BENIGN MIGRATORY GLOSSITIS AN UNUSUAL ENIGMATIC LESION

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ABSTRACT

Benign migratory glossitis is an asymptomatic inflammatory disorder of tongue of unknown etiology. This disease is characterized by depapillation, erythematous areas showing raised greyish or white circinate lines or bands with irregular pattern on the dorsal surface of the tongue. The objective in presenting these reports was to discuss the clinical presentation, associated causative factors and management strategies of benign migratory glossitis.

Key Words: *Migratory glossitis.*

INTRODUCTION

Benign migratory glossitis (BMG) is an intraoral benign condition of dorsal tongue, and is usually asymptomatic. It was first reported in the literature by Rayer in 1831.[1] This condition is also known by variety of names such as geographic tongue, wandering rash, erythema migrans and glossitis exfoliativa. Clinically it appears as red patches, which peripherally are often surrounded by well defined, raised, yellowish white lines on the dorsum of the tongue. The red patches are the depapillated filiform papillae. The fungiform papillae remain shiny, dark red eminences. The main characteristic feature of this disease is frequent changes in the pattern of depapillation, remissions and relapses that give it a migratory appearance.[2,3] The etiology of BMG is not well understood, however positive family history, endocrine disturbances particularly diabetes mellitus, Reiter syndrome, Down syndrome, pregnancy, psychological factors, use of oral contraceptive pills, allergy, and asthma may precipitate this condition.[4] The diagnosis is based on history and clinical presentation, characteristics of the lesion particularly the migratory pattern on the dorsal surface of tongue. BMG is an inflammatory disease usually asymptomatic in nature but in some cases burning sensation has been reported. Similar lesions may also be seen in atrophic candidiasis, local trauma, drug induced reactions, chemical burn, psoriasis, atrophic lichen panus and erthyema migrans.[1]

The purpose of this study was to determine the clinical presentation of benign migratory glossitis, associated etiological factors and treatment modalities.

CASE REPORTS

Case 1

A 45 years old lady presented with the complaint of mild pain in lower right side of tooth from the last one year. During intraoral examination lower right first molar was found to be carious and a diagnostic periapical radiograph was taken. Endodontic therapy followed by porcelain crown was advised, and procedure was duly completed. The patient was also incidentally found to have benign migratory glossitis associated with fissured tongue Fig 1. This was completely asymptomatic. The patient's medical history was unremarkable. Clinical presentation of tongue showed well circumscribed, irregular erythematous patch which was bordered by keratotic line on the left dorsal surface of the tongue showing depapillation of filiform and fungiform papillae. According to the patient this tongue lesion is asymptomatic so she never consulted any physician or dentist regarding this issue. The second clinical presentation

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was fissured tongue which was associated with BMG. Careful examination showed a large fissure in the middle of the dorsum and various small size fissures scattered on the right lateral border of the tongue. There was no secondary infection on the tongue. No medical intervention was given except reassurance, and oral hygiene maintenance and tongue cleaning was advised. Patient was further advised for regular monitoring of the lesion.

Case 2

A 65 years old male patient was referred to oral diagnostic department with the complaint of pain on upper right side of teeth. Review of his medical history showed that he was hypertensive and taking antihypertensive medication on regular basis. On intraoral examination multiple broken down roots (BDR) (18, 26, 28 and 44) were found. Patient was advised OPG X-ray to investigate the status of teeth and BDRs. Clinical examination revealed normal pinkish color oral mucosa except in some areas of dorsal surface of the tongue. Tongue showed multiple patchy erythematous sharply demarcated areas with irregular outline and depapillation of tongue. These erythematous areas were bounded by white borders on the dorsal surface extending into ventral surface of the tongue. He never had any complaint related to tongue. Asymptomatic BMG was diagnosed with no treatment given. Patient was only reassured and follow-ups were advised to monitor the BMG.

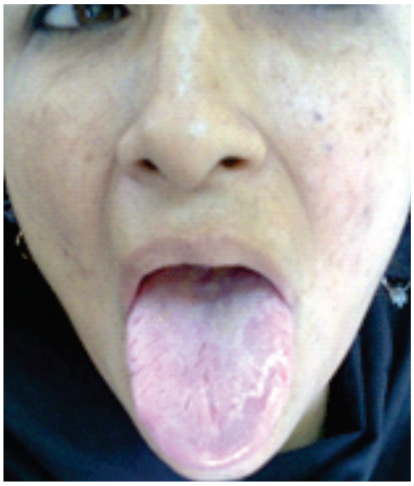

Fig 1: Benign migratory glossitis in 45 years old female

Fig 2a

Fig 2b

Fig 2: Irregular erthyematous patches bounded by slightly elevated keratotic bands on dorsal and ventral surface of tongue (figure 2a and b).

DISCUSSION

An abundance of benign migratory glossitis literature is available. Two cases are discussed here. The prevalence of the appearance of BMG is important and it varies from region to region and studies conducted in those regions. According to the study of Goswami the prevalence of BMG ranges from 1.0-2.5% in study population.[2] Darwazeh reported its prevalence which was about 4.8% in Jordanian population.[5] Investigators proved that there was no specific racial predilection or gender difference observed in their studies. In contrary, the study conducted by Brian revealed that BMG was highly expressed in white and black population as compared to Mexican Americans. In United States of America BMG prevalence range is from 1-14%.[6] This condition may occur any where in the mouth. The most common sites are dorsal surface of the tongue, tip and lateral surface of tongue, rarely involves ventral portion of tongue. This benign condition may occur at extra glossal sites, such as soft palate, uvula, floor of the mouth, gingiva, buccal mucosa and labial mucosa.[7,8] This condition may occur at any age group. Children may also be affected by this disease. Michael and colleague reported higher expression of BMG prevalence in Israel (14%) and Japanese (8%) childrens at the age range of 2-3 years.[9] Redman demonstrated its 1% prevalence in young school children with equal distribution in both genders. However, literature search proved female predominance. The female to male ratio was observed 5: 3-2:1.[10,9] The study conducted by Aree Jainkittivong in Thai population BMG was also in higher proportion in females than males and its peak incidence was 20-29 years age group.[7]

The etiology of BMG is not well understood, but various factors contribute in the pathogenesis of this disease. Some researchers still consider it as an anomaly of tongue and others mark it as hereditary in origin.[7]

Investigators also suggested the association of BMG with genetic factors. Marks investigated the higher frequency of HLA-B15 in atopic patient with geographic tongue. This study also supports the genetic basis for BMG.[11] Study conducted by Fenerli on Greek subjects also showed increased expression of DR5 and DRW6 antigen in BMG patients when compared to control group.[12] Previous studies have shown the involvement of BMG with various systemic and psychological factors such as anemia, emotional stress, Reiter's syndrome, allergies, diabetes and hormonal disturbances.[7] Bruna Picciani has reported the geographic tongue as oral manifestation of psoriasis which was also supported by several investigators.[13,14]

The histopatholgical findings are parallel to clinical appearance of the lesion. It usually shows hyperkeratinization of covering epithelium associated with depapillation of filiform papillae, intracellular edema, migration of polymorphonuclear leukocytes and lymphocytes into superficial layer of epithelium, and inflammatory cell infiltration in underlying connective tissue layer.[3]

BMG is benign in nature and in majority of cases does not require any treatment, only reassurance and symptomatic treatment is advised. No treatment is required when the lesion is asymptomatic. Topical prednisolone is advised in patients who are producing symptoms. A topical or systemic antifungal medication can be given if secondary candidiasis is suspected. However, successful treatment with cyclosporine and topical and systemic antihistamines has been reported. No definitive therapy or medication is suggested for fissured tongue. In case of fissured tongue patient is advised to brush the dorsum of tongue for the elimination of irritant debris.[2]

REFERENCES

1 Prinz H: Wandering rash of the tongue (geographic tongue). Dent Cosmos 69: 272-75, 1927.

2 Goswami M, Verma A, Verma M. Benign migratory glossitis with fissured tongue. J Indian Soc Pedod Prev Dent. 2012 Apr-Jun; 30(2): 173-75.

3 Assimakopoulos D, Patrikakos G, Fotika C, Elisaf M. Benign migratory glossitis or geographic tongue: an enigmatic oral lesion. Am J Med. 2002 Dec 15; 113(9): 751-55.

4 Honarmand M, Farhad ML, Shirzaiy M, Sehhatpour M. Geographic Tongue and Associated Risk Factors among Iranian Dental Patients. Iran J Public Health. 2013; 42(2): 215-19.

5 Darwazeh AM, Almelaih AA. Tongue lesions in a Jordanian population. Prevalence, symptoms, subject's knowledge and treatment provided. Med Oral Patol Oral Cir Bucal. 2011 Sep 1;16(6): e745-9.

6 Brian VR, Derby R, Bunt WC. Common tongue conditions in primary care. Am Fam Physician. 2010 mar 1;81(5):627-34.

7 Jainkittivong A, Langlais RP. Geographic tongue: clinical characteristics of 188 cases. J Contemp Dent Pract. 2005 15; 6(1): 123-35.

8 Warnock GR, Correll RW, Pierce GL. Multiple, shallow, circinate mucosal erosions on the soft palate and base of uvula. J Am Dent Assoc 1986; 112: 523-24.

9 Michael J. Sigal, David Mock. Symptomatic benign migratory glossitis: report of two cases and literature review. Pediatric dentistry: November/December, 1992; Vol 14(6): 392-96.

10 Redman R S: Prevalence of geographic tongue, fissured tongue, median rhomboid glossitis and hairy tongue among 3,611Minnesota schoolchildren. Oral Surg 30: 390-95, 1970.

11 Marks R, Taitt B. HLA antigens in geographic tongue. Tissue Antigens. 1980; 15(1): 60-62.

12 Fenerli A. Papanicolaou S, Papanicolaou M, Laskaris G. Histocompatibility antigens and geographic tongue. Pathol 1993; 76: 476-79.

13 Picciani B, Silva-Junior G, Carneiro S, Sampaio AL, Goldemberg DC, Oliveira J, Porto LC, Dias EP. Geographic stomatitis: an oral manifestation of psoriasis? J Dermatol Case Rep. 2012 Dec 31; 6(4): 113-16.

14 Pogrel MA, Cram D. Intraoral findings in patients with psoriasis with special reference to ectopic geographic tongue (erythema circinata). Oral Surg Oral Med Oral Pathol 1988; 66: 184-89.