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Benign Migratory Glossitis Associated with Psychological Neglect – Case Series

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Abstract
Tongue is a muscular organ that is mainly involved in mastication and speech. However, its significance to present manifestation of underlying systemic diseases makes it more important to be watched out by both medical and dental practitioners. While many systemic disorders present some sign or symptom in the tongue, very less psychological disturbances are reflected in it. Benign migratory glossitis (BMG) is an oral condition that is characterized by sequential loss of filiform papillae which transforms tongue physically. This article presents a series of three cases of BMG in elderly patients seeking prosthodontic care that had a common underlying psychological influence in the form of existence of elder neglect. Patients were diagnosed suffering from elder abuse with the use of a short questionnaire. Due process was followed to diagnose the oral condition before any prosthetic treatment was initiated. All patients suffered from anxiety and depression that was associated with their problem of elder neglect. All patients after proper diagnosis received their respective Prosthodontic treatment before being discharged for follow up.
Keywords: *complete denture, removable partial denture, elder maltreatment, neglect, glossitis.*

Introduction

The condition of benign migratory glossitis (BMG) has been reported first in 1831,[1] as an asymptomatic glossitis which may present in various forms depending upon the stage. General presentations being a circinate, erythematous or even ulcer like lesions either on the dorsum of the tongue or on the lateral borders.[2,3] Clinical presentation varies due to which it is also termed as a wandering rash, erythema migrans, exfoliation areata linguae, superficial migratory glossitis and lingual dystrophy. Its prevalence varies between 0.28% to 14%, and has been most commonly found in children, while sporadic reports in elderly women have also been reported.[4,5] Its cause is predominantly unknown, although it has been associated with conditions like pustular psoriasis, allergy, down syndrome, nutritional deficiencies and lichen planus. Its association with psychological disturbances was first reported by Redman,[6]and with advances and better understanding of psychological disorders, various authors have reported BMG with underlying psychological disturbances which are mainly emotional in nature.[7]

Increased life expectancy has resulted in increased elderly population, and in developing countries like India, it has been estimated to grow from the current 77 million to 177 million in next two decades.[8]one of the concerns among the elderly population is their vulnerability to be abused by their caregiver which are mainly from their own family. Such underlying psychological factors have been associated with adverse health outcomes,[9] due to the stress and depression involved in such abuse. Due to dependence on their family members, the elderly people are also prone to neglect their own needs like nutritional requirements, clothing, personal hygiene and medical necessities.[10]

This article in the form of a case series of three elderly patients suffering from the elder neglect in which all three had some form of BMG that ranged from mild to severe in form. The article also discusses the mechanism of how such underlying influence can result in BMG.

Case Report 1

An elderly middle aged patient reported to the department of prosthetic dentistry with chief complaint of inability to eat food due to loss of mandibular posterior teeth. Patients medical, social, drug and familial history revealed signs of depression, underlying diabetes (untreated) and signs of self-neglect. Extra oral examination showed normal features, while entirely the tongue showed a large erythematous lesion in the centre on the dorsum of the tongue that ranged from 3 cm anteriorposteriorly to 1.5 cm medial laterally (Fig 1a). The patient did not present with any history of discomfort, sensation or pain, but had noticed the lesion about one week back. The central lesion appeared to have a loss of filiform papillae with no distinction between the borders at the periphery. During case history records of the patient, a questionnaire (EASI - Elder Abuse Suspicion Index (EASI) that could identify the existence of elder abuse was investigated.[11]Patient was referred to department of oral diagnosis, where clinical confirmation of BMG was provisionally diagnosed and a biopsy was taken.

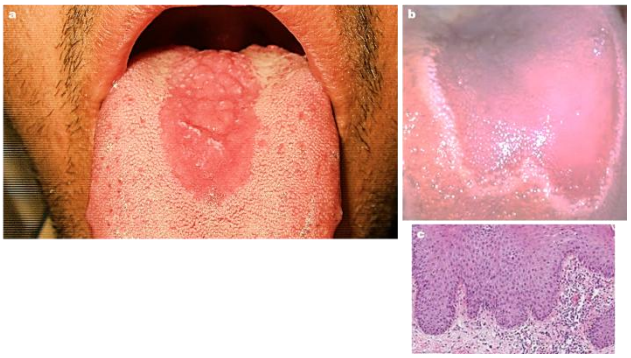

Figure 1: (a) Intra oral view of a well circumscribed oval lesion in the center of the tongue with major alterations in the hue (b) Lesion migrated laterally with more defined boundary between erythematous area and normal mucosa (c) Histopathological features showing acute and chronic infiltrate, lack of filiform papillae and neutrophil and leukocyte invasion into epithelium.

Dental treatment for fabrication of a cast partial denture was initiated and routine clinical and laboratory procedures were carried. Keeping the COVID 19 pandemic in mind, all diagnostic, treatment procedures were carried under strict guidelines of infection control, [12] and preventive aspects of geriatric care during the pandemic. [13] During the course of treatment, at the seven day there was a clinical change in the lesion on the tongue where the lesion had migrated to the lateral aspect with evidence of the clear demarcated boundary between the normal tongue mucosa and the affected tongue mucosa (Fig 1b).

Histopathological diagnosis was confirmed by the presence of an acute and chronic inflammatory infiltrate in the submucosa, with mild edema superficially in which neutrophils and leukocytes were observed (Fig 1c). No differentiation of filiform papillae was observed in erythematous area. The patient was noted about the lesion and the cast partial denture treatment was completed.

Case Report 2

An elderly male patient aged 62 years with a history of depression was brought to the department of Prosthodontics for replacement of maxillary and mandibular old dentures which had broken one year back. The patient was accompanied by his family member who reported that the patient had lost his spouse three years back after which he had developed severe depression.

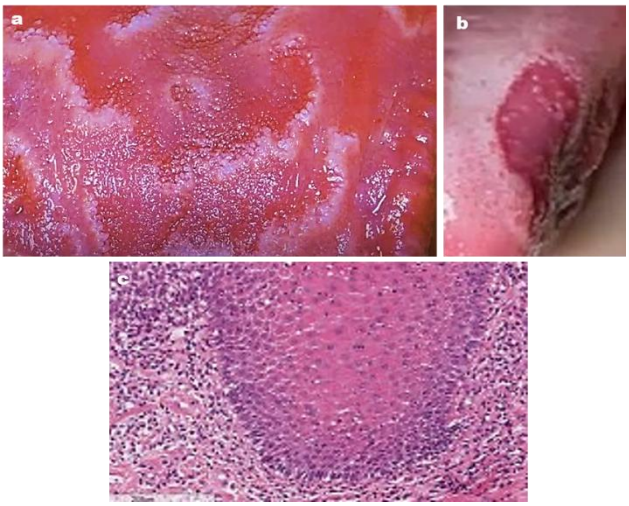

Figure 2: (a) Dorsum of the tongue showing multiple lesions demarcated by white borders (b) Denuded area of the lateral portion of the tongue showing absence of papilla and epithelium (c) Histopathological features of acute and chronic inflammatory cells along with the absence of stratum granulosum

The patient was neglectful of his health and nutritional needs and was not able to take care of his health. Medical, social and drug history revealed the patient was taking antidepressant and would often complain of xerostomia and burning sensation of the mouth. Glossodynia was more severe when he would eat anything spicy. Extra oral examination revealed a short maxillary lip with decreased vertical dimensions of the face. The patient appeared to be physically weak and posed poor neuromuscular control and coordination. Intraorally the patient presented with multiple denuded areas on the tongue that were highly erythematous with Multifocal lesions separated from each other by white patches (Fig 2a). Another ulcerative lesion was present on the lateral border of the tongue on the left side that had complete loss of papillae (Fig 2b). The patient was referred to department of oral medicine for clinical diagnosis and histopathological confirmation. Histopathology revealed a combination of severe acute and chronic inflammatory infiltrate, mononuclear infiltrates within the denuded area, filament bundle formation in spinous layer and lack of stratum granulosum (Fig 2c). A screening for existence of elder neglect was done using the EASI questionnaire. Routine clinical and laboratory procedures for fabrication of the complete denture were done. The patient was put on a multivitamin therapy during the fabrication of the complete denture process which improved his local condition. Complete denture was delivered when sensitiveness to denture was decreased. All sharp edges were specially taken care of and the complete denture was delivered to the patient along with instructions regarding denture maintenance.

Case Report 3

An elderly female patient aged 65 years reported to the department of prosthetic dentistry with a history of loss of natural teeth about 7 years back. The patient was not wearing any prosthesis and sought replacement since she was not able to eat properly with edentulous ridges. Medical history revealed that she has been diabetic since last 5 years and was also suffering from hypertension and high blood cholesterol levels for which she was taking regular medicines. Extra oral examination was within normal features except for maxillary long lip. Intra oral features presented a moderately resorbed ridge and a diffuse lesion on the tongue that mimicked BMG. The lesion was more at the stage of recession and presented with more of white patches than red erythematous patches (Fig 3a). However, a small lesion on the right lateral tongue had areas of severely denuded of the papillae (Fig 3b). After a clinical diagnosis by the department of oral medicine, the histopathological features confirmed the diagnosis of BMG (Fig 3c).

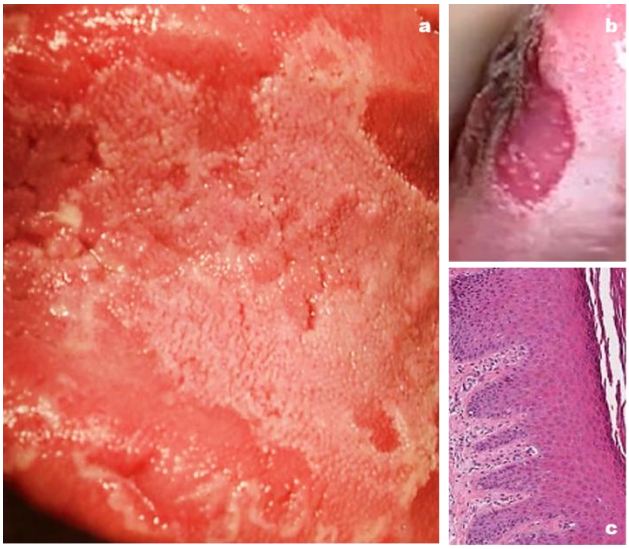

Figure 3: (a) Tongue showing light red erythematous patches dispersed among white patches of normal mucosa (b) Lateral part of tongue on the right side showing a single solitary erythematous lesion with denuded papillae (c) Histopathology showing lack of stratum granulosum and inflammatory cell infiltrate.

The patient was presented with various prosthetic treatment options that included implant supported over denture and conventional complete denture. The patient opted for a conventional complete denture that incorporated the neutral zone for better retention and stability.

Discussion

A series of three cases have been presented in this article with a common feature being the existence of some form of elder abuse among all. Different clinical presentation of the BMG lesion is also a feature of the article. BMG has been associated with many systemic disorders. Most oral lesions tend to be associated with a concomitant skin lesion for example lichen planus or psoriasis.[14] these skin disorders have been noted to occur in some stress related changes in the body. However, BMG has been commonly observed to occur with psoriasis.[15]

The term psychological upsets have been used to describe the association of BMG to psychological states.[16,17]Although the literature does not seem to investigate the cause of psychological states that it has been found in association with, it is more likely that a medical condition like depression and anxiety make an individual vulnerable to BMG. The problem with diagnosis of underlying influence like elder neglect is that both victims and the perpetrators conceal such situation for many social and personal reasons.[18]While elder abuse can exist in different forms, the most severe being physical abuse while the milder that has been observed can be financial exploitation or fiduciary abuse.[19,20] It can also occur daily in the form of making cruel and insensitive jokes about the elderly.[21]Psychological abuse can occur in the form of neglecting the elderly, which may even be unintentional. Human neglect of any kind has been reported to create psychological states, even that of children.[22]

Aging produces massive changes in the gastrointestinal mucosa which clinically present with motility problems of elderly.[23] Majority of the BMG patients are usually asymptomatic,[24] which in turn tends to develop severe anxiety for fear of cancer in such patients.[25]Underlying influences like elder abuse or neglect may further exaggerate the anxiety which may trigger changes in the oral mucosa. The lesion tends to change its location, size within few minutes to hours while it may change the pattern within a few days.[26] Once present, the course of BMG is highly variable and may extend to stay for days or even years.[6] Lesions that undergo exaggeration loose mucosa and expose underlying sensitive contents due to which the patient may experience glossodynia or even pain.[16]For diagnosis of the condition, one needs to base the findings of the history and clinical examination consistent with the pattern of migration of the lesion. Final diagnosis is by histologic examination thus reassuring the benign nature of the lesion.[27]

Conclusion

Patients in the elderly age group should be investigated for elder abuse and neglect if they present with BMG lesions in the oral cavity. The association between the two needs further investigation in the form of more robust studies.

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