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Case Report

A case of pigmented fungiform papillae of tongue in a young female with iron deficiency anaemia

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ABSTRACT

Fungiform papillae are red/pink, mushroom shaped projections located on the tip and dorsolateral part of tongue. It harbours several taste buds. Pigmented fungiform papillae is a not so common benign condition which involves pigment deposition in fungiform papillae. Authors report a case of 35 years female who presented with history of blackish spots over tongue for past 10 years with no other associated symptom. Patient had conjunctival pallor (moderate) and rest of the examination was normal. Investigations showed iron deficiency anaemia with Hb. of 9.5 mg/dl. A clinical diagnosis of Pigmented Fungiform Papillae (PFP) with associated Iron Deficiency Anaemia (IDA) was made. Patient was explained in detail about the benign nature of disease and was put on oral iron therapy. Follow up after 2 months was advised.

Keywords: Asymptomatic, Benign, Hyper pigmented, Fungiform papillae, Iron deficiency anaemia, Tongue

INTRODUCTION

Fungiform papillae are mushroom shaped projections present on tip and dorsolateral aspect of tongue containing taste buds.[1] Pigmented fungiform papillae are a benign condition characterised by localized hyperpigmentation confined to fungiform papillae of tongue. This condition was first reported by Leonard in 1905.[2] It is reported to occur with increased frequency in black Americans. There have been scattered case reports of pigmented fungiform papillae in Asian and Middle East population.[3] To authors knowledge this is the first reported case from Indian state of Jammu and Kashmir.

CASE REPORT

A 35 years old female, nonsmoker with no significant past medical history presented to OPD with history of blackish spots on tongue for last 10 years with no other associated symptom. Upon examination discrete groups of multiple 0.5-0.7 mm blackish spots were identified on tip and dorsolateral aspect of tongue corresponding to hyper pigmented fungiform papillae (Figure 1, 2, 3). No hyperpigmentation was observed in other papillae. There was no other mucosal or skin involvement. Conjunctival pallor was also noticed, rest of general and systemic examination was normal. Her base line investigations were normal except for CBC showing Hb of 9.5 gm/dl with MCV of 76 fl.

Further iron studies revealed serum iron of 26 micro gm /dl, ferritin -8 ng/ml. vitamin B12 and folic acid levels were normal.

A diagnosis of pigmented fungiform papillae with associated IDA was made, patient was reassured of benign nature of condition and put on oral iron therapy. Follow up after 2 months was advised.

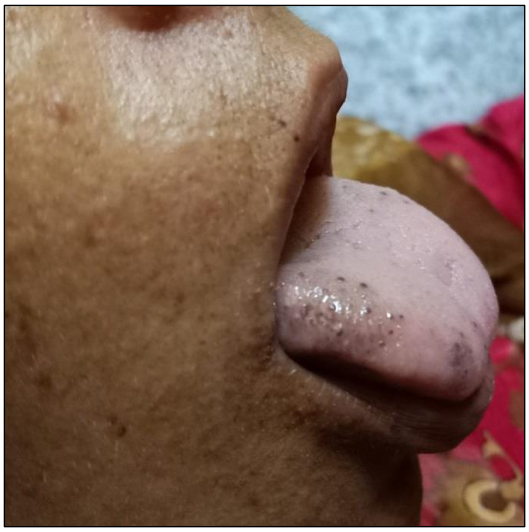

Figure 1: Female with lingual hyper pigmented macules (pigmented fungiform papillae).

Figure 2: Pigmented fungiform papillae involving dorsum of tongue.

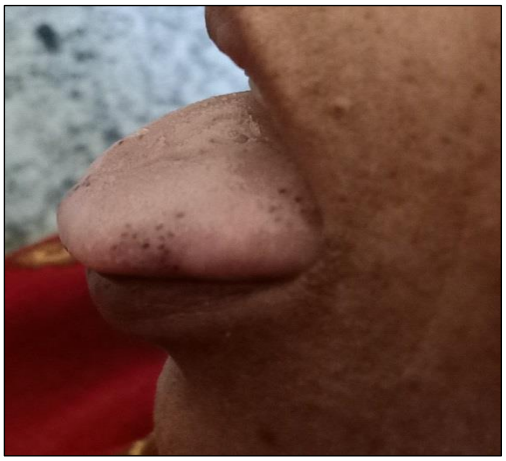

Figure 3: Pigmented fungiform papillae involving lateral aspect of tongue.

DISCUSSION

The tongue has four different types of papillae- filiform, fungiform, circumvallate and foliate. Fungiform papillae are mushroom like and help in recognising sweet/ sour tastes. They are mostly present on dorsolateral aspect and tip of tongue. Filiform papillae are the most numerous lingual papillae present on most of the dorsum of tongue. They are devoid of taste buds but sense touch. Circumvallate papillae are distributed in a V shaped manner on the posterior part of tongue and are associated with bitter taste. Foliate papillae are present along lateral borders of tongue and help in recognising salty taste.[4-6]

Patients with PFP have hyperpigmentation confined to fungiform papillae and these lesions are asymptomatic. This condition is usually seen in females in second or third decade of life.[1] There is no involvement of skin and its appendages or any other mucosal surface.[1]

PFP of tongue is commonly seen in African Americans.[7] One study by Holzwager et al, concluded that 30% of black men and 25% of black women have some hyperpigmentation of fungiform papillae. A very low prevalence was seen in Asians and Caucasians.[3,8]

The exact pathogenesis of PFP is not clear yet. Associations of several diseases with PFP have been put forward, which includes dermatological disorders such as Icthyosis and lichen planus, systemic diseases such as hemochromatosis, scleroderma, pernicious anaemia and IDA. Most patients with PFP are healthy with no other associated disorder.[9]

Histological examination of biopsy material shows sub epithelial melanophages with lymphocytic infiltrate. The pigment within the melanophages is positive for melanin with Fontana Masson stain and negative for iron.[9]

Diagnosis is made clinically and rarely requires histopathological confirmation unless a need to exclude other diseases arises. There is no effective treatment for PFP, only one reported case of slight improvement with iron therapy in patient with associated IDA.[10]

CONCLUSION

Authors described a case of pigmented fungiform papillae of tongue in young female with associated IDA. This condition is common in African Americans but only a few case reports from Asian population. Most patients with PFP are healthy, few may have associated disorders like IDA etc. Whether IDA plays a role in pathogenesis of PFP is not known and there is no substantial evidence of disappearance of hyperpigmentation with iron therapy.

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