

GEOGRAPHIC TONGUE: A CASE REPORT

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ABSTRACT

Tongue is a most delicate part of the oral cavity and it shows us the status of the stomach (digestion). The upper surface of the tongue is called the dorsum and inflammatory condition of its mucous membrane is called Geographic tongue, Geographic tongue is usually an asymptomatic condition but occasionally associated with burning sensation and sensitivity to hot and spicy food. Geographic tongue is characterized by areas of atrophy and loss of papillae, leaving an erythematous and smoother surface than the unaffected areas. The depapillated areas are usually well-demarcated and bordered by a slightly raised, white, yellow or grey, snaking peripheral zone. The objective in presenting the case report is to discuss the clinical presentation, etiological factors, and associated symptoms and management strategies of geographic tongue. A 42 years old male patient visited to the OPD of Central Ayurveda Research Institute for Cardiovascular Diseases, New Delhi with the chief complaint of burning sensation and sensitivity to hot and spicy food. During intraoral examination, it was diagnosed that he has geographic tongue. Patient was advised for Yashtimadhu (Glycyrrhiza glabra Linn.) Churna 3 gm, Lodhra (Symplacos racemosa Roxb) Churna 1 gm thrice a day with honey, Chitrakadi Vati 500 mg twice a day and Manjisthadi Kwath 20 ml twice a day for fifteen days. After 2 weeks, the tongue was clear and having faded pink hue surface with elevated red papilla. Color and length of lesion were assessed by taking photographs of the affected part before and after treatment.

Keywords: *Geographic tongue, Mucous membrane, Oral cavity*

INTRODUCTION:

Geographic tongue is an inflammatory condition of the mucous membrane of the tongue, usually on the dorsal surface. It is a common condition, affecting approximately 2–3% of the general population.^{1, 2} In India, its prevalence is 0.89% and overall prevalence is 1%–2.5% in general population. It is characterized by areas of smooth, red depapillation (loss of lingual papillae) which migrate over time. The etiology is unknown, but the condition is entirely benign. Other conditions associated with this pathology are Vitamin B deficiency, a trigger from certain foods such as cheese, congenital anomaly, asthma, rhinitis, systemic diseases such as psoriasis, anaemia, gastrointestinal disturbances, candidiasis, lichen

planus, hormonal imbalance and psychological conditions. Unlike in the presented cases which were asymptomatic, only reassurance was considered.³ In modern science, topical anesthetics can be used to provide temporary relief. Other medications that have been used to manage the symptoms include antihistamines, corticosteroids or anxiolytics, but these drugs have not been formally assessed for efficacy in geographic tongue.⁴ In Ayurveda, the specific description of geographic tongue is not mentioned, but the symptom may be compared with *Pitta-kaphaja Jihwakantak Vikara*, so it can be considered Geographic tongue under *Jihwavikara*.

CASE REPORT:

A Hindu married, 42 years old male Patient visited (May 6, 2019) the outpatient department (OPD) of the Central Ayurveda Research Institute for Cardiovascular Diseases, New Delhi, with a registration number 4899 for the complaints of white patches on tongue and mild burning sensation occurs on tongue on eating spicy food [Figure 1] since 3 months. On further oral examination, it was diagnosed that he has geographic tongue and patient was not aware of it. He was not having any related medical history. Detailed history related to tongue that condition is mostly asymptomatic. On examination of tongue, group of smooth, red depapillation (loss of lingual papillae), atrophic on the dorsum or lateral borders of the tongue were noted. These patches frequently have a slightly elevated, thin, yellow border [Figure 1,2]. Similar lesions are observed and differentiated from other similar oral lesions such as psoriasis, Reiter syndrome, glossitis, lichen planus and lupus erythematosus, the examination of scalp, hair, palms, nails, soles and eye, but no abnormalities were diagnosed. Thus, patient was advised for *Yashtimadhu* (*Glycyrrhiza glabra* Linn.) *Churna* 3 gm, *Lodhra* (*Symplocos racemosa* Roxb) *Churna* 1 gm thrice a day with honey, *Chitrakadi Vati*⁵ 500 mg



Figure 1: Geographic tongue

twice a day and *Manjisthadi Kwatha*⁶ 20 ml twice a day for fifteen days. After 2 weeks, the tongue was clear and having faded pink hue surface with elevated red papilla. [Figure 3,4].

The medicines were procured from the outpatient dispensing section, CARICD, New Delhi i.e. from IMPCL. Follow-up was taken once in 15 days for 2 months.

Kshudha:Alpa,

Mic./H-5-6time/d,

B/H-1time/d

Sleep: 6-7 hours

Agni:Mandagni

Prakriti: Kapha-pittaja,

Weight: 62kg,

Height: 5.7inch,

There was no any abnormal finding seen in general and systemic examination.

No any other medical, surgical and family history.



Figure 2: group of smooth, red depapillation (loss of lingual papillae), atrophic on the dorsum or lateral borders of the tongue



Figure 3: After 15 days **Figure 4:** Nodopapillation (loss of lingual papillae), and atrophic on the dorsum or lateral borders of the tongue

DISCUSSION:

In this patient, white patches were present on tongue, in Ayurveda mentioned heavy, thick and covered with growth in *Kaphaja Jihwakantak* as a symptom. The other as complaint of patient was burning sensation in mouth and tongue is a symptom of *Pittaja Jihwakantaka*. Considering the symptoms, patient may be compared with *Pitta-Kaphaja Jihwakantak*.⁷ Line of treatment of *Pitta-kaphaja Jihwakantak* is *Pratisarana* with *Madhura* and *Tikshana Dravya*.⁸ So patient was advised for *Pratisarana* with *Yashtimadhu* (*Glycyrrhiza glabra* Linn.) *Churna* 3gm, *Lodhra* (*Symplocos racemosa* Roxb) *Churna* 1gm thrice a day with honey. For *Agnidipti* purpose, *Chitrakadi Vati* 500 mg twice a day was given. *Manjistha* is given in the form of decoction, as it is well established blood purifier by our ancient Acharyas. *Manjisthadi Kwatha* is having *Laghu, Ruksha Gunas* which acts on *Kapha* and *Pitta Dosha*, causes *Pitta* and *Kapha Shamana* as well as *Raktashuddhi*. As result of *Raktashuddhi* and local treatment *Pratisarana* the relief is found in *Pitta-Kaphaja Jihwakantak*. This way the medicament administered here, correct all the factors of pathophysiology of disease with Ayurvedic principals.

TREATMENT:

The geographic tongue is usually diagnosed based on its unique clinical features, and so its histopathological confirmation or biopsy is rarely needed. The treatment is aimed at reassuring the patient that the lesion is self-limiting and benign. If the patient reports of symptoms of tenderness and burning, treatment in these cases is empiric. The treatment regime include *Deepana-Pachana, Shodhana* and Local therapy like *Pratisarana, Kavala-Gandoosha* are helpful and reducing the symptom. During this period, he was advised for *Laghu Supachya Ahara*. Avoid of *Dadhi, Kshira* and *Divaswapna*.

CONCLUSION:

Geographic tongue is an amiable condition that never changes into danger. Thus present case study concludes that the holistic approach of Ayurvedic system of medicine gives relief to the patient of Geographical Tongue. There were no adverse effects found during the Ayurvedic medication.

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 patient understand that his name and initials will not be published and due efforts will be made to conceal his identity.

Financial support and sponsorship: The authors are fully thankful to CARICD, New Delhi for providing medicine to patient.

Conflicts of interest: There are no conflicts of interest.

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