Burning Mouth Syndrome- An Updated Review

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ABSTRACT

Burning Mouth syndrome is a condition characterized by a burning pain or hot sensation which can be localized to the lips or tongue or more widespread in the mouth. The sensation can be continuous or intermittent. It can also be accompanied by other symptoms like dryness, an unpleasant taste, or feelings of numbness. It can increase with talking, eating hot or spicy foods, and in times of stress. It can be reduced by some foods or drink, sleep or rest and distraction. This abstract reviews the literature on this syndrome, with special reference to the etiological factors that may be involved and the clinical aspects they present. The diagnostic criteria that should be followed and the therapeutic management are discussed with reference to the most recent studies.

Key Words: Glossodynia, Glossopyrosis, Glossalgia, Stomatodynia, Oral dysesthesia and Burning Mouth Syndrome, Scalded Mouth Syndrome

INTRODUCTION

Burning Mouth Syndrome (BMS), is condition characterized by a sensation described by the patient as burning that affects the oral mucosa, in the absence of clinical or laboratory data to justify these symptoms. Burning mouth syndrome (BMS) refers to chronic orofacial pain, unaccompanied by mucosal lesions or other evident clinical signs [1-12]. The International Association for the study of Pain defines it as a pain of at least 4-6 months duration located on the tongue or other mucosal membranes in the absence of clinical or laboratory findings.

The most affected area is the tongue (tip and lateral borders), thus denominated ‘glossodynia’ (painful tongue) and glossopyrosis (burning tongue) and glossalgia; other terms used are stomatodynia, stomatopyrosis, oral dyesthesia and burning mouth syndrome, scalded mouth syndrome. Usually, the tongue is affected, but the pain may also be in the lips or roof of the mouth, or throughout the mouth.

Epidemiology

The true prevalence of BMS is difficult to establish due to the lack of rigorous diagnostic criteria. According to literature between 0.75 and 15 per cent of the population are affected. It is more common in women than men. The women most commonly affected are those around the menopause. This syndrome is rare in patients under 30 years, never having been described in children or adolescents.

PRIMARY AND SECONDARY BMS

Primary BMS: If tests do not reveal an underlying medical problem, the diagnosis is primary BMS. Experts believe that primary BMS is caused by damage to the nerves that control pain and taste.

Secondary BMS: Certain medical conditions can cause BMS. Treating the medical problem will cure the secondary BMS. Common causes of secondary BMS include

- Hormonal changes (such as from diabetes or thyroid problem)
- Allergies to dental products, dental materials (usually metals), or foods
- Dry mouth, which can be caused by certain disorders (such as Sjögren’s syndrome) and treatments (such as certain drugs and radiation therapy)
- Certain medicines, such as those that reduce blood pressure
- Nutritional deficiencies (such as a low level of vitamin B or iron)
- Infection in the mouth, such as a yeast infection
- Acid reflux

Different classification types have been proposed based on the daily fluctuations of the symptoms (7, 12-13).

a) Type 1: characterized by progressive pain, patients wake up without pain, which then increases throughout the day, affects approximately 35% of patients. This type may be associated with systemic diseases, such as nutritional deficiencies.
b) Type 2: the symptoms are constant throughout the day and patients find it difficult to get to sleep, represents 55%. These patients usually present associated psychological disorders.
c) Type 3: symptoms are intermittent, with atypical location and pain. Constitutes 10% of patients. It seems that contact with oral allergens could play an important etiologic role in this group.

**Etiology**

The various factors related with the etiology of this syndrome have been divided into local, systemic and psychological.

**Local factors**

Factors which can have a direct irritant effect on the oral mucosa, maybe either physical, chemical or biological (some bacteria or fungi), and are able to set off the burning symptoms [7]

Local factors can include poor fitting prosthesis, parafunctional habits, dental anomalies, allergic reactions, infection, chemical factors, galvanism, taste alterations, xerostomia. Oral infections produced by diverse microorganisms have been associated with this syndrome. Infection by Candida albicans has been considered one of the most frequent factors in the production of BMS. In recent years investigations have been carried out into the alterations in taste perception and tolerance to pain as a possible cause of the burning sensation. Taste is located fundamentally on the fungiform papillae, finding in certain patients with burning mouth, above all women, an elevated number of said papillae, these individuals being denominated ‘supertasters’. This theory proposes that certain people, labeled as supertasters due to the high density of fungiform papillae present on the anterior part of the tongue, are more susceptible to developing burning mouth pain.

**Systemic factors**

Systemic factors implicated in BMS are Endocrine alterations ;(hypothyroidism, diabetes, menopause), Deficiencies ; (iron, vitamin, zinc), anemia, gastrointestinal anomalies, medication, neuropathy, sjogren’s syndrome, esophageal reflux.

**Psychological factors**

Studies exist that suggest that psychopathologic factors may play an important role in BMS
Many of these patients have symptoms of anxiety, depression, personality disorders, and psychosocial stress. Cancerphobia can be present in up to 20-30% of these patients.

**Pathogenesis**

The causes of BMS are poorly understood. Recent studies suggest that changes occur in the way of the tongue and transmits warmth, cold and taste to the brain. This results in pain discomfort, or burning. It is called a “neuropathic pain” as it is caused by nerves malfunctioning.
Clinical Features

It is characterized by a burning pain or hot sensation which can be localized to the lips or tongue or more widespread in the mouth. The sensation can be continuous or intermittent. The majority of studies describe the coexistence of oral burning with other symptoms, such as dry mouth, dysgeusias, metallic taste, bitter taste or combinations thereof, and/or changes in intensity of taste perception. In addition, dysphagia and atypical facial or dental pain may appear.

Diagnosis

It is important to emphasize that a diagnosis of BMS should only be established after all other possible causes have been discarded, there are no specific diagnostic tests, thus, the diagnosis is made in the absence of visible oral lesions, and is therefore a diagnosis of exclusion of other possible diseases. Other systemic diseases that can manifest symptoms similar to BMS should be considered: Sjögren’s syndrome, diabetes, candidiasis, deficiencies of iron, folate, zinc or group B vitamins. Medication that can produce xerostomia, the presence of parafunctional habits, and the clinical history should provide information on prior or current psychological and psychosocial stress factors [4,7,14]. An oral and extraoral examination should be made to discard lesions such as erythema, erosions, depapillated tongue. The oral cavity should not present any anomalies such as inflammation or atrophy of the mucosa in order to establish a diagnosis of BMS. Possible dental problems should be ruled out, reviewing any prostheses and their occlusion, any probable oral galvanism and volumetric tests of saliva flow should be made.

Treatment

Treatment should be adapted to each patient, where a multidisciplinary approach is recommended. Initially the clinician should determine whether the symptom is primary (essential or idiopathic) or secondary BMS, in which the symptoms are attributable to other causes, candidiasis, vitamin deficiencies, galvanic allergies; parafunctional habits should be examined; substitution therapies should be established (in cases of vitamin and mineral deficiencies). To help ease the pain of BMS, sip a cold beverage, suck on ice chips, or chew sugarless gum.

Avoid irritating substances, such as:

- Tobacco
- Hot, spicy foods
- Alcoholic beverages
- Mouthwashes that contain alcohol
- Products high in acid, such as citrus fruits and juices.

The most important part of the treatment is to accept that BMS is a long term condition which may take a number of years to disappear. It is very important for the patient to develop some coping strategies.

REFERENCES