Burning Mouth Symptoms, Part II: A Clinical Review

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Part I of this series presented a review of the literature on Burning Mouth Symptoms (BMS) focusing on its prevalence, its symptoms, and proposed local etiologic factors associated with the condition. Part II will focus on the possible systemic and psychological etiologic factors in order to provide the dental clinician with a perspective on the alternative factors that may cause BMS.

Systemic Factors
There are many systemic factors associated with BMS. The three most commonly discussed in the literature are menopause, hyperglycemia, and nutritional deficiencies. This section is a review of the relevant data and the research associating these factors with BMS.

The possibility of an association between BMS and menopause has been studied by several investigators who examined the prevalence of BMS among peri- and postmenopausal women. The results of these independent investigations were not in agreement, and therefore the role of menopause in BMS remains unclear. Basker, Sturdee, and Davenport found that 19.3% of women presenting to a menopause clinic in England (n=114) had experienced BMS at some time. Similarly, Ferguson, et al found that 17.9% of oophorectomized women (n=145) reported BMS. All of these findings are lower than the prevalence reported in the earlier, often-cited study by Massler, which stated a BMS prevalence of 93% among menopausal women (n=86) interviewed about their menopausal symptoms. Basker, Sturdee, and Davenport point out that if the high prevalence reported by Massler were the case, BMS, like hot flashes, would probably be more commonly recognized as a symptom of menopause by the lay public.

Many researchers have been interested in the effects of hormone replacement therapy on peri- and postmenopausal women. Investigative efforts in this area have produced conflicting results. Grushka found no significant difference between a group of postmenopausal women with BMS and a control group of postmenopausal women without BMS in the prevalence of estrogen replacement therapy after menopause. Similarly, Ferguson, et al found no significant difference between the number of oophorectomized women on mestranol (an estrogenic synthetic steroid) experiencing BMS (12 of 74) and the number of oophorectomized women treated with a placebo experiencing BMS (14 of 71). Ziskin and Moulton, in one of the earliest studies using estrogenic hormone therapy (diethylstilbestrol, benzestrol, or estradiol benzoate), found no change in oral burning symptoms among seven patients treated. Contrary to the preceding data, Basker, Sturdee, and Davenport found that 64% of postmenopausal women with BMS (n=11) had improvement in their symptoms when treated with hormone therapy (a combination of estrogen and progesterone). Similarly, Wardrop, et al found that approximately two thirds of menopausal women with oral discomfort (including burning mouth, persistent dry mouth, oral ulceration, and altered or unpleasant taste), but without oral clinical signs (n=24), found relief with various estrogen replacement medications individually prescribed.

It is difficult to draw any firm conclusions about the efficacy of
been clarified. Basker, Sturdee, and Davenport reported that 10% of patients complained of BMS in whom neither local nor systemic factors could account for their symptoms.8-11 The prevalence of psychological morbidity among BMS patients was above that of healthy individuals but lower than that of psychiatric outpatients.12 Three recent reports evaluated the psychological disposition of patients with BMS in whom neither local nor systemic factors could account for their symptoms.8-11 Although these studies used different instruments, all three found that 10% to 45% of BMS patients had psychiatric or personality morbidity.

Taken together, these three recent studies make an important point. Less than half of BMS patients, whose symptoms could not be accounted for by either local or systemic factors, have significant psychological morbidity. For these reasons, clinicians may want to avoid the assumption of psychological etiology.

All of the research regarding psychological factors and BMS discussed above presents only correlative data, which raises the question of whether psychological morbidity predisposes a patient towards BMS or vice-versa. It is important for the dentist to bear in mind that the presence of psychological morbidity does not necessarily imply a psychological etiology. Two authors have drawn parallels with other chronic pain situations, noting that improvement in the health of somatically ill patients or the alleviation of pain in patients with "chronic pain" is associated with a decrease in or disappearance of psychological concomitants.16,29 Thus, symptoms of psychological morbidity may decrease or disappear once BMS are alleviated.

Summary
Several authors have suggested possible approaches to diagnosis...
Since burning mouth symptoms may arise as the result of a number of etiologic factors (some of which are admittedly more clearly associated with these symptoms than others), diagnosis and management of the patient with BMS should involve consideration of all possible factors that have been reviewed. The extent to which tests designed to eliminate or confirm each of these possible etiologic factors will vary from patient to patient.

REFERENCES


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