The Journal of Dental Panacea 2023;5(2):65–67

Content available at: https://www.ipinnovative.com/open-access-journals

The Journal of Dental Panacea

Journal homepage: https://www.jdentalpanacea.org/

Review Article

Burning mouth syndrome- An overview

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ARTICLE INFO

Article history:
Received 01-05-2023
Accepted 19-05-2023
Available online 04-07-2023

Keywords:
Burning mouth syndrome
Dry mouth
Pain

ABSTRACT

A burning sensation of the oral mucosa without any obvious oral lesions is a defining feature of the burning mouth syndrome (BMS), a chronic and untreatable orofacial pain syndrome. Women in their later years of life who are experiencing hormonal shifts or psychological issues are most affected by this ailment. BMS patients also complains of pain in oral mucosa, taste perception changes and dry mouth with burning sensation. Even though the exact cause of BMS is unknown, a complicated correlation between biological and psychological components has been found, pointing to the possibility of a multiple etiology. This article's goal is to review the etiology, clinical manifestation, and management of BMS.

1. Introduction

Burning mouth syndrome is characterized by burning pain which is continues and somtime intermittent in a normal-appearing of oral mucosa.[1] The tongue, lips, palatal area, and other oral mucosa frequently experience scorching or stinging pain in people with burning mouth syndrome. Dysgeusia, oral paresthesia, and dry xerostomia are accompanying symptoms. When there are no other clinically significant local or systemic etiologies, a diagnosis of BMS is made based on exclusion.[2]

Two clinical variants, referred to as "Primary BMS" and "Secondary BMS," have been developed because of improvement in its aethiopathogenesis .Primary BMS (BMS) is defined as essential idiopathic BMS when no systemic or localised pathological causes can be found. Oral burning symptoms, also known as secondary BMS, can be brought on by local or systemic pathological illnesses or causes, including dietary deficiencies, dental trauma, menopause, diabetes mellitus, medication-related alterations, and allergy or hypersensitivity reactions.[3,4]

2. Etiologic Factor[5]

Local factors include allergy to dental materials, loose dentures, functional paraphrases, dysfunctional taste mechanical variables, periodontal disorders, discomfort in the muscles, allergy to dental restoration. Infections which include bacterial, fungal and viral.

Systemic factor like Nutritional deficiency/anemia, illnesses of the central nervous system, depressions, anxiety, diabetes, hormonal imbalance, menopause, xerostomia, Sjogren's syndrome, Sicca syndrome, neurological conditions, hormonal imbalances, medication includes antihyperglycemic, ACE inhibitors etc.

Idiopathic and other unrelated factor like radiation treatment, carcinophobia.

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https://doi.org/10.18231/j.jdp.2023.014

3. Clinical Manifestation

BMS often manifests in a range of clinical manifestations, making it occasionally difficult to identify these symptoms. Most common BMS occur in middle age groups, Patient complains of continues burning, tingling, itching, pricking, or numbness. Even if it may occasionally be connected to a traumatic experience, disease, dental surgery, or stress, the pain is frequently unbearable. The oral mucosa, such as the palate, lip, buccal mucosa, lateral border of the tongue, and floor of the mouth, may also be affected. In most cases, pain is restricted to the front two-thirds of the tongue. Patients frequently describe everyday discomfort that lasts for at least 4-6 months and is either intermittent or constant.

Burning sensations are bilateral and vary in severity; they usually get progressively worse during the day and in response to psychological stressors, although they get better when you eat and drink. Most of the time, the pattern of pain does not correspond to the anatomical distribution of peripheral nerves. The patient's poor mental health further exacerbate the severity of the burning feelings.[6–10]

4. Treatment

The care of these individuals must take a methodical, interdisciplinary approach due to the complicated and multiple etiology of BMS. Although numerous medications and treatment strategies have been put forth for the management of BMS, none of them stand out as ideal and are unsatisfactory. Every patient's treatment plan needs to be unique. For the management of BMS, obtaining an accurate clinical diagnosis is of the utmost importance.

5. Topical Application

Benzodiazepine, clonazepam, applied topically, lessens BMS symptoms. Orally the drug is consumed by keeping it in the mouth for three minutes and then spitting it out. However, xerostomia and weariness could be unwanted side effects. Additionally, the patient might need to take the prescription for a long time because the symptoms could return if they stop taking it, which could lead to dependence problems even with the ocal application approach.

Although the exact way that topical clonazepam works is yet unknown, it is believed to have immediate analgesic effects and function by stabilizing the membranes of nerve fibre and oral mucosa cells. Due to its lower risk of side effects when compared to systemic clonazepam, topical clonazepam may be a more appealing therapy option.[11–15]

Local application of desensitising drugs such as topical capsaicin reduces peripheral burning sensation by depleting substance p .It can also cause dyspepsia; therefore, care should be taken when giving this to people who already have gastrointestinal difficulties. It does, however, create an initial increase in the burning sensation just after application, which the patient should be told of. Increasing serotonins, certain endorphins, and depolarizing C-fibers are thought to be the mechanisms by which low-level laser therapy helps BMS patients. However, this therapy may not be widely accessible, and more research is needed to provide more conclusive proof of its efficacy. Topical local anaesthetic medications may also offer temporary relief. It is discovered that topical application of 0.5ml Aloe vera gel three times a day in conjuction with a tongue protector is beneficial for lowering the burning and aching sensation of the tongue.[16]

6. Systemic Application

Treatment for BMS may involve the use of tricyclic antidepressants, such as amitriptyline, desipramine, imipramine, clomipramine, and nortriptyline (beginning dose of 5–10 mg/day and subsequently increased to 50 mg/day). Some authors are against the systemic use of these medication and they do not advise it if a patient has dry mouth as it worsen the issue. Taking these medications if a patient has dry mouth since they may make the issue worse. Oral burning sensation is significantly reduced by antidepressants with selective serotonin reuptake inhibitors, such as sertraline (50 mg/day), paroxetine (20 mg/day) for 8 weeks, duloxetine at a dose of 30–60 mg/day, and dual action antidepressants that block both serotonin and[1] Alpha-lipoic acid (ALA) at a dose of 600 mg/day, either alone or in combination for 2 months, functions as an antioxidant and a potent neuroprotective agent that prevents nerve damage caused by free radicals, regenerates other antioxidants like vitamin C and E, and is able to increase the intracellular levels of glutathione. As a result, patients with idiopathic dysgeusia experience a marked reduction in symptoms. Patients receiving ALA therapy need to be informed about using gastric protection medicine concurrently. capsaicin effectively lessen pain severity.[2]

Alprazolam (0.25 mg to 2 mg/day) and clonazepam (0.5 mg/day) are frequently used to treat BMS pain, and they work by likely interfering with the underlying neuropathologic mechanism. With reported total remission of oral symptoms, vitamin B12, folic acid, iron, and zinc supplements can dramatically lower the mean serum homocysteine level and increase blood haemoglobin levels. Oral burning symptoms and cytologic features can be improved with hormone replacement therapy, especially in peri- and post-menopausal women, who can benefit from conjugated oestrogens like premarin (0.625 mg/day duration for 21 days) and medroxyprogesterone acetate like farlutal (10 mg/day from day 12 through day 21).

For some people, cognitive behavioural therapy has been helpful. It has also been reported that BMS patients have been successfully treated using a mix of psychotherapy and psychopharmacotherapy.[17–23] Although there is very little evidence for their efficacy in BMS, gabapentin and pregabalin, anticonvulsant drugs used to treat neuropathic

pain, are increasingly utilised in clinical practise for the management of chronic orofacial pain problems.(ALA's benefit is a low side effect profile; when taken alone or with gabapentin in BMS, it may result in pain relief).[24]

7. Conclusion

BMS is a reasonably frequent form of chronic intraoral pain disease that is traditionally characterised by unrelenting burning and may be linked to xerostomia and dysgeusia. A secondary type of BMS should be rigorously looked for and treated as it has a complex aetiology. Patients with BMS may benefit from symptom relief through a multidisciplinary approach that includes medicinal and psychological therapy; however, further research is required to determine the long-term prognosis. BMS is still a serious medical illness that frequently burdens patients and the healthcare system and necessitates prompt diagnosis and care.

8. Source of Funding

None.

9. Conflict of Interest

None.

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Cite this article: Rahul B, Sangeetadevi M, Anupriya C. Burning mouth syndrome- An overview. *J Dent Panacea* 2023;5(2):65-67.