

Wandering Rash - A Cause for Concern? A Report of Two Cases

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Abstract

Benign Migratory Glossitis is a benign inflammatory disorder occurring commonly on the dorsal and lateral aspect of the tongue. It is also known as geographic tongue, wandering rash of the tongue, erythema migrans. Though it is a common presentation on the tongue, it may be left undiagnosed. This can be a potential error on behalf of a practitioner as this lesion, in many instances, may present as an early sign of an underlying systemic disorder. Here we present two cases of benign migratory glossitis and discuss about the need of treatment and the multiple modalities of treatment available for the same.

Keyword: Benign Migratory Glossitis, Diagnosis, Differential.

Introduction:

Benign migratory glossitis is a common disorder of the tongue, usually presenting as an asymptomatic disorder, although some patients may have burning sensation. The condition is observed in approximately three percent (3%) of the population with a female preponderance.¹ First described by Rayer in 1831, this lesion is known by various terminologies such as wandering rash of tongue, geographic tongue, lingua geographica, exfoliation areata lingua, pityriasis linguae, erythema migrans, transitory benign plaques of the tongue, glossitis areata migrans, and marginal exfoliative glossitis.^{2,3} Despite its common presentation, many a times this lesion is undiagnosed, either due to improper examination of the tongue or asymptomatic nature of the lesion. It is also interesting to note that the exact cause of this disorder is unknown. Here, we shall discuss two cases of benign migratory glossitis.

Case Report 1:

A 38 year old male patient presented to department of Oral medicine & maxillofacial radiology with a chief

complaint of stains on his teeth. Patient's medical history was uneventful and he had no contributory dental history. General examination and extra oral examinations showed no significant findings. On intra oral examination, the hard tissue showed presence of generalized stains and calculus and moderate plaque accumulation. The dorsal aspect of the patient's tongue showed an appearance of well-defined grooves having a branching appearance associated with a presence of local denuded erythematous zones are surrounded by a slightly elevated, yellowish-white, serpentine border [Figure No. 1]. The patient gave a negative history in relation to any symptoms of the tongue or any similar lesions in the immediate family members. Based on patient's history and clinical examination, provisional diagnosis of fissured tongue with benign migratory glossitis was given. The patient was advised to maintain good oral hygiene and advised to use tongue scrappers to avoid food accumulation on the tongue. Patient was referred to department of Periodontics for Oral prophylaxis.

Case Report 2:

A 4 year old male patient presented to the dental clinic with a chief complaint of decay of upper anterior teeth. Patient's medical history was not significant and it was his first dental visit. General and extra oral examination showed no significant findings. On intra oral examination, grossly decayed teeth were noted in relation to upper anterior teeth associated with generalized plaque accumulation. Patient's oral hygiene was satisfactory. The local examination of dorsal aspect of tongue revealed a white serpingious border surrounding mildly erythematous depapillated areas on right and left lateral aspects of anterior 1/3rd of the tongue [**Figure No. 2**]. The patient gave a negative history in relation to any symptoms of the tongue or any similar lesions in the immediate family members. Thus, based on examination of the patient, provisional diagnosis of benign migratory glossitis was given. The patient was advised to maintain good oral hygiene and undergo restorative therapy of the decayed teeth.

Discussion:

Benign migratory glossitis [BMG] is a disorder commonly noted in various populations. The prevalence rate of BMG varies, and is reported between 0.28% and 14.4%, with no racial predilection.¹ In Indian population, the prevalence of geographic tongue is 16.4%.⁴ It appears to occur more commonly in children, and its frequency diminishes with age. The above discussed cases report the existence of this lesion at the age of 4 and 38 years respectively. Literature states the existences of geographic tongue to be more common in females. However, in our cases, both patients are male. The lesion usually presents as circinate, erythematous, ulcer-like appearance of the dorsum and lateral border of the tongue. This appearance is attributed to the loss of filiform papillae of the tongue epithelium.² Many instances, the Lesion tends to change location, pattern, and size, which has given rise to the term wandering rash of the tongue.^{1,2} Although commonly, the lesion present in the anterior two thirds of the dorsal surface of the tongue, some cases show lesions

on other aspects of oral mucosa, such as on commissure of lip, floor of mouth, cheek etc., which has been described as ectopic geographic tongue, which was first described by Cooke (1955).⁵ This lesion is quite common, and has also been associated with patients suffering from Acquired Immune Deficiency Syndrome (AIDS).^{6,7}

The exact etiology of this disease is known. Various researchers have proposed multiple theories which include the possible role of an acute inflammatory reaction or congenital anomaly. Redmann et al suggested a polygenic mode of inheritance for BMG, while Marks and Czarny found prevalence of BMG in atopic patients with a history of asthma, hay fever, rhinitis, and even in patients with elevated total serum immunoglobulin E level. Waltimo reported the initiation of BMG in people who use oral contraceptives. Studies have also reported a prevalence of BMG in Insulin Dependent Diabetes Mellitus (IDDM) and also propose that it can be used as a clinical biomarker for IDDM. The lesion may be commonly associated with Down syndrome, Aarskog syndrome and Fetal Hydantoin syndrome.^{3,8,9,10} In the above discussed cases, pertinent case history revealed that none of the family members had a similar lesion on the tongue. The patients also presented a negative history in relation to Insulin dependent Diabetes Mellitus and syndromes.

BMG is believed to be an oral manifestation of Psoriasis, a cutaneous dermatological condition. This is because the histopathological examination of the benign migratory glossitis shows the presence of Hyperparakeratosis, acanthosis of epithelium, intracellular edema and elongated, anastomosing rete ridges with areas of foci of acute and chronic inflammatory cells found within the submucosa, all of which are considered as hall marks of psoriatic lesion.^{8,9,10} A possible psychological component in the aetiology of geographic tongue has also been investigated. Redman et al associated an increased risk of geographic tongue in patients having stress although this data has cannot be validated as the physiologic measures of stress were not recorded.^{8,10}



Figure No. 1: Geographic Tongue Superimposing Fissured Tongue



Figure No. 2: Mild Lesion of Geographic Tongue

Fissured tongue is believed to be an inherited disorder where the tongue presents with deep grooves which can vary in size and depth. It presents as superficial or deep grooves of the tongue which may have linear or branching patterns. Due to the loss of papillae in areas of the fissure, the mechanical protection of tongue mucosa is lowered. The fissures are hypothesized to act as areas of stagnation on the tongue surface in which food and bacterial accumulation may lead to development of glossitis.^{10,11,12} This glossitis presents symptomatically as burning sensation of tongue. Although a definitive etiology is unknown, a polygenic mode of inheritance is suspected. Various contributory factors are hypothesized to cause the development of fissured tongue which include hyposalivation, diabetes mellitus, vitamin B deficiency and lichenoid reactions. It is believed to be more in elderly patients than in children, which is further cemented by the fact that hyposalivation is common in adults than children.¹¹ Fissured tongue is commonly noted with BMG, as reported by Milog lu et al, who recorded a rate of 34.5%, while Chosack et al determined a rate of 48.8%.^{10,12} The association between fissured tongue and BMG supports a genetic basis for the development of the condition. The first above mentioned case shows the presence of the

similar appearance of fissured tongue overlapped by benign migratory glossitis, although in this patient no symptoms were noted.

The diagnosis of BMG is usually done by thorough examination of the tongue and relevant case history, as most of the cases have a pathognomic appearance, however in certain cases, a differential diagnosis of drug-induced reactions, atrophic candidiasis, local trauma, chemical burns and in some cases atrophic lichen planus can be given.¹¹ In such instances, a histological examination of the serpiginous white line of the tongue can be used for assessment and final diagnosis of the lesion.²

Most patients of BMG do not present with any symptoms and the lesion is found on routine examination. This was true in the case of above reported patients. However, a few patients may present with apprehension as they may notice the changing patterns on the tongue, or may have varying symptoms in relation to the lesion, ranging from mild discomfort, increased salivation and burning sensation on smoking, consuming spicy foods etc.^{9,10} In such instances, the primary management of the lesion involves reassurance to the patient following which supportive and symptomatic relief is provided.^{9,10,11} **(Figure No. 3)**

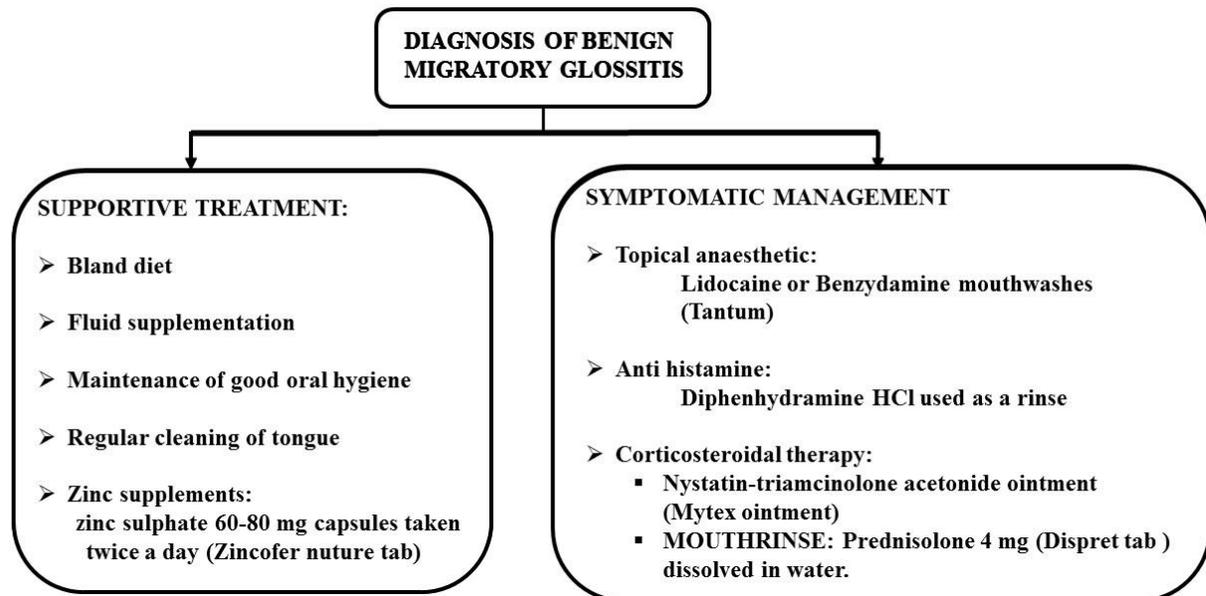


Figure No. 3: Management of Benign Migratory Glossitis

Conclusion:

Benign migratory glossitis is an enigma. Though the lesion is a multifactorial disorder and presents histopathologically similar to psoriasis, it presents as a common lesion on routine oral examination and most patients are asymptomatic. Thus it is important to truly understand the value of careful examination of tongue and not underestimate the existence of asymptomatic Benign Migratory glossitis lesion, as it may perhaps be an oral manifestation of an underlying systemic disorder. However, further studies are warranted to associate the existence of Geographic tongue and its importance as a hallmark of general health status of the patient.

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