

Median rhomboid glossitis with palatal 'kissing lesion' – A case report

M Bihari¹, R Srivastava², B Jyoti³, V Mehrotra⁴, M Gupta⁵, S Pradhan⁶

Abstract

Median rhomboid glossitis manifests as a well-delineated erythematous area located along the midline posterior dorsal tongue. Its rhomboid shape usually "points" in an antero-posterior direction. Median rhomboid glossitis may have a "kissing lesion," or area of roughness, most commonly in the area of the hard and soft palate. Here is a case report of 24 year old male patient having median rhomboid glossitis with kissing lesions over the hard palate.

Key words: Median rhomboid glossitis, candidiasis, kissing lesion.

Introduction

Anomalies resulting from disturbances of growth and development can be referred to as developmental malformations. These may be congenital – a congenital disease being one which is present before or at birth. Congenital anomalies or diseases may be inherited, i.e. transmitted through genes, but many are not hereditary.¹ These types of defects are often major patient complaints and cause confusion among clinicians. These conditions may cause some difficulties in establishing a definitive diagnosis and appropriate management.

This dilemma not only causes some concern to the patients because of thoughts regarding infection, transmission, and malignancy but it can complicate both the use of clinical or laboratory tests and patient orientation and treatment. Because of patient concern and sometimes symptoms, it is always important to be able to assure patients that these conditions are neither precancerous nor contagious. The basic explanation of these developmental and acquired conditions is best characterized as manifestations (phenotypic expression) of subtle and unidentified genetic defects, probably at specific chromosomal loci. Median rhomboid glossitis (MRG) is thought to be a congenital abnormality related to the persistence of an embryonic midline tongue structure, the tubercular impar.²

1. Dr. Manorama Bihari MD, Professor of Physiology, CM Medical College, Durg, Chattisgarh, India.

2. Dr. Rahul Srivastava MDS, Senior Lecturer, Department of Oral Medicine and Radiology, Rama Dental College Hospital and Research Centre, Kanpur, Uttar Pradesh, India.

3. Dr. Bhuvan Jyoti MDS, Dental Surgeon and Consultant-Oral Medicine and Radiology, Ranchi Institute of Neuro-Psychiatry and Allied Sciences, Kanke, Ranchi, Jharkhand, India.

4. Dr. Vishal Mehrotra MDS, Reader, Department of Oral Medicine and Radiology, Rama Dental College Hospital and Research Center, Kanpur, Uttar Pradesh, India.

5. Dr. Manas Gupta MDS, Senior Lecturer, Department of Oral Medicine and Radiology, Rishiraj College of Dental Sciences & Research Centre, Bhopal (M.P), India.

6. Dr. Shobhit Pradhan MDS, Consultant- Oral and Maxillofacial Pathology, Kanpur, Uttar Pradesh, India.

Glossite lasangigue mediane de la face dorsal langue was the name given initially by Brocq and Pautrier to a benign lesion which occurs in posterior midline of the dorsum of the tongue at about the middle third or in front of circumvallate papillae.³

Median rhomboid glossitis (MRG) also known under the terms, Central papillary atrophy of the tongue (CPA), localized atrophy of the tongue papillae (LAT), atrophy of the tongue papillae, median type (ATP) is a benign lesion of uncertain etiology. This lesion used to be considered solely as a developmental disorder.⁴

Median rhomboid glossitis (MRG) is characterized by a shiny oval or diamond-shaped depapillated region on the dorsal midline of the tongue just anterior to the circumvallate papillae. The specific location suggests a developmental anomaly related to persistence of an embryonic structure, 'tuberculum impar'. However, the lesion is now believed to be a localized chronic infection by *Candida albicans*. Sometimes, MRG occurs in association with candidal commissural leukoplakias and palatine kissing lesions. The estimated prevalence of MRG among adults is less than 1%.⁵

Address of Correspondence:

Dr. Manorama Bihari MD, Professor of Physiology, CM Medical College, Durg, Chattisgarh, C- 103, Harmu Housing Colony, Ranchi, Jharkhand, India- 834012.
E-mail: drbihari@yahoo.com

Case Report

A 24-year-old male patient reported with chief complaint of redness over the tongue since 6 to 7 years. Patient gave history of erythematous lesion on the dorsal surface of tongue 7 years back with no increase in size, patient has also history of burning sensation over the posterior region of palate while taking the spicy food. Patient had history of chewing pan masala with tobacco since three years 3-4 pouches per day. There was no relevant family history as well as no known history of allergies and medication. On examination patient was moderately built and nourished and his vital signs were within normal limit.

Intraoral examination revealed sharply demarcated, slightly elevated, red, depapillated, rhomboid lesion approximate 2x1cms in size present on the dorsal surface of the tongue on midline just one cm anterior to the circumvallate papillae. (Fig.1) On palpation the lesion was non tender, non-fluctuant and firm in consistency. 4 to 5 erythematous lesions approximate 3x4 mm in size with ill define margins were present over the posterior part of the hard palate just opposite to the rhomboid lesion present on the dorsal surface of the tongue. Lesions were non tender on palpation, soft in consistency and no bleeding was present. (Fig.2) There was generalized edema of gingiva with bleeding on probing and deposits of stains and calculus. Based on history and clinical examination, a provisional diagnosis of median rhomboid glossitis was given, as this entity was concomitant with palatal inflammation so provisional diagnosis of kissing lesions was given for palatal lesions. Patient was checked for HIV by the Enzyme-Linked Immunosorbent Assay (ELISA) which was found to be non reactive. Tongue and palate culture was done by the scraping on the lesion and swab was transferred into one ml sterile phosphate-buffered saline solution and inoculated on Sabouraud dextrose agar (SDA) supplemented with 1% chloramphenicol. Plates were incubated at 37°C for 48 hours. Grams stained smear show dark haematoxyphylic round to oval budding form suggestive of *Candida*.



Fig. 1 Sharply demarcated, slightly elevated, red, depapillated, rhomboid lesion



Fig. 2: Erythematous lesions over the posterior part of the hard palate.

(Fig.3 & Fig.4) Capsule Candidral (Itraconazole 100 mg) once daily for 15 days with topical application of lotion Candid -B (Clotrimazole 1%, Beclomethasone dipropionate 0.025%) for 15 days was prescribed. The patient was advised to maintain proper oral hygiene. After two week follow up patient got relive in symptoms.

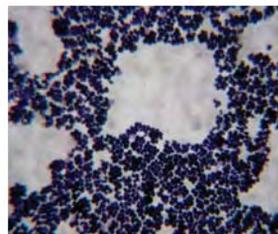


Fig. 3: Dark haematoxyphylic round to oval budding form of *Candida* from tongue lesion

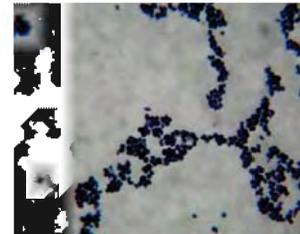


Fig. 4: Dark haematoxyphylic round to oval budding form of *Candida* from palatal lesions.

Discussion

Median rhomboid glossitis is a benign tumor of the tongue often erroneously mistaken for cancer. It is described as a roughly rhomboid shaped mass, situated in the midline of the dorsum of the tongue, usually about one cm. anterior to the circumvallate papillae. It may be smooth, shiny, red and studded with yellow spots, or composed of closely grouped, wart-like nodules with shallow fissures between them.⁶ Median rhomboid glossitis (MRG), first described by Brocq in 1914, occurs in less than 1% of the general population.⁷ The prevalence of median rhomboid glossitis in general population is less than 1% and in Indian population varies between 0.04 and 0.01% with adult males being more commonly affected than females.³

MRG is classically described as a focus of symmetrical filiform papillary atrophy and may exhibit either a smooth or a lobulated surface architecture.⁸ The most common clinical presentation of the disease is an erythematous or white- erythematous area on the dorsal median surface of the tongue, immediately prior to Region V of the circumvallate papilla (terminal gingiva). The erythematous region of the mucose can be flat or raised. It is normally well circumscribed, with a rhomboid shape, and smooth.⁹ Its aetiology is unknown, although it has been proposed that it may be derived from chronic candidiasis, or that it may be of embryological, inflammatory, or even immunological origin. Reported associated factors include smoking, diabetes mellitus dental prostheses, small traumas and candidal infections.^{3,10,11}

Strong association between localized atrophy of tongue (LAT) and tobacco smoking has been suggested by studies done in India.

Mehta *et al* in 1971 conducted a random sample of 10000 villagers in Ernakulam district, Kerala, India, the prevalence of localized atrophy of tongue (LAT) was 2.3% among bidi smokers, 1.3% among cigarette smokers and 0.5% among non-smokers.⁴ It has been thought that MRG was a developmental anomaly generated by failure of the tuberculum impar to withdraw before fusion of the lateral halves of the tongue, with subsequent failure of the filiform papillae to develop in the mid-dorsal tongue. However, MRG has not been reported in a child. Therefore, this lesion is now believed to be related to a chronic infection by *Candida albicans*.⁵ Recent theories suggest the role of *Candida albicans* – a type of yeast, which causes fungal infection. Hence it can be said to be a type of Candidiasis, which may lead to excessive surface keratin. By studying the biopsies of some patients with MRG in 1975, Cooke discovered that *Candida* caused mucosa colonization on the tongue. This infection may be caused along with secondary hyperplasia. MRG is mostly asymptomatic. In some patients, however, general discomfort can be sensed – especially in the site which is evident of atrophic changes. Itching or burning sensation can be caused in the dorsal line of the tongue but it is not painful. Even in such cases, symptoms seem to be transitory.¹²

Sometimes a “kissing” lesion develops on the palate, directly opposite from the tongue lesion. This is more common in people whose immune system is suppressed and is believed to result from the fungal organisms on the top of tongue being transferred to the palate during swallowing and similar movements.¹³ When Median rhomboid glossitis is found in association with palatal inflammation corresponding to contact with the involved area on the tongue immunosuppression should be rule out in those patient. In present case *Candida* species of both lesions (median rhomboid glossitis and kissing lesions of hard palate) were the same. This finding suggests that these lesions may be due to prolonged contact between the *Candida*-infected midline dorsum of the tongue and the hard palate.¹³

Diagnosis of MRG is basically clinical, although sometimes histopathology is required for differential diagnosis. Though the diagnosis of median rhomboid glossitis is essentially a clinical, the role of *Candida* can be proved by isolation of pathogenic *Candida* species from the lesion by laboratory techniques such as smear, culture of *Candida* on Sabouraud's dextrose agar, colony forming units and CHROM agar test.

The characteristic histopathological features have been studied by Sammet which include loss of papillae with varying degrees of parakeratosis, downward proliferation of spinous layer forming elongation of rete ridges which branch and anastomose, lymphocytic proliferation and presence of fungal hyphae readily seen by periodic acid Schiff (PAS) stain.^{3,7}

Conclusion

Median rhomboid glossitis was once thought to represent a developmental defect. Today, however, most authors do not subscribe to the embryogenesis theory. Instead, they believe that median rhomboid glossitis is related to an infection of *Candida albicans*. MRG still gives rise to questions concerning its importance and etiology. When MRG associate with kissing lesion immunosuppression should be suspected and it has been considered a marker of AIDS. So proper diagnosis and management of such lesions are essential.

References

1. Prabhu SR, Wilson DF, Daftary DK, Johnson NW. Oral disease in tropics. In: Developmental anomalies of oral soft tissues. Delhi: Oxford University press;1992. pp 638-9.
2. Silverman S, Eversole LR, Truelove EL. Essentials of oral medicine. In: Developmental mucosal conditions. London: BC Decker Inc Hamilton;2001. pp 255-6.
3. Bojan A, Christy W, Kurian K, Elangovan S. A study to determine the association between tobacco smoking habit and oral Candidal infection in median rhomboid glossitis by cytologic and histopathological method. J Indian Aca Oral Med Radiol. 2012 Apr-Jun;24 (2):106-12.
4. Mehta FS, Bhonsle RB, Murti PR, Daftary DK, Gupta PC, Pindborg JJ. Central papillary atrophy of the tongue among bidi smokers in India; a 10-year study of 182 lesions. J Oral Pathol Med 1989; 18: 475-80.
5. Zegarelli DJ. Fungal infections of the oral cavity. Otolaryngol Clin North Am. 1993; 26: 1069–89.
6. Pollack RS. Median Rhomboid Glossitis Case Reported in an infant. Ann Surg. 1954 Feb; 139(2): 250–2.
7. Lago-Méndez L, Blanco-Carrión A, Diniz-Freitas M, Gándara-Vila P, García-García A, Gándara-Rey JM. Rhomboid glossitis in atypical location: case report and differential diagnosis. Med Oral Patol Oral Cir Bucal 2005; 10:123-7.

8. Noonan V, Kabani S. Pathology Snapshot 2011 ;59(4):41. Available from: http://www.exodontia.info/files/Winter_2010_Pathology_Snapshot_Median_Rhomboid_Glossitis.pdf
9. Leite RMS, Leite AAC, Friedman H, Friedman I. Median rhomboid glossitis associated with esophagic candidiasis. A possible etiologic relation with candida albicans. An bras Dermatol. 2002; 77(5):579-83.
10. Van der Wal N, van der Kwast WA, van der Waal I. Median rhomboid glossitis: A follow-up study of 16 patients. J Oral Med 1986;41:117-20.
11. Soysa NS, Ellepola AN. The impact of cigarette/tobacco smoking on oral candidiasis: an overview. Oral Dis 2005;11:268-73.
12. Median Rhomboid Glossitis. Diseases and conditions. Health Inset 2013. Available from: <http://www.healthinset.com/median-rhomboid-glossitis.html>
13. Radfar L. Patient Information Sheet. Median Rhomboid Glossitis; 2007 Nov 7. Available from: http://www.exodontia.info/files/American_Academy_of_Oral_Medicine_2007_Patient_Information_Sheet_Median_Rhomboid_Glossitis.pdf