A Case Report of Oral Pigmentation- Post-Inflammatory or Psoriasiform Lesions.

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Abstract
Intraoral pigmentation occurs in various physiologic and pathologic conditions. Many of these are the manifestations of systemic diseases that too dermatologic conditions in specific. Herewith reporting a case of intraoral brownish pigmentation in a young adult female who was treated for mild dermal lesions of psoriasis which was reported to be either postinflammatory pigmentation or psoriasis form oral manifestations. The pattern of mucosal pigmentation is nonspecific and there is lack of recent research regarding etiopathogenesis.

Introduction
Intraoral pigmentation is one of the most common clinical conditions, despite pose a challenging situation to diagnose often. Post inflammatory pigmentation is one such entity where in elucidation of etiopathogenesis remain unanswered. Herewith reporting a common case of intraoral brownish pigmentation that ignites a new interrogation.

Case Report
A 24 year old female patient presented with asymptomatic brownish discolouration of oral mucosa since 1 month. The discoloration was gradual in on set, was initially smaller in size and gradually increased to the present size. Patient was diagnosed with milder variant of Psoriasis over both the elbows 2 months ago by a dermatologist and treated with topical steroid cream (triamcinolone acetonide-0.1%) application and short term systemic steroid therapy (90mg/day for first 3 days tapered to 30mg /day for 9 days) and also gives history of appearance of oral lesion after the resolution of the skin lesions. Dental and family history were non-contributory.

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Extraoral manifestation revealed small scaly popular eruptions over the skin of right elbow. [Figure No 1]

![Fig. 1: Small scaly popular eruptions over the skin of right elbow](image)

Intraoral examination revealed the multiple diffuse brownish to black pigmentation of oral mucosa chiefly over hard palate, attached gingiva, tongue & buccal mucosa. (FIG No. 2-5) The lesions are irregular in shape with well-defined margins. On palpation the lesion was non tender, non-scrapable, do not disappear on stretching.

![Fig. 2: Brownish macules over lower labial mucosa, vestibule and gingiva](image)

![Fig. 3: Brownish macules over tongue and left retromolar region](image)

![Fig. 4: Brownish pigmentation over lingual attached gingiva](image)

![Fig. 5: Brownish pigmentation over palatal attached gingiva](image)

Provisional diagnosis of endogenous Intraoral pigmentation and differential diagnosis of post inflammatory pigmentation, unnoticed oral manifestation of psoriasis or drug induced was given. As patient was uncooperative for further investigations, as the appearance of the mucosal lesion was observed secondary to skin lesion and corresponded with available reports the lesion could be secondary to psoriasis.

**Discussion**

Colour of the normal oral mucosa is pale pink to reddish depending on the vascularity, thickness of the epithelium, amount of melanin pigment deposition from melanocytes and degree of keratinisation. Pigmentations of oral mucosa are result of increased production of melanin and augmented number of melanocytes and deposition of exogenous materials.¹
Melanin, an endogenous non-hematogenous pigment secreted by melanocytes in basal layer of oral epithelium & is transferred to adjacent cells via melanosomes. Neural crest derivatives or nevus cells also synthesize and cause melanin pigmentation. Blue, brown and black discoloration of tissues are influenced by the region and amount of melanin pigmentation.\(^2\) Healthy individuals like dark skinned African population exhibit about melanin pigmentation\(^1\) compared to 30% - 98% of Asians.\(^2\) Oral pigmentation can be classified as physiologic and pathologic. Pathologic pigmentation can be either exogenous or endogenous based upon etiologic factors. Exogenous pigmentation occurs due to drugs, smoking/smokeless use of tobacco habit, amalgam tattoo or heavy metals induced. Endogenous pigmentation commonly seen in endocrine disorders, systemic disease or syndromes, chronic irritation or microtrauma, microbial infections, reactive or neoplastic disorders.\(^2\)

Post-inflammatory pigmentation is less well studied type of pigmentation which occurs as a consequence of chronic inflammatory or refractory oral mucosal diseases, particularly oral lichen planus. Dark-skinned personnel frequently exhibit diffuse brownish to black pigmented areas adjacent to reticular or erosive lesions of lichen planus. It is also quoted that once the healing of the lesion manifest as pigmentation. Halder et al. reported that pathogenesis of post-inflammatory pigmentation remains imprecise. Histological sections reveal increased amount of melanin laid by melanocytes and superficial connective tissue showing accumulation of melan in laden macrophages.\(^3\)

Various drugs like hormones, oral contraceptives, chemotherapeutic such as cyclophosphamide, busulfan, bleomycin & fluorouracil, tranquilizers, antimalarials like clofazamine, chloroquine, amodiaquine, commonly used anti-microbials like minocycline, antivirals such as zidovudine and anti-fungals like ketocanazole very commonly known to induce pigmentation in the tissues and oral mucosa.\(^9\)

Psoriasis is primarily a papulosquamous dermatologic disease that manifest with skin lesions of variable morphology, distribution, severity, and course. Patients with Psoriasis complain of intense pruritus or burning. Skin lesions are characterised by papules and plaques with scaling characteristically disseminated symmetrically over scalp, elbows, knees, lumbosacral area, & in body folds. Koebner’s phenomenon i.e occurrence of lesions at site of trauma or injury, is seen in Psoriasis. A generalised exfoliative erythroderma is the feature of psoriasis which is progressive or uncontrolled. This can also result in Nail involvement and psoriatic arthritis (PsA). Infrequently psoriasis may comprise oral mucosa or tongue. Features of tongue included discrete circumscribed white and red patches with circinate white yellow border and changing pattern that assume distinct annular patterns in map like fashion, hence the name geographic tongue. Till now there are no reports of associated oral pigmentation.\(^8\) The present case report could be the oral counter part of dermal psoriatic lesions.

Conclusion
Black and Brown oral mucosal pigmentation is seen in various physiologic conditions to life-threatening diseases. Need of an hour is early identification of unusual pigmentation of oral mucosa by Oral physicians through appropriate clinical history regarding the onset, duration, & existence of local or systemic symptoms. Some lesions can be diagnosed clinically or by laboratory testing and biopsy is indicated in suspicious lesions.

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