

BENIGN MIGRATORY GLOSSITIS — A CAUSE FOR WORRY?

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SUMMARY

A child and two elderly females with benign migratory glossitis (BMG) are presented. The aetiology is unknown, but emotional stress, mechanical and chemical trauma are important in the production of pain in an initially asymptomatic BMG. Treatment consists of reassurance, avoidance of hot, spicy and highly-seasoned foods. Any underlying reactive depression must be treated.

INTRODUCTION

Benign Migratory Glossitis (BMG) has been known by a variety of names including geographic tongue, erythema migrans and wandering rash of the tongue. It is not an uncommon condition and surveys showed a prevalence of below three percent in the North Americans (McCarthy 1941, Halperin 1953, and Redman 1970), and the condition may be found at any age. The male to female ratio being 1:2 (Halperin 1953, Spouge 1973). The lesion almost always affects the dorsum of the tongue, though there have been reports involving the mucosa of the lips and cheeks. It appears as a single or multiple area of red patches surrounded by white peripheral borders. The red patch appears

such because of desquamation of the filiform papillae in this region, resulting in the thinning of the tongue epithelium. The fungiform papillae are not affected at all and may be seen as red elevations. The white border is the advancing front of the lesion and is acutely or subacutely inflamed and is characterised by spongiosis of the epithelium with accumulation of polymorphonuclear leukocytes (Duckworth 1976). The multiple lesions frequently coalesce with each other to form larger areas, forming a circinate pattern (Shafer *et al* 1974). The remission period ranges from a few weeks to a few months, only to appear again at some other positions on the tongue. Clinically, the lesion would appear to migrate to various positions, and hence the name given to it. However, some lesions may remain static for a long time and can complicate diagnosis. Once healed, it becomes virtually impossible to detect its site due to regeneration of new filiform papillae. The majority of patients are symptom-free, but in some, low-grade burning sensation or even soreness of the tongues may be felt.

The purpose of this paper is to describe three cases of BMG that occurred in patients at different ages, and to discuss its significance in relation to management.

CASE NO. 1

A six-year Chinese female presented to the dental faculty for routine dental check-up. Intra-oral examination revealed two circumscribed,

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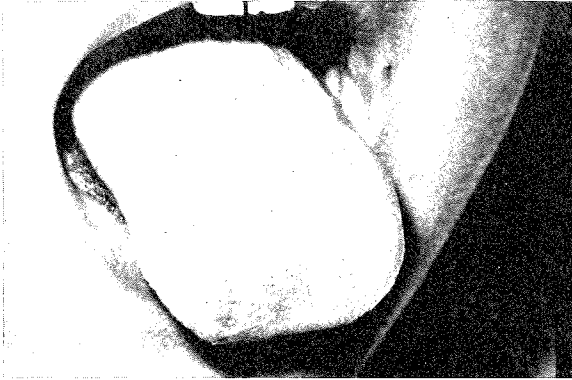


Fig. 1a Asymptomatic BMG occupying the Antero-lateral and postero-dorsal aspects of the tongue in a six-year old female. The central areas of depapillation are obvious.



Fig. 2 Asymptomatic BMG on the lateral aspect of the posterior part of the tongue in a 34 year - old female. The appearance resembles that of Fig. 1a and 1b.

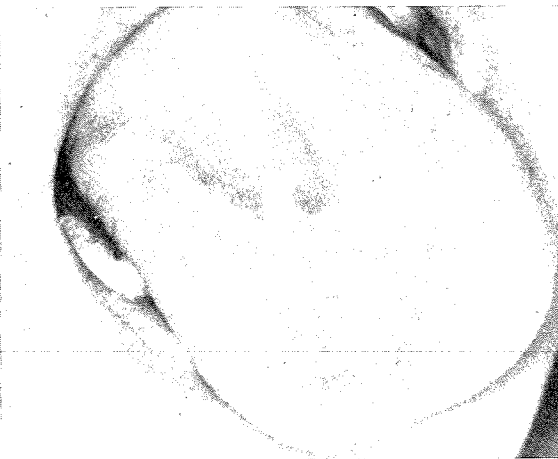


Fig. 1b The tongue of the same patient as above taken 1 month later. Note the change in positions of the lesions.



Fig. 3 Three separate BMG lesions on the tongue of a 50 year-old lady. Note the bizarre appearance of the lesions. All lesions have hyperkeratotic margins, with the lateral ones showing elevation and fungation of the tongue tissue. Pain was a feature.

smooth and depapillated areas on the lateral border of the right side of the tongue and the mid-portion of the posterior one-third of the dorsum (Fig. 1a). The lesions were symptomless and were diagnosed as BMG. The condition was brought to the parents' attention when she was 2½ years old. There was no family history.

The tongue was subsequently examined one month later and the lesions had migrated to different areas on the tongue (Fig. 1b). The sites of the former lesions were completely healed. The parents were reassured of the benign nature of the lesion.

CASE NO. 2

A 34-year old Malay women, married and a

labourer, attended the dental faculty for a set of dentures. The lateral border of the posterior part of the tongue showed a depapillated area with distinct margins. The patients had not been aware of this lesion before, since it was symptomless (Fig. 2). Two weeks later the asymptomatic lesion was found on the tip of her tongue. No active treatment was carried out.

CASE NO. 3

A 50 year-old business lady, complaining of a painful tongue for the previous 18 months, was referred to this faculty by a general surgeon. The patient suffered frequent bouts of depression due to family problems.

On examination, there were three separate lesions (Fig. 3). The two lesions on the lateral borders of the anterior two thirds of the left and right side of the tongue looked very aggressive and showed elevated and fungated depapillated areas bordered by a thick band of hyperkeratotic areas. The lesion on the dorsum appeared similarly though there was no fungation of tissues.

The patient said that the lesion changed positions at intervals of 3 or 4 days and she was cancerophobic. She admitted being under severe depression. She was assured of the benign nature of the lesion and was advised to avoid spicy and seasoned foods. She was also told that her emotional problems were largely to be blamed for the pain in her tongue, and that she should take steps to solve them.

Four weeks later the patient was seen again and she was free from pain. The three previous lesions healed completely, though there remained one non-elevated, non-fungating new lesion on her tongue dorsum. The patient complied with the advice given her.

DISCUSSION

The clinical appearance of BMG is very often bizarre and frightening, and is sufficient to make the parents of the child as well as the adult patients very anxious. They are very often cancerophobic.

The aetiology of BMG is definitely not known. Several factors, like allergic reactions and drug eruptions, though without concrete evidence, have been incriminated. The disorder may have a familial background, as it has been shown that 42 percent of the families of patients were affected, whereas only 9 percent of the families of control subjects showed evidence of the disorder (Duckworth 1976).

Kerr and Ash (1978) stated that BMG is commonly associated with furrowed tongues and they believed that there is an association between BMG and the irritation produced by the bacteria found on the coat of the tongue, or in the fissures of furrowed tongues where they are easily trapped. The author has seen many furrowed and fissured tongues in his clinics, but has failed to find any association between them and BMG. No doubt the

accumulation of microorganisms and food debris in deep fissures of the tongue, if left unremoved over a long period, will set up inflammatory reactions of the adjacent tissues in contact. This will inevitably result in variable degrees of discomfort felt in the tongue. This is a feature that the author is familiar with when dealing with unhygienic fissured tongues, but not BMG.

Emotional and psychosomatic factors have been suggested as contributory (Spouge 1973, Shafer *et al* 1974 and Duckworth 1976). The author finds it hard to accept this contention as BMG is not uncommonly found in infants and the very young when emotional disturbance is not a feature of this age group. The young girl of case no. 1 is a happy and stable child who has been brought up by happy and loving parents. Though she has BMG, and knowing her family background, it is beyond the author's comprehension to put the blame on emotional disturbance in her case. As stated previously, BMG is usually symptomless, though occasionally patients may complain of burning sensations and soreness of the tongues. What then are the factors that may have led to this discomfort in these patients? It is the author's firm belief that there are at least two different sources that are responsible for the symptomatic change, namely, emotional stress or reactive depression and direct mechanical or chemical irritation to the thinned and atrophic epithelium of the tongue. Many authorities agree that almost all symptomatic BMG are found only in the adult patients, and it is rarely found in children. Close enquiry revealed that many of them have emotional problems of various kinds. It is well established that depression, in the forms of professional and family worries, bereavement and loneliness may be expressed as real pain that may be felt in the face, including the tongue (Harris 1975). It is the author's opinion that pain that accompanies BMG is a result of such depressive disorders. Glossodynia would probably have resulted in such patients regardless of the presence or absence of BMG. In Case 1 and Case 2, both the patients were free from emotional disturbance, and the appearance of their lesions were mild. This was in contrast to Case 3, where the patient was an elderly lady burdened with depression and emotional instability. The appearance of her lesion was most bizarre and to the unwary, it could have easily been mistaken for a malignant tumour. In the author's experience, patients who presented with painful BMG usually

have bizarre-looking lesions with variable degrees of emotional disturbances. The converse was true for the emotionally stable patients.

The depapillated tongue surface in BMG has a thin, atrophic epithelium. Such an epithelium is not as robust and strong compared to one that has normal thickness. It thus can be logically expected that any direct mechanical irritation to this area, usually from sharp teeth and improperly made oral prostheses, will further traumatise it, thereby causing variable amount of discomfort. Such trauma is easily acquired when it is realised that BMG commonly affects the lateral borders of the tongue where it is very close to the teeth and prostheses. Irritation from acidic drinks, highly-seasoned and spicy foods are also known to likewise irritate the atrophic epithelium to produce tongue discomfort.

Diagnosis of BMG is straightforward, as the clinical presentation of this lesion is pathognomonic. The migratory nature may be readily elicited by carefully questioning the patient or by recording the exact lesional site at each appointment. Confusion may arise in cases when the lesion remains stationary over a prolonged period of time. A biopsy may then be necessary to confirm diagnosis. When seen in infants, BMG must not be confused with familial autonomic dysfunction, in which the surface of the dorsum of the tongue is completely smooth due to absence of circumvallate and fungiform papillae. In contrast to BMG, this is a hereditary condition characterised among others, by defective lacrimation, skin blotching and motor incoordination. There is no successful treatment for BMG simply because its aetiology is unknown. Patients are usually extremely worried, especially in symptomatic cases, and they have fear for cancer. Reassurance and explanation as to the benign nature of the lesion will do much to reduce or

abolish apprehension of the patient. Tongue discomfort has been reported to disappear once the patients came to understand the true nature of the lesion. Avoidance of hot and spicy, as well as highly-seasoned foods are strongly recommended. In intractable cases of emotional disturbance and depressive states, psychiatric help should prove to be very beneficial.

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