



# An Overview of Burning Mouth Syndrome



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**Submission:** October 26, 2016; **Published:** December 04, 2017

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## Introduction

Burning mouth syndrome (BMS) is a disease of unknown etiopathogenesis, frequently affects women, characterized by burning symptoms on oral mucosa, which appears clinically normal. Despite of not being accompanied of evident organic alterations and not representing risks to the health, the BMS can significantly reduce the life quality of patients. This syndrome has complex and multi factorial character, but its etiology remains unknown what makes difficult the treatment and management of such patients. The involvement of neurologic, emotional and hormone alterations is proposed in BMS etiology; however, its mechanisms are complex and not completely understood. The correct diagnosis of BMS and the exclusion of possible local or systemic factors that can be associated to burn symptoms are fundamental. It is also important to evaluate the life quality of these patients trying to recognize the impact of this condition in their lives.

The International Association for the Study of Pain defines Burning Mouth Syndrome as a pain that lasts for at least 4-6 months of duration and which is located on tongue or in other mucosal membranes and that is presented in the absence of any clinical and/or laboratory findings. The terms “glossodynia” (painful tongue) and “glossopyrosis” (burning tongue), as well as “glossalgia,” describe the phenomenon present in this disorder with respect to the most affected area, the tongue (especially the tip and lateral borders). Other terms such as “stomatodynia,” “stomatopyrosis,” “oral dysesthesia,” and “burning mouth syndrome” are used to define this condition [1]. Although percentages in research findings may vary between .07% and 15%, we can state that this disease is highly prevalent [2].

BMS is a complex chronic disorder characterized by symptoms of burning, pain or itching on oral mucosa without changes on physical examination, laboratorial analysis or salivary flow rate [3-6]. This syndrome shows higher prevalence on middle-aged and elderly women [4,6,8], the most frequently affected sites are tongue, hard palate and lower lips [1-2,4,7]. The episodes of burn are spontaneous and the symptoms range in severity, while some patients complain of moderate burn, others show unbearable

pain [6]. Moreover, symptoms of dysgeusia and xerostomia are common and associated with the same sensory abnormalities which promote burning mouth [8].

Some criteria should be observed to distinguish burn mouth complaints of the true syndrome. These complaints are frequent and can be caused by local or systemic factors such as hyposalivation, contact stomatitis, oral candidiasis, vitamin deficiencies or local irritants. If the cause is removed, there is relief of the symptoms, which does not characterize true BMS [6-7,9]. The etiopathogenesis of the syndrome is still unknown; studies suggest a neuropathic origin [4,7,9-10], although other factors have been investigated. Since BMS preferentially affects women in the post-menopause period, a complex interaction of hormonal alterations and psychological disturbances have also been suggested in its etiology [1-3,6,7,11,12].

The lack of unified criteria makes the diagnosis even more complicated, and consequently, epidemiological information can differ depending on the researcher who analyzes it [13,14]. Within the risk group of postmenopausal-women, the prevalence of this disorder ranges between 18% and 33% [15]. According to most of the authors, the typical average age of patients of BMS is from 50 to 60 years old, however, it can also arise in patients close to their thirties, but not in children or in teenagers.

The true cause of burning mouth syndrome is still unknown. Although this syndrome is not accompanied by evident organic alterations and it does not present health risks, it can significantly reduce the patient's quality of life. BMS patients tend to have a history of frequent medical and dental visits with the objective of obtaining a cure that does not yet exist. Experts currently debate whether the psychological alterations that BMS patients experience are the cause or the consequence of such chronic pain [9,12]. The patient profile is rather specific and is comprised of the following personal characteristics: age range between 50 and 60, a history of prolonged suffering from chronic pain, and a history of having been treated by many different specialists without obtaining any solution to the problem. It is also often

accompanied by a significant emotional profile and is usually related to cancerophobia [16].

BMS is included within the group of diseases categorized by idiopathic orofacial pain. According to some authors [16]. Such diseases share the common features that in all cases the pain is continuous, it is chronic for several months, and then it disappears while the patient is sleeping [2,6,13,16].

The clinical manifestation of BMS is described by a continual hot, burning and painful sensation that lasts throughout the day. It is a chronic disease that appears at different locations within the oral cavity, all of course in the absence of any type of lesion that could justify the symptoms, as well as any clinical or histological changes [17]. Patients tend to complain of a sensation of dry mouth and palate alterations, which include a metallic or bitter taste [16].

The tongue is the most common location of BMS manifestation (at the tip and at the lateral edges), together with lips, especially the lower lip [6,17]. The description of the symptomatology varies depending from patient to patient, although the majority of them describe the symptoms as unbearable and with prolonged evolution. The feeling of discomfort tends to be continuous, or it can be intermittent, and it often worsens throughout the day. Some patients, however, experience days without any symptoms.

The symptoms affect the patients' quality of life and due to the significant emotional component that goes along with BMS, it is advisable that these patients' visits be quiet, one-on-one with the physician, and held in a relaxed environment so that he/she can explain his/her familiar and affective situation. These patients need time and dedication from their medical professional, seeing as they want to be heard and understood. Patient reassurance is paramount [18].

BMS diagnosis is fundamentally based on clinical signs. It is necessary to correctly examine the patient, discarding the existence of systemic and local factors that could cause such symptoms [16]. The administration of a blood test is also highly recommended. In the case that any deficit should appear, replacement therapy will be initiated, and if in spite of this therapy the symptomatology persists, we at that point face idiopathic BMS, and therefore, we must begin with symptomatic treatment [3,6].

BMS treatment is usually directed towards symptoms management, but local factors they may play a role in worsening the oral burning sensation should be eliminated [3,6]. This disease has a chronic clinical evolution seeing as patients experience alternating periods of exacerbation of the symptomatology, as well as periods of improvement. Unfortunately, those who are affected by this disorder must accept that fact and learn to cope with it, and in turn, they must be conscious of that fact that the solution to this disorder may not be found in the short term. In some cases, those who suffer from BMS have also described spontaneous remission [19].

The managing of patients with Burning Mouth Syndrome is very difficult and more times than not, a frustrating task. However, it is essential to not only acknowledge the patient but also reassure him/her. The main objective of management is that of providing support to the patient and working towards symptom reduction, rather than total elimination of such symptoms. It is crucial for us to evaluate the quality of life of those BMS patients, trying to fully comprehend the impact that this condition has on all aspects of their lives. The complex and not completely understood mechanisms of BMS need to be investigated to make possible the establishment of an effective treatment to this disorder.

### References

1. López-Jornet P, Camacho-Alonso F, Andujar-Mateos P, Sánchez-Siles M, Gómez-García F (2010) Burning mouth syndrome: an update. *Med Oral Patol Oral Cir Bucal* 15(4): 562-568.
2. Gao J, Chen L, Zhou J, Peng J (2009) A case-control study on etiological factors involved in patients with burning mouth syndrome. *J Oral Pathol Med* 38(1): 24-28.
3. Spanemberg JC, Cherubini K, de Figueiredo MA, Yurgel LS, Salum FG (2012) Aetiology and therapeutics of burning mouth syndrome: an update. *Gerodontology* 29(2): 84-89.
4. Brailo V, Vučević-Boras V, Alajbeg IZ, Alajbeg I, Lukenda J, et al. (2006) Oral burning symptoms and burning mouth syndrome-significance of different variables in 150 patients. *Med Oral Patol Oral Cir Bucal* 11(3): 252-255.
5. Salort-Llorca C, Mínguez-Serra MP, Silvestre FJ (2008) Drug-induced burning mouth syndrome: a new etiological diagnosis. *Med Oral Patol Oral Cir Bucal* 13(3): 167-170.
6. Spanemberg JC, Rodríguez de Rivera Campillo E, Salas EJ, López López J (2014) Burning Mouth Syndrome: update. *Oral Health Dent Manag* 13(2): 418-424.
7. Bergdahl M, Bergdahl J (1999) Burning mouth syndrome: prevalence and associated factors. *J Oral Pathol Med* 28(8): 350-354.
8. Soares MS, Chimenos-Küstner E, Subirá-Pifarré C, Rodríguez de Rivera-Campillo ME, López-López J (2005) Association of burning mouth syndrome with xerostomia and medicines. *Med Oral Patol Oral Cir Bucal* 10(4): 301-308.
9. Balasubramaniam R, Klasser GD, Delcanho R (2009) Separating oral burning from burning mouth syndrome: unravelling a diagnostic enigma. *Aust Dent J* 54(4): 293-299.
10. Jääskeläinen SK (2012) Pathophysiology of primary burning mouth syndrome. *Clin Neurophysiol*. 123(1): 71-77.
11. Tarkkila L, Linna M, Tiitinen A, Lindqvist C, Meurman JH (2001) Oral symptoms at menopause-the role of hormone replacement therapy. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod* 92(3): 276-280.
12. Carlson CR, Miller CS, Reid KL (2000) Psychosocial profiles of patients with burning mouth syndrome. *J Orofac Pain* 14(1): 59-64.
13. Abetz LM, Savage NW (2009) Burning mouth syndrome and psychological disorders. *Aust Dent J* 54(2): 84-93.
14. Sardella A, Carrassi A (2001) BMS: S for syndrome or S for Symptom? A reappraisal of the burning mouth syndrome. *Minerva Stomatol* 50(7-8): 241-246.
15. Lipton JA, Ship JA, Robinson DL (1993) Estimated prevalence and distribution of reported orofacial pain in the United States. *Journal of the American Dental Association* 124(10): 115-121.

16. López-López J, Rivera-Campillo MER (2014) El Síndrome de boca ardiente. Madrid: Ripano 96 p.
17. Nasri-Heir C (2012) Burning mouth syndrome. The Alpha Omegan 105(3-4): 76-81.
18. Chugh D, Mock D (2013) How do I manage a patient with burning mouth syndrome? Journal of Canadian Dental Association 79: d41.
19. Sun A, Wu KM, Wang YP, Lin HP, Chen HM, Chiang CP (2013) Burning mouth syndrome: a review and update. Journal of Oral Pathology & Medicine 42(9): 649-655.



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DOI: [10.19080/ADOH.2017.06.555691](https://doi.org/10.19080/ADOH.2017.06.555691)

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