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Subject DEN2311

11/19/2021

## **Geographic Tongue**

### **Overview**

Geographic tongue is a benign recurrent seditious illness of the oral cavity that has no recognized cause. It's also known as benign migratory glossitis, annulus migrans, erythema migrans, and a tongue roaming rash. It commonly appears as migrating circinate blotches and asymptomatic erythematous that have a map-like appearance. Depending on the patient, the lesion might last anywhere from a few days to weeks before disappearing and reappearing in a different spot. Ultra-lingual lesions can visible on the lips, buccal mucosa and labial, and the surface of the mouth, but they are extremely common on the dorsal and lateral parts of the tongue. Geographic tongue has been linked to various illnesses, leading to several views about the disorder's pathophysiology.

### **Etiology**

The geographic tongue's actual cause is unknown. The illness frequently runs in families, implying that genetics may play a role in its development. Geographic tongue is commonly connected with fissured tongue, a disorder with a strong genetic relationship, indicating that heredity plays a substantial part in geographic tongue development (Ishibashi, M., Tojo, G., Watanabe, M., Tamabuchi, T., Masu, T., & Aiba, S.). Moreover, emotional stress, psychological problems, habits, allergies, diabetes, and hormone changes have all been suggested as probable

reasons. None of these variables, however, has been convincingly connected to geographic tongue.

### **Clinical Presentation**

Geographic tongue has a wide range of clinical manifestations. It usually appears as asymptomatic erythematous migrating atrophic circinate blotches with damage of filiform papillae. They are enclosed by white circinate borders that affect the tongue's dorsal and lateral features. The phrase ectopic geographic tongue is used when the lesions appear in places other than the tongue. Extra-lingual lesions, which may affect the buccal mucosa and labial, hard palate, lips, uvula, and mouth surface, are infrequent (Dafar, A., Çevik-Aras, H., Robledo-Sierra, J., Mattsson, U., & Jonell, M.). Geographic tongue has a migratory map-like pattern that goes through stages of exacerbation and remission with variable sizes and shapes. Pain, tingling sensations, dysgeusia, stomatodynia, and sensitivity to spicy, hot, and sour foods are all possible indications of lesions.

### **Demographic**

A study was done to look into the spread of geographic tongue and its associated characteristics between students aged 7 to 18 in Kermanshah, Iran. The multi-stage random cluster sampling approach was used to conduct this vivid cross-sectional study in three Kermanshah schools (Rezaei, F., Safarzadeh, M., Mozafari, H., & Tavakoli, P). Besides it, 3600 pupils were questioned, and a questionnaire was used to collect demographic information and exam results. The Chi-square test and the SPSS-20 software were used to examine the factors that influence the occurrence of geographic tongue. The geographic language was found to be present in 7.86 percent of the population. Males were found to have a considerably higher

incidence of this lesion than females. There was no link between psoriasis or fissured tongue and geographic tongue. When compared to those who did not have a geographic tongue, those with the disorder had higher pain and suffering when eating. The geographic language was prevalent in 7.86 percent of the population surveyed, with male students having a higher incidence than female students.

### **Biopsy / Histology / Radiographs**

Although most oral lesions are benign, a biopsy will almost certainly be conducted if there is any chance that the growth is cancerous or pre-cancerous. A biopsy is usually a straightforward procedure performed in the office with only a local anesthetic. Incisions are frequently closed with self-dissolving sutures (stitches) that do not require removal. Sutures are not necessary if the tissue for a biopsy can be obtained using a laser. Given the typical clinical appearance of a geographic tongue, a biopsy is rarely required (Ogueta, I. C., Ramírez, M. P., Jiménez, C. O., & Cifuentes, M. M.).

Histological confirmation is rarely required, but it may be in exceptional circumstances. If any of the correlations with geographic tongue are detected, further investigation may be necessary. Psoriasis, celiac disease, atopic dermatitis, diabetes mellitus, lichen planus, lupus erythematosus, reactive arthritis, Aarskog syndrome, Down syndrome, fetal hydantoin syndrome, Robinow syndrome, and HIV have all been linked to the condition.

### **Differential Diagnosis**

The diagnosis of geographic tongue is usually made based on the patient's medical history and clinical findings. Geographic tongue differential diagnosis includes lichen planus, erythroplakia, candidiasis, leukoplakia, contact stomatitis, aphthous ulcer, and trauma in

situations of unusual lesions. Furthermore, geographic tongue is diagnosed based on a thorough clinical examination, a full patient history, and the distinctive look of the tongue lesions associated with this illness. Because of the tongue's distinct appearance, surgical removal and microscopic investigation (biopsy) of afflicted tissue are rarely necessary.

## **Treatment**

If the geographic tongue is asymptomatic, it commonly does not need treatment. Its benign self-limiting character can reassure patients. Antihistamines, topical corticosteroids, zinc, vitamin A, topical tacrolimus, and acetaminophen have all been demonstrated to be beneficial for symptomatic lesions. Avoid worsening symptoms, avoid alcohol, spicy, sour foods, hot, beverages, acidic fruits, and maintain proper mouth hygiene.

## **Prognosis**

Geographic tongue disease is a benign disorder that is commonly asymptomatic and has a fair prognosis. It tends to come and go, healing without therapy most of the time but recurring in a different place of the tongue most of the time. The majority of patients have no symptoms, and the illness goes typically away on its own.

## **Professional Relevance**

The best possible outcomes can be achieved with the support of an interprofessional group that takes integrated access to diagnose and treating geographic tongue. Dental care providers and emergency department professionals play a critical role in detecting and sending individuals with tongue lesions that resemble geographic tongue to dermatology or otolaryngology. Patient happiness and quality of life will improve as a result of this.

### Work Cited

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