

Geographic Tongue: The Waging Wanderlust of the Oral Cavity – A Case Report

Geon Pauly^{1*}, Roopashri Rajesh Kashyap², Raghavendra Kini³, Prasanna Kumar Rao⁴, Gowri P Bhandarkar² and Dhanya S Rao⁵

¹Postgraduate Student, Department of Oral Medicine and Radiology, AJ Institute of Dental Sciences, Mangaluru, Karnataka, India.

²Reader, Department of Oral Medicine and Radiology, AJ Institute of Dental Sciences, Kuntikana, Mangaluru, Karnataka, India.

³Professor and Head, Department of Oral Medicine and Radiology, AJ Institute of Dental Sciences, Mangaluru, Karnataka, India.

⁴Professor, Department of Oral Medicine and Radiology, AJ Institute of Dental Sciences, Mangaluru, Karnataka, India.

⁵Assistant Professor, Department of Oral Medicine and Radiology, AJ Institute of Dental Sciences, Mangaluru, Karnataka, India.

*Correspondence:

Geon Pauly N, Postgraduate Student, Department of Oral Medicine and Radiology, AJ Institute of Dental Sciences, Mangaluru, Karnataka, India, Tel: +918905102696; E-mail: geonpauly@gmail.com.

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ABSTRACT

Geographic tongue is a benign recurrent condition of uncertain aetiology affecting the tongue characterized by loss of epithelium especially filiform papillae giving a characteristic appearance. The clinical presentation may vary from asymptomatic to painful and burning ulceration. The condition is commonly seen in adults but few cases are reported in children. Hereby, we present a case of asymptomatic geographic tongue in 5-year-old male child and with insight on its clinical picture and management.

Keywords

Geographic tongue, Benign migratory glossitis, Wandering rash.

Introduction

Geographic tongue, also known as benign migratory glossitis, is a benign inflammatory condition of unknown aetiology characterised by irregular, ulcer-like erythematous patches with a white rim on the tongue's dorsal surface or lateral borders [1]. These lesions may change in location, pattern and size, hence the name 'migratory' [2].

It commonly occurs on the tip, lateral borders, and dorsum of the tongue; and sometimes even extends to the ventral portion as well [3]. The aetiology of geographic tongue is not well understood. The diagnosis is based on history and clinical presentation, characteristics of the lesion particularly the migratory pattern on the dorsal surface of tongue [4].

Hereby, we present a case of 5-year-old child who had reported to our out-patient department with a case of a recurring asymptomatic geographic tongue.

Case Report

A 5-year-old male patient had reported to our department, with the chief complaint of asymptomatic white patches on the tongue since 6-8 months. His mother gave a history of change of size, shape, and site of these patches on the dorsum of the tongue since its development. She illustrated that usually these patches persisted for 7-10 days and then they regressed spontaneously with a remission period of 10-15 days. Medical and dental histories were non-contributory. On general physical examination, the child showed no sign of systemic involvement.

On intraoral examination, a solitary erythematous lesion, roughly ovoid in shape, measuring about 2.5×1.5 cm in size in their

maximum dimensions, covering almost the entire left lateral border of the anterior two-third of tongue was seen. The lesion had raised whitish circinate borders with irregular margins surrounded by erythematous halo around. The lesions showed areas of depapillation with loss of filiform papillae. The lesions did not show any visible discharge (Figure 1). On palpation, all the inspectory findings were confirmed. The lesions were non-tender and non-scrapable. Based on the history and clinical examination, we drew the diagnosis as benign migratory glossitis. Since asymptomatic, no treatment was advised. The patient's mother was reassured about the nature of the condition and advised to have regular check-up done every 3 months.

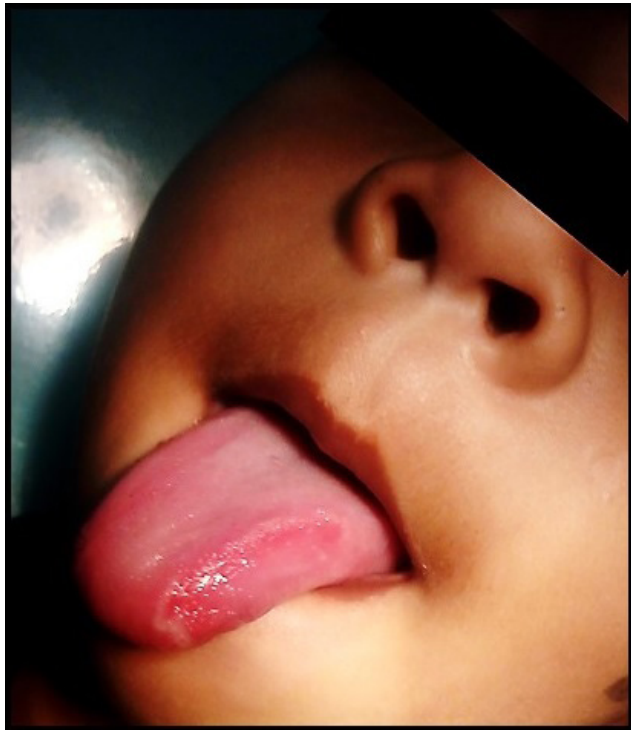


Figure 1: Geographic Tongue on Left Lateral Border of Tongue.

Discussion

Benign migratory glossitis or geographic tongue is a common benign disorder of unknown aetiology. The epithelium of the tongue is affected with loss of filiform papillae leading to smooth ulcer like-lesions that rapidly change the colour and size. The prevalence rate is between 1.0% and 2.5%. According to Jainkittivong and Langlais, the highest incidence of geographic tongue is in the 20-29 years' age group. A higher female preponderance is reported [5]. It is also known as erythema migrans, annulus migrans and wandering rash [6].

It is reported to begin in childhood and is most frequently observed in children 4-5 years of age [7]. It is confined most normally on the dorsum of the tongue, lateral borders and the tip of the tongue. It is portrayed by discrete smooth reddened areas, usually slightly raised with pale yellow or white borders. When observed over a period of hours or days, the denuded patches may change drastically in size and shape, often appearing to migrate across the

surface of the tongue or disappearing for widely varying period of time. The pattern has been likened to land masses and oceans on a map, from which the synonym geographic tongue was derived. Some consider the condition to be a congenital anomaly, and others believe it to represent an acute inflammatory reaction [8].

Recently in 2015, Seiden and Curland explained geographic tongue in terms of media dynamics based on physics. They observed different evolutionary phases between “a healed (rest) state, a highly inflamed (excited) state, and a healing (recovering state)”. They narrowed down different patterns of geographic tongue under 3 types – Oblate pattern, Wavy 1D pattern and a ring shaped concentric pattern [9]. Our case clearly resembles the wavy 1D pattern.

Differential diagnosis includes candidiasis, psoriasis, Reiter's syndrome, leukoplakia, lichen planus, systemic lupus erythematosus, herpes simplex, and drug reaction. In children local trauma, chemical burn, and severe neutropenia should be excluded [10].

Geographic tongue is usually diagnosed based on its unique clinical features, and so its histopathological confirmation or biopsy is rarely needed which justifies our decision not to go for one. The treatment is aimed at reassuring the patient that the lesion is self-limiting and benign as done in our case. However, if the patient reports of symptoms of tenderness and burning, treatment in these cases is empiric [11]. The treatment regime includes: Topical steroids, vitamin A therapy, and rinse with a topical anaesthetic agent, antihistamines, analgesics, steroids and sodium bicarbonate in water and diphenhydramine which have proven to be helpful in reducing the symptoms [12].

Conclusion

As once rightfully quoted by renowned American environmentalist Yvon Chouinard, “Fear of the unknown is the greatest fear of all.” Geographic tongue is a benign condition of uncertain aetiology. The clinical presentation may cause anxiety in young patients as well as parents. Imparting accurate knowledge, sound reassurance and follow up of patients, especially in paediatric population is needed to know more about its pathological variance and implement effective treatment modalities as and when a need arises.

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