

Geographic tongue

Venkata Joga Prasanth MS DNB, Anup Singh MS

■ Cite as: *CMAJ* 2021 September 13;193:E1424. doi: 10.1503/cmaj.202855

A 37-year-old woman presented to the outpatient ear, nose and throat department with a 1-year history of intermittent burning and changes in appearance of her tongue. The patient had no history of bleeding, pain or concurrent skin or genital lesions, and she had no dermatologic history. A course of clotrimazole and vitamin B supplementation had been ineffective. On examination, she had well-defined annular lesions with central erythema and a raised white serpentine border involving the dorsal anterior two-thirds of her tongue (Figure 1). There was no fissuring. Based on her history, the appearance of her tongue and an otherwise normal physical examination, we diagnosed geographic tongue. We prescribed topical benzydamine, as required, for symptomatic relief of burning. At 6-month follow-up, she was free of symptoms, with patchy tongue changes.

Geographic tongue, also known as migratory glossitis, is a benign, usually asymptomatic, inflammatory condition of unknown origin that most commonly affects the dorsal aspect of the tongue. Prevalence estimates range from 1% to 5%, with no sex predilection, and it is more common among people under 30 years of age.¹ Central areas of erythema and peripheral whitish annular areas correspond to histology showing focal atrophy of filiform papillae and desquamated epithelium with neutrophilic and subepithelial lymphoplasmacytic infiltrates.² More localized lesions, and those of shorter duration, particularly among patients who smoke, have heavy alcohol intake and poor dental hygiene, may be suggestive of candidiasis or malignant disease.² If clinical suspicion is low for alternate diagnoses of lichen planus and adverse drug reaction, a biopsy is unnecessary.³ For patients who have burning, a trial of topical steroid or anesthetic may be helpful.^{1,2} Lesions may change shape or location over the tongue but are usually self-limiting.

References

1. de Campos WG, Esteves CV, Fernandes LG, et al. Treatment of symptomatic benign migratory glossitis: a systematic review. *Clin Oral Investig* 2018;22:2487-93.
2. Ogueta CI, Ramírez PM, Jiménez OC, et al. Geographic tongue: what a dermatologist should know. *Actas Dermosifiliogr* 2019;110:341-6.
3. Jankittivong A, Langlais RP. Geographic tongue: clinical characteristics of 188 cases. *J Contemp Dent Pract* 2005;6:123-35.



Figure 1: Multiple well-defined annular lesions with central erythema and raised white serpentine border of the dorsal anterior two-thirds of the tongue in a 37-year-old woman with geographic tongue.

Competing interests: None declared.

This article has been peer reviewed.

The authors have obtained patient consent.

Affiliation: Department of Otolaryngology and Head and Neck Surgery (Prasanth, Singh), Andaman and Nicobar Islands Institute of Medical Sciences, Port Blair, India

Content licence: This is an Open Access article distributed in accordance with the terms of the Creative Commons Attribution (CC BY-NC-ND 4.0) licence, which permits use, distribution and reproduction in any medium, provided that the original publication is properly cited, the use is noncommercial (i.e., research or educational use), and no modifications or adaptations are made. See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>

Correspondence to: Anup Singh, anoop.aiims1@gmail.com