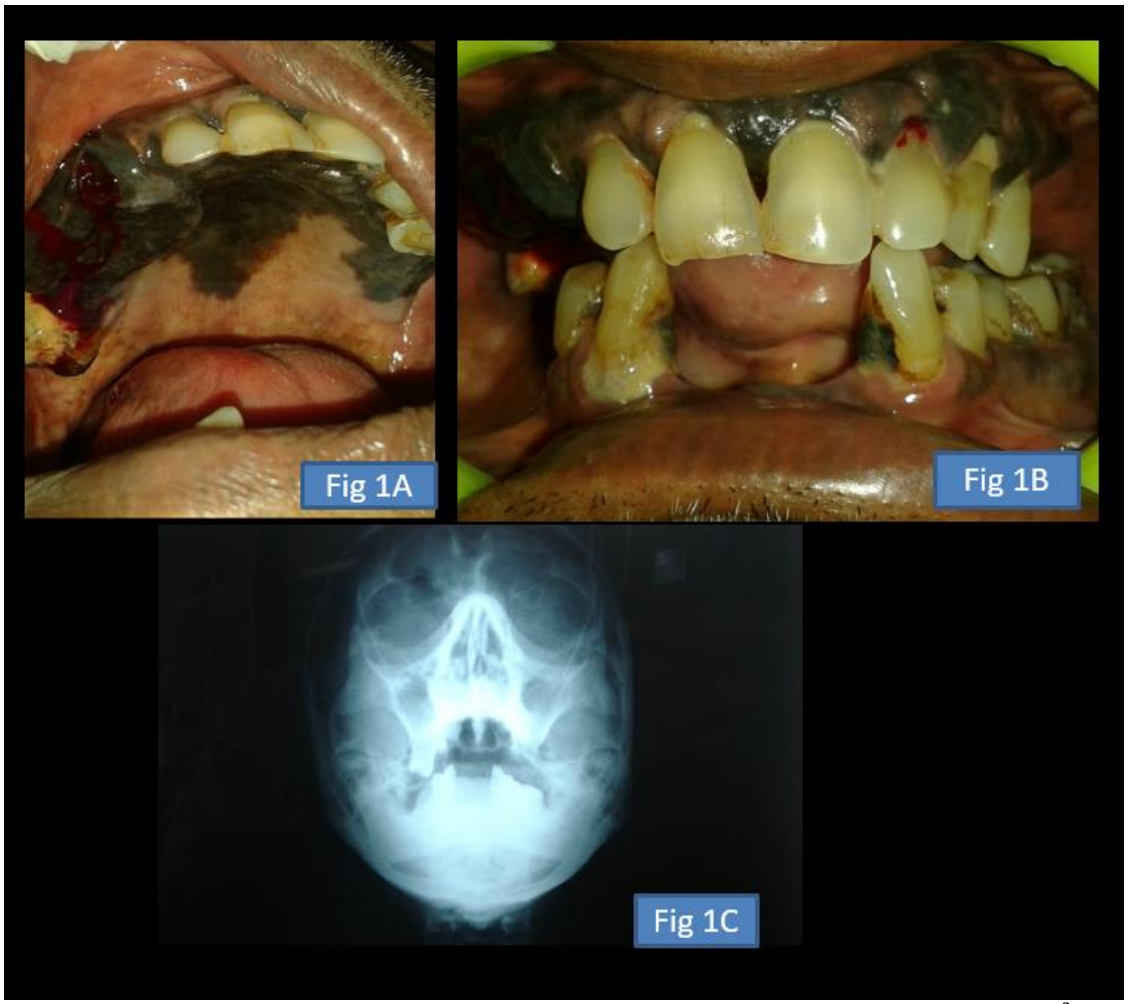

Fig 1(A, B): Intraoral photographs showing a large,blackish, exophytic (approximately 7.5 × 5.0 cm^2), irregular growth with few hemorrhagic spot over alveolar ridge in relation to 13 to 16 with surface indentation, The diffused lesion extends bilaterally over alveolar mucosa in relation to 13 to 16 and 25 to 27; Fig 1(C): PNS view revealed no significant involvement of the underlying bone

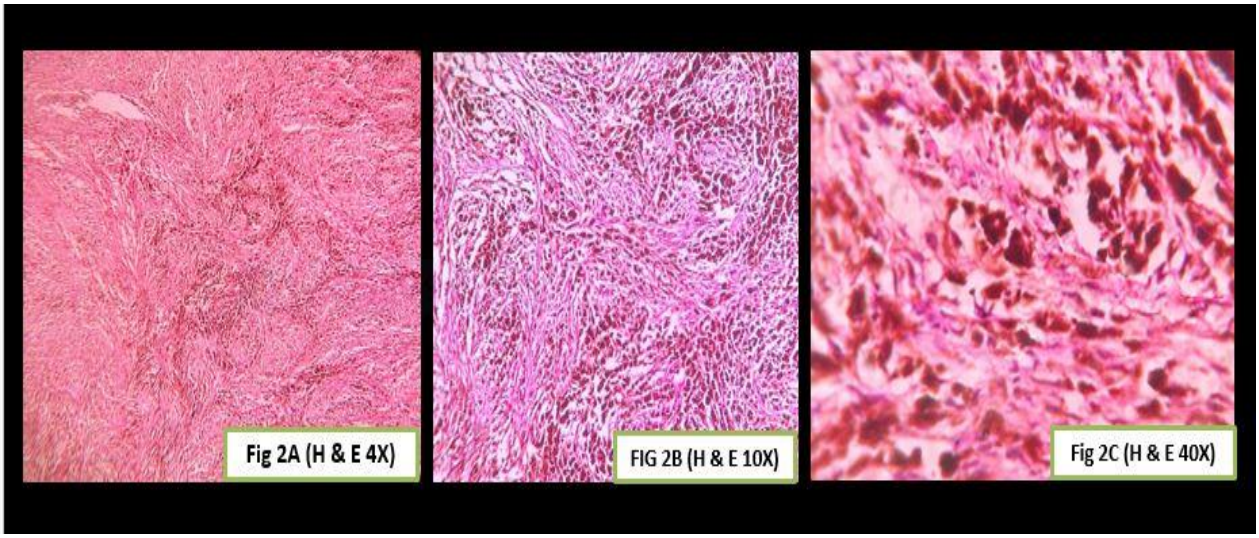

Fig 2(A,B,C): High power photomicrographs (H& E X4,10,40) revealed the presence of atypical melanocytes infiltrate into underlying connective tissue stromafollowing a streaming pattern, focal areas being characterized by nests of large spindeloid cells with pleomorphic vesicular and hyperchromatic nuclei, prominent nucleoli, and abundant cytoplasm with brown pigment

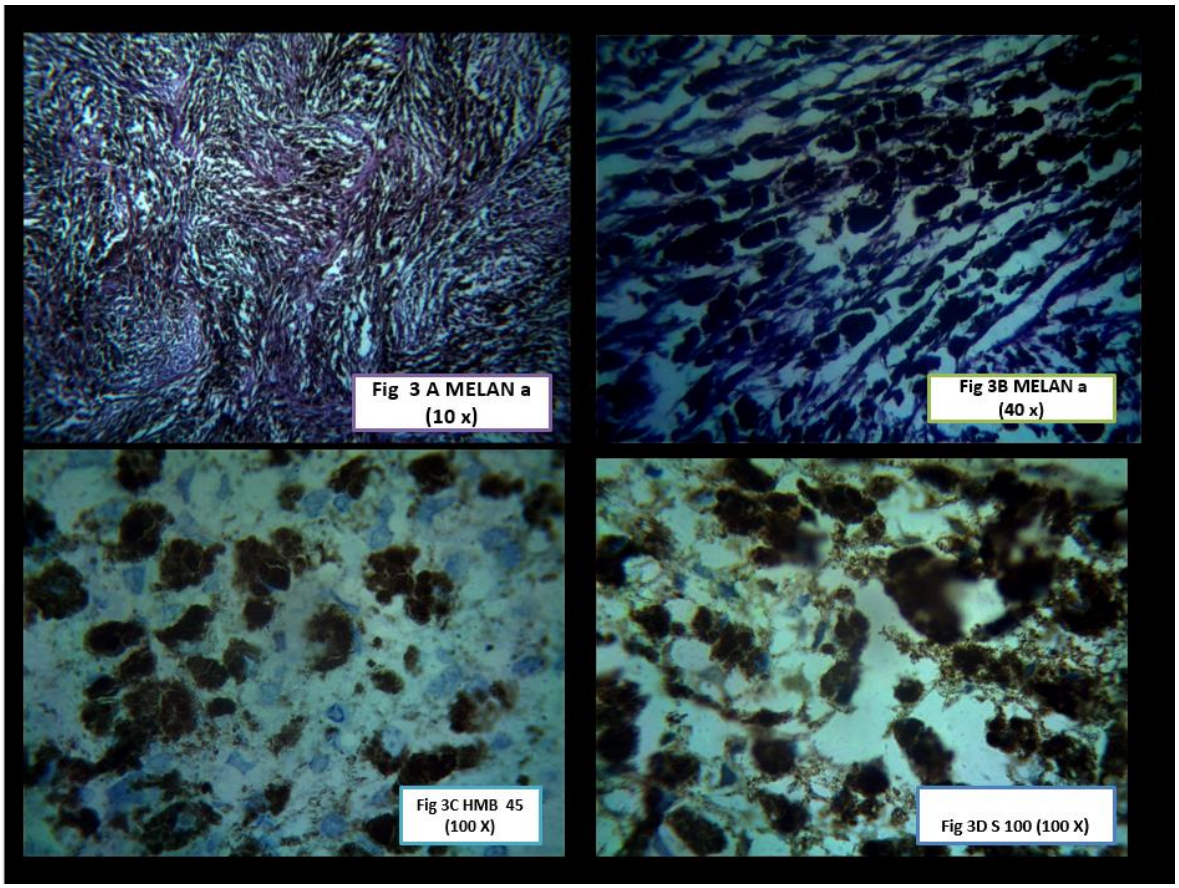

Fig 3(A,B,C,D): High power photomicrographs showing intense immunopositivityof the atypical melanocytes towardsMelan A, HMB 45 and S100

DISCUSSION

Oral melanoma is a rare aggressive tumor of the middle aged population that originates from the proliferation of melanocytes. Earlier studies classified oral melanoma separately from their cutaneous counterpart and terminology should include descriptive terms such as atypical melanocytic proliferation, melanoma-in-situ, invasive melanoma and combined in situ and invasive form.

Most cases of melanoma occur between the fourth and seventh decades of life, with a mean age of 55–57 years and showed a male predilection. According to authors of previous studies [1-4] majority of the cases of oral melanoma originates in the hard palate and the maxillary alveolar mucosa. The mucosal melanoma is conventionally presented with a brown to black macular lesion with irregular border which could extend laterally and often found as a lobulated exophytic mass once the vertical growth is initiated.

The case under the discussion was a 67 year old male patient having solitary large blackish, exophytic (approximately $7.5\times5.0\ cm^2$), irregular, proliferating growth with few haemarrhagic spots involving alveolar ridge in relation to 17 to 26 which shows surface in dentation. The bulk of the growth involves the edentulous alveolar ridge (17 to 13), attached palatal gingiva upto the junction of soft palate posteriorly and extended upto edentulous alveolar ridge of 25 to 27. The site of involvement, clinical presentation and the age of occurrence of our case are in accordance with the previous published cases [5, 7, 10, 12, 14].

The histological sections of Melanoma in the present case revealed atypical melanocytes showing active invasion into underlying connective tissue stroma, these invasive islands of neoplastically altered malignant melanocytes being characterized by pronounced features of cellular, nuclear atypia with occasional abnormal mitotic changes .The nature of arrangement of tumour tissue was found to be in streaming fashion and clustered form, staining characteristics of cells strongly mimicks the feature of mucosal malignant melanoma though pagetoid patterns were absent.

To differentiate the present case of malignant melanoma from other macular lesions, IHC was performed and revealed intense immuno positivity of the atypical melanocytes towards HMB45, MART I, MELAN A and S100. Based on clinicopathological and IHC findings the case was confirmly diagnosed as melanoma.

The primary mode of treatment for malignant melanoma is wide surgical resection. In a review of the outcome of primary mucosal melanomas treated only with radiation, from the previously reported case studies, it was estimated that 44% of patients survived for a period of 4.5 years of follow-up. Even though these results appear to be encouraging, radiation is most often used as a supplementary mode of treatment after surgery.

In the present case after proper clinicopathological and immunohistochemical evaluation, patient was advised for further surgical removal and necessary treatment and the post operative histopathological diagnosis appear to be same as pre operative ones.

To minimize the chances of rapid recurrence, a careful clinical examination and early biopsy will usually results in an early diagnosis thus improving the prognosis to a significant extent.

CONCLUSION

Oral malignant melanoma is an extremely rare malignancy which is potentially very aggressive in nature and rapidly invasive too. Clinically these tumors are very silent and asymptomatic in their appearance, causing diagnostic dilemma. Thus, the early detection and diagnosis is of utmost importance for saving lives.

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Conflict of interest: NIL

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