



## CASE STUDY

### MALIGNANT MELANOMA, A RARE DISEASE IN ORAL CAVITY: CASE SERIES

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#### ARTICLE INFO

##### Article History:

Received 25<sup>th</sup> July, 2016  
Received in revised form  
20<sup>th</sup> August, 2016  
Accepted 07<sup>th</sup> September, 2016  
Published online 30<sup>th</sup> October, 2016

##### Key words:

Cutaneous malignancy, Melanoma,  
Palate, Rarity, Survival rate..

#### ABSTRACT

The most common malignancy affecting the world population is the skin malignancy. Although melanoma only account for the 5% of the total cutaneous malignancy, the death related to it encompasses 75% of total skin cancer related deaths. It is very rare in oral cavity with only 0.5% of all oral malignancies. In this article we have presented two cases of extensive palatal discoloration with exophytic growth. These cases provide an extensive information about the pigmented lesion of the oral cavity which should be submitted for biopsy to exclude malignancy. We found only two lesions in six years that's proves the rarity of this lesion.

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**Citation: Dr. Mohammad Danish, Dr. Mohammad Kaleem Ansari, Dr. Syed Sayeed Ahmed and Dr. Gulam Sarwar Hashmi, 2016. "Malignant melanoma, A rare disease in oral cavity: case series", International Journal of Current Research, 8, (10), 40081-40083.**

## INTRODUCTION

Cutaneous malignancies are the most common malignancy worldwide and their incidence is at rise with decreasing age of presentation and causes significant health care cost (Surveillance, epidemiology and end results, 2011; Chen *et al.*, 2001; Skin cancer facts, 2012; Housman *et al.*, 2003; Robinson, 2005; Robinson *et al.*, 1997). Primary mucosal melanoma comprise 0.5% of oral malignancies and 1-2 % of all neoplasms. Exposure to ultraviolet radiation has been suggested as commonest risk factor (IARC monographs on the evaluation of carcinogenic risks to humans. Solar and ultraviolet radiation, 1992). Patients should be asked about risk factors including sun exposure, history of sunburns, and especially family history, because up to 10% of melanoma cases report a first-degree or second degree relative with melanoma (Hayward, 2003). On the treatment cost is exuberant leading to extensive treatment cost burden on the patient as well as health service providers. Within oral cavity, hard palate is the most common site of occurrence- 42.2% and it is followed by maxillary alveolus - 32% and other regions like soft palate, tongue and floor of the mouth, sinuses, pharynx, larynx and oesophagus (Tagaki *et al.*, 1974). The current recommendation for the management of melanoma include surgical excision of melanoma up to 4mm of thickness (Wagner *et al.*, 2000).

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## Case report

### Case 1:

A 55 year old male, farmer patient reported in the Out Patients' Department with the chief complain of pain over right side of the neck since 2 months. According to the patient he was apparently well 2 months back and later he developed mild pain over right side of the upper neck. For this the patient consulted some local practitioner and was advised some medicines. However there was no relief and pain continued to increase in duration and intensity slowly with difficulty in eating food. During the detailed history of the present illness patient revealed that he noticed darkening of the mucosa of the upper lip 8 months back. There was none associated symptoms related with faintly discoloured mucosa which later increased in size and became darker over the time. Patient reported some loss in weight over the 6 months (approximately 5kg). Family history and medical history was insignificant. The dental history of revealed that he underwent tooth extraction of upper front teeth 2 and half month back by local practitioner which was uneventful. Patient was a chronic bidi smoker (10-15 bidi per day) since 2-3 years and was still smoking. Nothing significant finding in inspection was found during Extraoral examination. On palpation, there was no local rise in temperature, mild tenderness, single oval shaped lymph node on the right side of the upper lateral neck as well as the submandibular region just below the skin was found. Surface

was smooth with distinct margins. The lymph nodes were partially fixed. Intra-oral examination showed Multiple dark pigmented lesions present on the upper lip and anterior hard palate extending from the half of the vermillion excluding the muco-cutaneous junction involving the right side of the corner of mouth and 3/4<sup>th</sup> of the left side of the medial part of the vermillion up to the whole of the pre-maxilla with the greatest dimension of 9 X 12 cm. Diffuse pigmentations also present over the rest of the hard palate, soft palate and the alveolus of the mandible. Healed socket was present over the anterior maxillary alveolus. Surface was smooth with some area of overgrowth. There was distinct differentiation between the margin of the lesion and the normal tissue. There was no local rise in temperature and no tenderness present (Fig. 1).

### Histopathology

Incisional biopsy from upper alveolus comprises of tissue fragments focally lined by stratified squamous epithelium. Sub epithelium shows a tumour comprises of spindle cells arranged in sheets. The nuclear cells show marked nuclear pleomorphism, prominent nucleoli and dense cytoplasmic melanin pigmentation. Large melanocytes with infiltration into the underlying dermis are seen (Fig. 2). The spindle cells are immunopositive for HMB-45, S-100 and Melan A while negative for CK. Histopathology suggests superficial spreading melanoma.

### CT scan

Showed necrotic bone in the left anterior maxilla from 2<sup>nd</sup> premolar crossing the midline up to the canine. Both buccal and lingual cortical breach was present with erosion of the anterior part of the nasal fossa. Multiple ipsilateral cervical lymph nodes were involved with sign of necrosis.

### Case 2

A 47 years male, farmer patient with chief complain of pain and swelling over the upper front jaw since 5-6 months came to the outpatient department. According to the patient he was apparently well before 6 months then he noticed darkening of his upper front gums with pain in the decade left upper front teeth which subsided after taking medicine from local practitioner. Darkening of mucosa increases during the first 3 months without any associated symptoms with swelling and pain in the last 3 months which increases over time. Difficulty in eating was present. There was no any discharge. Patient consulted local practitioner from where he was referred to our department. No significant medical, dental and family history was found. Patient was vegetarian, diet, appetite was reduced with slight reduction in weight over 6 months. Bowel and bladder was normal. Patient was bidi smoker (8-10 bidi/day since 14-15 years) and gutkha chewer (5-6 gutkha/day since 10 years). On extraoral examination no significant finding was observed during inspection. On palpation submandibular lymphadenopathy with tenderness was present. Lymph node was approximately 2×1.5 cm, oval, firm, smooth, fixed to underlying tissue but the overlying skin was mobile. Intraorally single, brown pigmented nodular overgrowth with area of normal mucosa approximately 4×3 cm, oval shaped, distinct margins, extending from medial border of right lateral incisor to the distal border of second premolar anteroposteriorly and from vestibular depth to the 0.5 cm inferior to incisal edge of the lateral incisor superoinferiorly. Surface was lobulated with

area of necrotic tissue over the buccal surface of the centre of the lesion without any discharge. On palpation lesion was mildly tender, firm, non-fluctuant, sessile and fixed to the underlying tissue (Fig 3).

### Histopathology

Incisional biopsy from the lesion shows spindle cells with pleomorphic and prominent nucleoli. Atypical melanocytes are seen without any growth in the epidermis with abundant melanin pigmentations in the cytoplasm. These findings suggest nodular melanoma (Fig. 4).

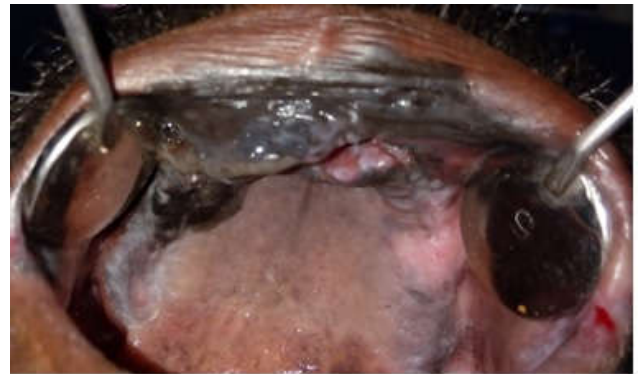


Fig. 1. Intraoral clinical photograph showing the colour and extent of lesion

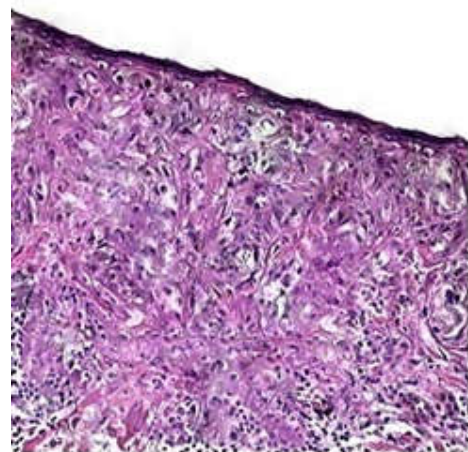
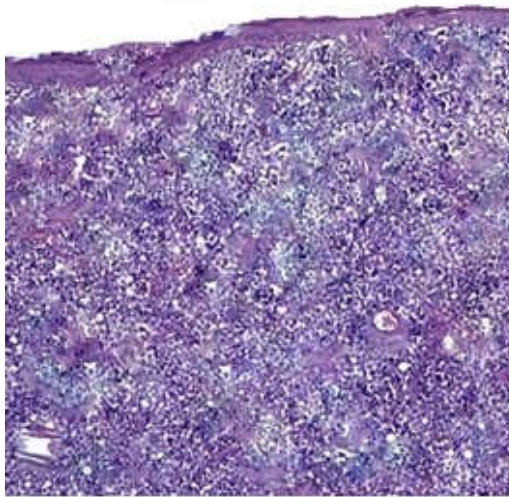


Fig. 2. Histopathology of the lesion with abundant of spindle cells and melanocytes (H/E staining)



Fig. 3. Clinical photograph showing pigmented exophytic overgrowth



**Fig. 4. Histopathologic findings with atypical melanocytes (H/E staining)**

## DISCUSSION

The signs of cutaneous melanoma have been described in terms of the ABCDE rule: Asymmetry, Border irregularity, Colour variegation, Diameter greater than 6 mm, evolution (Kienstra and Paphya, 2005). The origin of malignant melanoma is the melanocytes or melanocyte precursors (Ullah *et al.*, 2010). Oral melanoma has the high potential to metastasise to regional lymph nodes or locally invade the adjacent structures more frequently than other malignancies of the oral cavity (Garzino-Demo *et al.*, 2004). There are five different histological variants of malignant melanoma: superficial spreading, nodular, lentigo maligna, acral lentiginous, and desmoplastic. The most successful treatment module for primary lesion is complete surgical excision with the margin as dictated by its thickness. Prognosis of the oral melanoma worsens when there is metastasis to the regional lymph. Primary mucosal melanoma of the head and neck region is rare as compared to cutaneous melanoma and oral mucosal melanoma only comprises 0.5% of oral neoplasm and 1-2% of all neoplasm. Most common environmental risk factors for malignant melanoma is ultraviolet radiation (IARC monographs on the evaluation of carcinogenic risks to humans, 1992). In the oral cavity, the most common site for occurrence of melanoma is the hard palate (42.2%) and maxillary alveolus (32%) followed by the soft palate,

tongue, floor of the mouth, sinuses, pharynx, larynx and oesophagus (Tagaki *et al.*, 1974). The most successful treatment module for primary lesion is complete surgical excision with the margin as dictated by its thickness. Prognosis of the oral melanoma worsens when there is metastasis to the regional lymph node. The purpose of this article is to highlight the rarity of oral mucosal melanoma in the form of only two cases which came to our department in the period of 6 years.

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