

Incidence of Burning Mouth Syndrome: A Single Centre Study

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Abstract

Original Research Article

Objective: To calculate the incidence of burning mouth syndrome (BMS) diagnosed in the Department of Medicine, Medical College of Theni. **Material and Methods:** Diagnoses of BMS were confirmed through the presence of burning pain symptoms of the oral mucosa with normal oral examination findings and no associated clinical signs. **Results:** Eighty five incident cases were confirmed, majority of the 69 patients were female (81.1%). The mean age at diagnosis was 62.6 years (range, 19–96 years). At diagnosis, 9.4 % of patients were current smokers and 22.3% were prior smokers. The tongue was the most frequently involved anatomic. Intensity of reported pain had a broad range, but most of them had mild pain (57.6%) followed by moderate pain (30.5%). Disease was commonly symmetrical on both the mediolateral (95.2%) and anteroposterior (80.0%) axes. Pain was typically continuous (94.1%) and present throughout the day (81.1%). **Conclusion:** The results of our study show BMS is an uncommon disease, highly associated with both advancing age and female sex. Typical symptom characteristics show mild, symmetrical, bilateral burning pain of the tongue that is continuous throughout the day

Keywords: Burning mouth syndrome; incidence; menopause; hormones.

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INTRODUCTION

Burning mouth syndrome (BMS) is characterized by a burning sensation in a normal oral mucosa and occurs particularly in postmenopausal women [1]. The tongue is the most commonly affected site, but the burning sensation can be diffused in any area of oral mucosa, being variable in intensity and has a chronic course [2]. Several studies indicate that BMS is fairly common, which explains the increased attention that the condition has received in the recent literature [3-5]. The etiology is poorly understood and considered multifactorial, being associated to different local, systemic, psychogenic and neurologic causes [6].

Therapy is empiric and without evidence of efficacy, leaving the condition with no recognized treatment [7]. Little information about the variations of BMS in the different population in the world is available, the same applies to its prevalence. The wide range of prevalence values, from 0.01 to 0.7% in general population or 26% in the elderly, reflects the lack of any accurate definition [8].

MATERIAL AND METHODS

The present study was approved by institutional review board. We assessed cases of BMS within the population reporting to the Department of Oral Medicine, College of.....

The subjects were screened with the diagnosis codes for screening used the Hospital Adaptation of the International Classification of Diseases code “mouth burning” and the International Classification of Disease-9 code 528.9, “other and unspecified diseases of the oral soft tissues.”¹ Sixteen patients without research authorization were excluded. The study was limited to incident cases; therefore, patients with a known diagnosis of BMS were excluded. Diagnoses were confirmed through the presence of oral burning symptoms with a normal oral examination.

A retrospective review of the medical records documented date of birth, date of diagnosis, sex, smoking status, and race. The date of BMS diagnosis was the date when the patient received a first-ever diagnosis of BMS by either a dermatologist or a nondermatologist physician, provided the patient’s characteristics met BMS criteria. At each physician visit, the following data were collected: site of burning

pain, intensity of pain, mediolateral and anteroposterior localization of symptoms, pattern of pain, temporal classification of pain, presence of dysgeusia, and presence of xerostomia. Intensity of pain was abstracted from either a 0-to-10 numeric pain scale or subjective description of mild, moderate, or severe pain. Abstracted data were entered into a database created for this particular study.

STATISTICAL ANALYSES

The data obtained were analyzed using the SPSS program (Version 21.0 for Windows, SPSS Inc., Chicago, Ill).

RESULTS

Using the study criteria, we confirmed 85 incident cases. The majority of the 69 patients were female (81.1%). The mean age at diagnosis was 62.6 years (range, 19–96 years). At diagnosis, 9.4 % of patients were current smokers and 22.3% were prior smokers.

The tongue was the most frequently involved anatomic location, affecting 57.6% of the 85 cases independently and 37.6% of cases in conjunction with other anatomic sites. The lips (2.3%) and palate (2.3%) were rarely independently affected. Intensity of reported pain had a broad range, but most of them had mild pain (57.6%) followed by moderate pain (30.5%). Disease was commonly symmetrical on both the mediolateral (95.2%) and anteroposterior (80.0%) axes. Pain was typically continuous (94.1%) and present throughout the day (81.1%).

DISCUSSION

The pathogenesis of BMS is poorly understood. Psychological, hormonal, neurologic, and allergenic etiologic factors have been proposed. Tongue thrusting, lip sucking, depression, and smoking are risk factors for BMS. Pharmacologic treatment of BMS relies on clonazepam, capsaicin, tricyclic antidepressants, and other medications used to treat neuropathic pain (16, 17). Cognitive behavioral therapy for patients with psychiatric comorbidities may be beneficial (18). Other nonpharmacologic treatments have involved the recommendation of smoking cessation and biofeedback therapy.

The diagnosis of BMS, according to the third edition of International Classification of Headache Disorders, requires a superficial, burning oral pain that recurs for more than 2 hours per day for more than 3 months with normal-appearing oral mucosa and no more-appropriate diagnosis.⁹ Other causes of burning pain that must be excluded are salivary hypofunction, menopause, oral candidiasis, nutritional deficiencies, endocrinopathies, bruxism, medication adverse effects, dental trauma, mucosal irritation from dentures, and

allergic contact stomatitis. Because of the challenging nature of the BMS diagnosis, the mean time from onset of symptoms to BMS diagnosis is more than 1 year. BMS is also misdiagnosed by an average of more than 3 physicians before the correct diagnosis is made [10].

The demographic characteristics of the patients in the present study are similar to those reported previously in the literature. The preponderance of women was consistent with other cohorts that reported a prevalence of 75% to 87% [11, 12]. In our study, postmenopausal women had the highest incidence of disease, with the maximal rate seen in women aged 69 to 79 years. BMS incidence is associated with both advanced age and female sex. In addition, the mean age at diagnosis was 62.6 years. Overall, 9.4% of BMS patients were currently using tobacco and 22.3% had a history of tobacco use. Most patients had mild or moderate burning pain with tongue involvement that was present throughout the day. These observations were in accordance with findings by Kohorst *et al.* [13-15].

Association of tobacco use and symptom characteristics of the BMS patients were consistent with the similar studies reported in the literature. Many patients from our study reported symmetrical, bilateral mild burning pain of the tongue that was continuous throughout the day. The tongue has been described as the most frequently involved anatomic location and patients described their tongue symptoms as being more commonly anterior than posterior[2,11,13].

CONCLUSION

The results of our study show BMS is an uncommon disease, highly associated with both advancing age and female sex. Typical symptom characteristics show mild, symmetrical, bilateral burning pain of the tongue that is continuous throughout the day. Our findings provide a basis for future studies addressing at epidemiology of BMS. Further studies should aim at exploring the potential influence of factors such as concurrent disease and medication use on the incidence of BMS on population groups.

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