

# PIGMENTATION OF PALATAL MUCOSA DUE TO TRAUMA:

## A CASE REPORT

MURALI NAIDU R\*, ELIZABETH JOSHUA\*\*, SARASWATHI TR\*\*\*, RANGANATHAN K\*\*\*\*

### ABSTRACT

Intra oral pigmentation can be of many causes, which might be of exogenous or endogenous origin. Melanin pigmentation is the most common form of endogenous pigmentation. Pigmentation may be also of haematogenous origin. We report a case of pigmentation of the soft palate, which clinically appeared as an oral melanotic macule. On histologic examination it was found to be haemorrhage / haemosiderin, due to trauma.

**Key words:** pigmentation, trauma, haematoma, haemosiderin, macule

### INTRODUCTION

Pigmentation of the oral cavity may be due to exogenous or endogenous pigments. Endogenous pigmentation is predominantly due to melanin, the product of melanocytes, in the epithelium. It gives brownish to blackish in colour. Discolouration can also occur due to haematoma secondary to trauma leading to haemosiderin deposition, which is bluish black in colour. We report a case where pigmentation of the palatal mucosa was due to haemosiderin deposits following physical trauma.

### CASE REPORT

A 68 year old Aryan Indian female presented to Ragas Dental College and Hospital, Chennai, with a complaint of black spot on the left upper posterior region in the mouth. She gave the history that she first noticed it 6 months previously. There was also a history of extraction of posterior upper molar teeth 7 months back, in that region. Past medical history was non-contributory.

Intra oral examination revealed a bluish black discolouration of the mucosa at the junction of hard and soft palate, opposite to maxillary left third molar. The lesion was a brownish discoloured patch

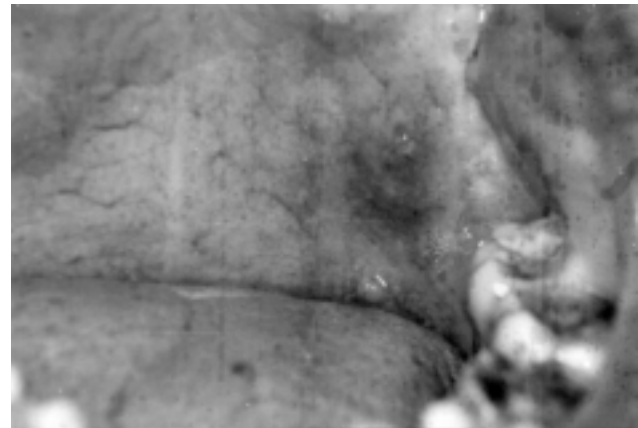


Fig. 1: Bluish black discolouration of the mucosa at the junction of hard and soft palate. Telangiectasia is present on the soft palate.

measuring 3 x 3 mm. Telangiectasia was present in the soft palate (Fig. 1). On palpation the lesion was non-tender and was not blanching on compression. The clinical provisional diagnosis of the lesion was melanotic macule.

Excisional biopsy was done under local anaesthesia. The tissue section was stained with Haematoxylin and Eosin. It revealed a thin parakeratinized stratified squamous epithelium that appeared normal. The underlying fibrous connective tissue exhibited many areas of haemorrhage subepithelially (Fig. 2). The areas of haemorrhage were seen in the deeper region, in between the mucous salivary gland acini (figure-3). Organiza-

\*PG student, \*\*Lecturer \*\*\*Professor & Head \*\*\*\*Professor, Department of Oral Pathology, Ragas Dental College, Chennai.

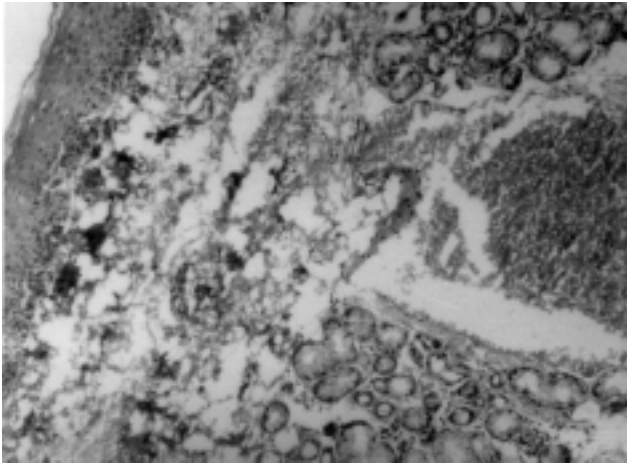


Fig. 2: Areas of haemorrhage subepithelially in the underlying fibrous connective tissue. x10.

tion of blood clot with plump fibroblasts and tiny capillaries was also evident. Special staining with Masson's Fontana for melanin showed a negative reaction. The histopathological diagnosis was "Areas of haemorrhage and organization of the clot".

## DISCUSSION

Pigments are substances occurring in living matter which absorbs visible light and they possess some colour of their own in their normal state. Deposition of pigments in tissue is known as pigmentation. Michael A. Meyerson *et al* have broadly classified oral pigmentations into endogenous pigmentation and exogenous pigmentation in which pigmentation due to trauma was also included<sup>2</sup>.

The common cause of endogenous oral pigmentation is due to melanin. In the oral mucosa, in certain areas such as gingiva, tongue and palate, melanin pigmentation is seen in certain ethnic groups known as physiological racial pigmentation. Other causes for focal areas of melanin pigmentation include melanotic macule, intra mucosal naevi and oral melanoma.

Buchner and Hansen<sup>3</sup> reviewed 105 cases of oral melanotic macule (OMM) and defined it as lesions that exhibited an increased melanin content in the basal cell layer in the upper portion of the lamina propria or in both, clinically they appear as flat,

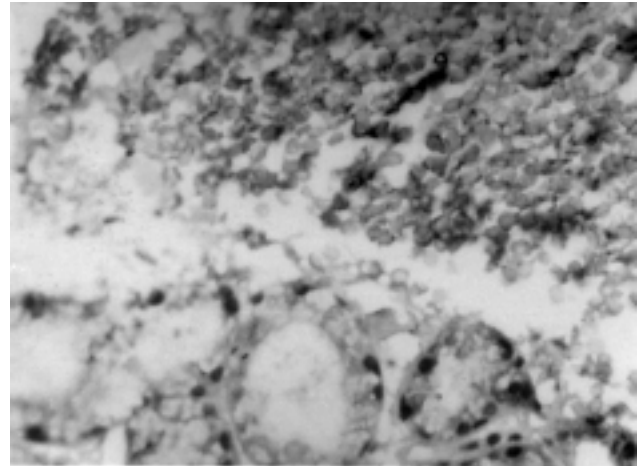


Fig. 3: Areas of haemorrhage in between the mucous salivary gland acini. x40.

localized pigmented areas with a black or brownish colour. They found that it was usually a solitary lesion with its size varying from 0.1 to 0.3 cm, in patients with mean age of 41 years and having a female predilection. In their study, 12.4% of OMM occurred on the palate. It was associated with local trauma such as chronic cheek biting, chronic lip biting, etc.

Apart from focal melanotic macule there are instances of focal pigmentation of oral mucosa due to exogenous origin like amalgam tattoo giving a blue-black discolouration. The clinical features of these lesions occasionally may be confused with pigment deposition of haematogenous origin. The colour of these lesions varies from red to blue to purple depending on the age of the lesion and the degree of degradation of the extravasated blood. Soft tissue haemorrhagic lesions usually appear in areas accessible to trauma such as the buccal mucosa, lateral tongue surface, lips and junction of the hard and soft palate<sup>5</sup>.

In our case, on the basis of clinical finding the provisional diagnosis was oral melanotic macule. But histopathology showed absence of melanin pigmentation and evidence of large areas of haemorrhage and organisation of clot. Patient's past history of dental extraction may be the source of this mechanical trauma of the palatal mucosa. This would have resulted in haematoma formation

and congestion of the adjacent soft palate causing telangiectasia, the degradation of the extravasated blood causing bluish-black discolouration of the palate. Clinical appearance of bluish black mucosa commonly represents increased deposition of melanin. Rarely it could be the result of vascular component as seen in the present case. Excisional biopsy of the lesion and histopathological evaluation helped to delineate melanotic discolouration from haematogenous origin.

### SUMMARY

Oral pigmentations are predominantly due to melanin. Rarely it could be of haematogenous origin due to trauma, with degradation of the extravasated blood giving bluish black discolouration as seen in the present case.

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### Address for communication:

Dr.Murali Naidu.R  
C /o Dr. T. R. Saraswathi  
Professor & Head  
Department of Oral Pathology  
Ragas Dental College and Hospital  
2/102, East Coast Road,  
Uthandi, Chennai 600 119.  
Email: mur\_krish2000@yahoo.com