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Pigmentation of Oral Mucosa: A Review

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Abstract: Pigmentation is both normal and abnormal discoloration of skin and mucous membrane (1). Oral pigmentations maybe exogenous or endogenous in origin. Exogenous pigmentation is commonly due to foreign body implantation in the oral mucosa. Endogenous include melanin, haemoglobin, hemosiderin and carotene (2). Pigmented lesions of oral mucosa appear blue, brown or black pigmentations may be physiologic or pathologic in origin (2).
Keywords: Pigmentation,Oral Mucosa.

Introduction:

Pigmentations of oral mucosal membrane is changes in colour of the oral mucosal surfaces because of local or systemic diseases .The oral mucosal melanocytes has played a role in the oral pigmentations .Oral mucosal melanocytes produce and secrete melanin (3).Melanin produces brown colour to the mucosa .depending on the depth of the melanin mucosa can be shaded blue, grey or black(5). These colour changes often occurs due to deposition, production andincreased accumulation of various exogenous or endogenous pigmented substance(3).

Classification:

Classified as localised pigmented lesions and generalised pigmented lesions

Localised pigmentations:

- Amalgam tattoo.
- Graphite.
- Nevus.
- Melanotic macule.
- Hemochromatosis.
- Hairy tongue.
- Malignant melanoma.

Generalised pigmentations :

- SPeutz-jeghers syndrome.
- Neurofibromatosis.
- Smokersmelanosis.

- Addison's disease.
- Oral melanosis in HIV.

Amalgam Tattoo:

Amalgam pigmentations, generally called as amalgam tattoo ,amalgam fillings are made up of a mixture of several metallic particles ,especially mercury silver and tin .Clinical features of amalgam tattoo appears as blue, black or grey asymptomatic flat macules on the oral mucosa ,located adjacent to the restored tooth. Most common sites are gingiva and alveolar mucosa (1)(7).

Graphite:

This lesion mainly occurs in children due to habit of pencil stick in their mouth. Fragments from the pencil break off in the palate, the carbon remains insert and seen as dark mucosal membrane (5) .Microscopically graphite resembles as amalgam in the tissue although the special stains segregate the two (4).

Nevus:

Nevi are occurs due to benign proliferation of melanocytes.There are two major types based on histology and these two types tend to show differences clinically .They arejunctional nevi and compound nevi.Both are tend to be appear as brown in colour and may be flat macules or nodular ,sharply defined borders and asymptomatic and most common sites are palate and gingiva (4)(2).

Melanotic Macule:

Melanotic macule occurs mainly due to trauma common in females and common sites is lower lip (2).The colour may be light or dark brown and homogenous with in each lesion .Macules usually smaller than 1cm in diameter and they are usually single lesions (8).The variation of melanotic macule is ephelis or freckle which is small brown spot on the lip (5)(2).

Hemochromotosis:

Hemochromatosis is a chronic disease characterised by the deposition of excessive iron in the body tissues resulting in the fibrosis and functional insufficiency of involved organs (1)(9).Most common site is palate and gingiva .They are brown to grey diffuse macules .males are most commonly affected(4).

Hairy Tongue:

Change in oral flora associated with chronic antibiotic theory .Colonization of chromogenic bacteria impart variety of colour white, green, brown or black .Various food, drinks and also smoking of tobacco or cocaine has been seen in hairy tongue (10).The lesion seen in posterior one third and middle one third of the dorsum surface of tongue .The papilla are elongated and have appearance of hairs .Hyperplastic papillae pigmented as brown in colour (4).

Malignant Melanoma:

Melanoma is the cancerous condition of the melanocyte .Malignant melanoma affects both the sexes equally after 40years of age .The most common sites are palate, gingiva and alveolar mucosa ,asymptomatic brown or black macule can be seen. Macules are like plaque or mass forming like appearance with well circumscribed lesion(2)(4)(5).

Peutz -Jeghers Syndrome:

Peutz –jeghers syndrome is a genetic disorder characterised by mucocutaneous pigmentation andhamartomas of intestine (11).It manifest itself as freckles like macules about the hands , perioral skin and intra orally to include the gingiva , buccal and labial mucosa .Pigmented spots are 1-10mm in diameter(1).Multiple polyps in small intestine and intra orally freckles are seen in gingiva and buccal mucosa(5).

Neurofibromatosis:

Neurofibromatosis is an autosomal dominant inheriteddisease,both nodular and diffuse neurofibromas occur in the skin and the oral cavity (12).Cafe-au-lait spots as the term implies ,These lesion have colour of coffee with cream and vary from small ephelis like macules to broad diffuse lesions (4).Most common sites are lips .they are pale brown colour similar to lesion occurs in the maccune-albright syndrome(5).

Smokers Melanosis:

Smokers melanosis is a benign focal pigmentation of the oral mucosa (6)(1).It tends to increased significantly with tobacco consumption.melanin pigment synthesis is stimulated by tobacco smoke products .Heat of smoke may stimulate pigmentation.Smokersmelanosis will disappear within three years of smoking cessation(2). The lesion is usually present as multiple brown pigmented macules less than 1cm in diameter,smoker's melanosis is common in females. Localisized mainly at the attatched anterior labial gingiva andinterdental papilla (1).

Addisons Disease:

Patients infected with HIV progress hyperpigmentation of oral mucosa .Clinically appears as irregular macules with brown or dark brown colour .The tongue ,buccal mucosa and palate are most commonly affected sites (1)(5).In some patients ,these lesions represent a reaction to drug therapy with ketoconazole (5).

Conclusion :

The identification and clinical assessment of oral pigmentation are important because of the possible risk of serious systemic diseases .Oral pigmentation is a relatively common condition that can occur in any portion of the oral cavity and arises from intrinsic and extrinsic factors and can be physiological or pathological .Health care professionals to observe the colour changes in the oral cavity which may be a manifestation of the underlying pathological process (1).

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