

Geographic tongue: A tongue that changes appearance

Takeshi Onda, Kamichika Hayashi, Akira Katakura, Masayuki Takano

CASE REPORT

A 66-year-old female presented with a chief complaint of glossal erythema with daily changes in position and shape (Figure 1A and B). She was anxious about the possibility of malignancy. Upon periodically self-inspecting her tongue using a mirror for one year, the patient noted gradually enlarging erythematous macules that fused to form larger patches and that moved from one area of the tongue to another. There was no noted pain or dysgeusia, and the patient had an unremarkable medical history. Based on its pathognomonic history and clinical features, the condition was diagnosed as geographic tongue. The patient was reassured that the lesion was benign. It improved after four weeks of proper dental hygiene with a toothbrush and tongue scraper.

DISCUSSION

Geographic tongue is also referred to as benign migratory glossitis, erythema migrans, annulus migrans, and wandering tongue rash [1]. Geographic tongue is characterized by the loss of the filiform papillae, resulting in erythematous sections of the tongue [2]. Typically located at the border between the dorsal and the lateral edges of the tongue, these erythematous patches are surrounded by well-defined white borders and resemble a map. Geographic tongue is present in 1–2.5% of the general population and is slightly more common in females

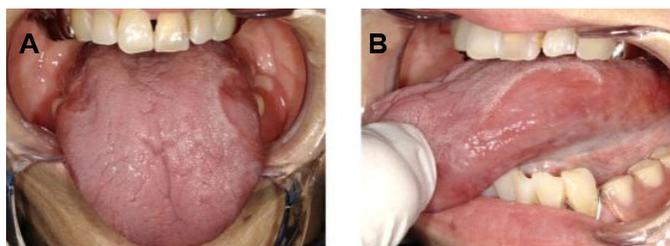


Figure 1: Oral findings at the first visit. (A) Front view: An erythematous round-shaped lesion with a well-defined border is observed extending from the dorsal surface of the tongue to the lateral borders of the tongue bilaterally. (B) Side view: The center of the lesion is smooth and erythematous, while the white edges are raised like embankments, resulting in its characteristic map-like appearance.

[1]. While the specific cause has not been determined, genetics, constitutional abnormalities, vitamin deficiencies, and mental or endocrine disorders may play a role in its pathogenesis [3]. This disease has also been reported in patients with psoriasis; some studies have even referred to geographic tongue as psoriasis of the oral cavity [4]. Since the signs and symptoms of geographic tongue are pathognomonic, a biopsy is not necessary [5]. If asymptomatic, geographic tongue does not require treatment. External corticosteroids, antihistamines, cyclosporine, vitamin A, zinc, acetaminophen, and external tacrolimus are reportedly effective treatment modalities for symptomatic lesions [1, 4].

CONCLUSION

Typically, geographic tongue is asymptomatic and does not require treatment. In addition, its characteristic history is sufficient to establish a diagnosis; a biopsy is not needed. It is important to reassure the patient that the condition is benign. If pain or discomfort develops due to inflammation, palliative treatments can be considered. Avoiding irritants and maintaining good oral hygiene are recommended to avoid the exacerbation of symptoms.

Keywords: Erythema migrans, Geographic tongue, Migratory glossitis

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Author Contributions

Takeshi Onda – Conception of the work, Design of the work, Acquisition of data, Analysis of data, Interpretation of data, Drafting the work, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Kamichika Hayashi – Analysis of data, Interpretation of data, Drafting the work, Revising the work critically

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Akira Katakura – Analysis of data, Interpretation of data, Drafting the work, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

Masayuki Takano – Analysis of data, Interpretation of data, Drafting the work, Revising the work critically for important intellectual content, Final approval of the version to be published, Agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved

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Authors declare no conflict of interest.

Data Availability

All relevant data are within the paper and its Supporting Information files.

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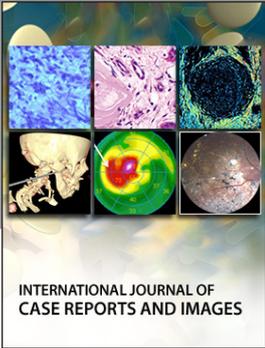
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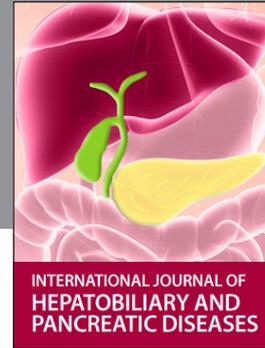
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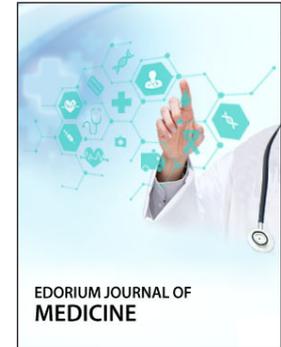


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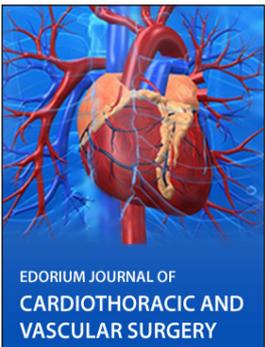


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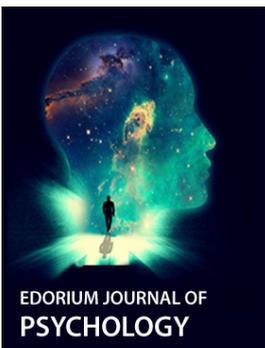
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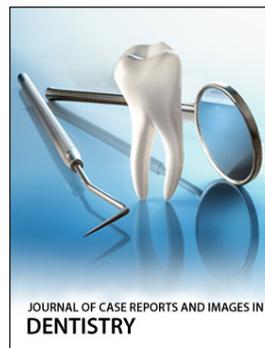
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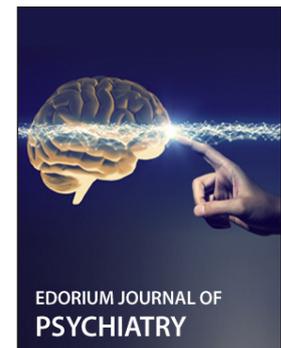
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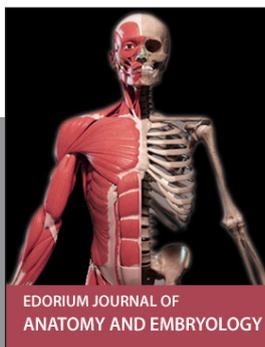
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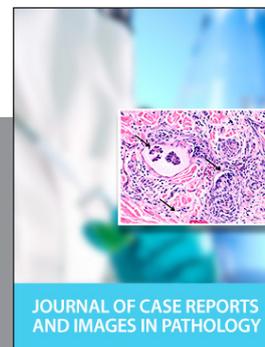
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