

# Asymptomatic Benign Migratory Glossitis: A Rare Case Report

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## Abstract

Benign migratory glossitis, also known as geographic tongue, is an inflammatory recurrent condition of unknown etiology, which is characterized by loss of filiform papillae on the dorsum of the tongue. Clinically, it appears as irregular erythematous patches devoid of filiform papilla bounded by slightly elevated white bands. The lesion changes its location, pattern, and size on the tongue over time, creating a migratory appearance, and in many cases will resolve completely. It is usually an asymptomatic condition but may be associated with burning sensation to hot and spicy food. A case of geographic tongue in a 2-year-old male child is presented here. The purpose of presenting the case report is to discuss the clinical presentation, etiological factors, and treatment modalities of geographic tongue.

**Keywords:** Asymptomatic, benign migratory glossitis, geographic tongue

## INTRODUCTION

Geographic tongue is a transient condition characterized by periodic localized loss of epithelium, particularly of the filiform papillae on the dorsum of the tongue and surrounded by white serpiginous lines.<sup>[1]</sup> It is a benign inflammatory disorder and was first described by Rayer in 1831.<sup>[2]</sup> It is quite prevalent in females affecting between 0.6% and 4.8% of the world population and occurs more often in children.<sup>[3]</sup>

It is characterized by constantly changing patterns, locations, and size of serpiginous white lines around areas of depapillated mucosa.<sup>[4]</sup> Erythematous patches devoid of filiform papillae appear on the dorsum of tongue. The white border represents filiform papillae which are regenerating and mixture of keratin and neutrophils. The term migratory is conferred as the lesion changes its location, pattern, and size over time.<sup>[2,4]</sup> It is usually an asymptomatic condition but may be associated with burning sensation to hot and spicy food. Diagnosis of geographic tongue is made on the basis of clinical examination and patient's history.

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## CASE REPORT

A 2-year-old male patient came to the department of pediatric and preventive dentistry with the chief complaint of white patches on the tongue for 4 months. His mother gave a history of change of size, shape, and location of these patches on the dorsum of the tongue since its development. Medical and dental history was noncontributory. The child showed no signs of systemic involvement. Intraoral examination revealed thick elevated white lines surrounding erythematous patch on the dorsal surface of tongue [Figure 1]. The frontal view of the patient is shown in Figure 2. The lesions did not present any symptoms on palpation and were not scrappable. No other abnormality was observed in other parts of the oral cavity and facial region. Based on the patient's history and clinical examination, provisional diagnosis of benign migratory glossitis was considered. A smear was done to rule out candidal infection. Blood examination results were within normal limits. No treatment was done, and the patient's mother was informed about the nature of the condition and advised to have regular checkup done.

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**Figure 1:** Thick elevated white lines on dorsal and lateral surface of tongue.



**Figure 2:** Frontal view of the patient.

## DISCUSSION

Geographic tongue is defined as a benign inflammatory condition. It is characterized as erythematous lesion with atrophy of filiform papillae. The white border around this lesion represents regenerating filiform papillae and mixture of keratin and neutrophils.<sup>[5]</sup> The etiology of burning tongue also is unknown, and women seem to be affected seven times more often than men.<sup>[6]</sup> Geographic tongue is considered by some to be a congenital anomaly, and others believe it to represent an acute inflammatory reaction.<sup>[7]</sup> Benign migratory glossitis has been associated with various systemic and psychological conditions, which include psoriasis, anemia, nutritional disturbances, psychological factors candidiasis, lichen planus, Reiter's syndrome, diabetes mellitus, and allergies.<sup>[8]</sup> The differential diagnosis includes atrophic candidiasis, psoriasis, Reiter's syndrome, atrophic lichen planus, systemic lupus erythematosus, leukoplakia, trauma, and drug reaction.<sup>[9]</sup>

## Treatment

Patients do not usually require treatment apart from symptomatic relief. Various symptomatic treatments have been tried and include mouth rinsing with topical anesthetic agent, antihistaminic, acetaminophen, and steroids. Patients may be advised to avoid food accumulation on the tongue using soft toothbrush or tongue scrappers. The topical factors aggravating patient's symptoms such as spicy or acidic food should be avoided.<sup>[3]</sup>

## CONCLUSION

Benign migratory glossitis or geographic tongue is usually asymptomatic and may sometimes be associated with burning sensation and sensitivity to spicy and acidic food. It produces the characteristic migratory pattern as the lesion changes its location, pattern, and size over time on the dorsum of tongue. The only complication is the discomfort due to the persistent clinical appearance and frequent recurrence after healing. However, it is advisable to promote optimal oral hygiene and avoid contact with local factors that could precipitate

symptoms, such as spicy and acidic foods. Careful examination and investigations are recommended to rule out probable etiological factor. Regular follow-up of both young and adult patients is important so that inappropriate treatment modalities are not attempted.

## Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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## Conflicts of interest

There are no conflicts of interest.

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