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A Rare Syndrome in a Middle-Aged Female: Burning-Mouth Syndrome

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ABSTRACT

Burning Mouth Syndrome (BMS) is a chronic condition characterized by a burning or scalding sensation in the oral cavity, typically involving the tongue, lips, palate, or entire mouth, without any identifiable mucosal or systemic pathology. This case report discusses the presentation, diagnosis, and management of BMS in a 45-year-old female patient. The patient presented with a chief complaint of persistent oral burning sensation, which significantly impacted her quality of life. A diagnosis of BMS was established through a thorough clinical examination and exclusion of potential causes. Management involved a multidisciplinary approach, including pharmacotherapy, behavioral therapy, and lifestyle modifications. The patient showed improvement in symptoms following treatment, highlighting the importance of a comprehensive approach to managing BMS.

Keywords: Burning Mouth Syndrome, Glossodynie, Oral burning sensation

INTRODUCTION

Burning Mouth Syndrome (BMS) remains challenging for clinicians due to its elusive etiology and varied clinical presentation.[1] BMS is a perplexing and debilitating condition characterized by burning pain in the oral cavity, often accompanied by alterations in taste sensation and oral dryness.[2] Despite its prevalence and impact on quality of life, BMS remains a diagnostic and therapeutic challenge in clinical practice. The etiology of BMS is multifactorial, encompassing a complex interplay of biological, psychological, and environmental factors. While no single cause has been identified, hypotheses suggest the involvement of neuropathic, hormonal, immunological, and psychological mechanisms.[3] This heterogeneity underscores the need for a comprehensive understanding of BMS pathophysiology to facilitate accurate diagnosis and targeted treatment strategies. In recent years, neurobiology and oral medicine advancements have shed light on the underlying mechanisms of BMS, revealing potential neurosensory disturbances, alterations in oral mucosal innervation, and dysregulation of pain processing pathways. Furthermore, emerging evidence implicates factors such as hormonal imbalances, nutritional deficiencies, and psychological comorbidities in the pathogenesis of BMS, highlighting the importance of a multidisciplinary approach to patient evaluation and management. Despite progress in unraveling the complexities of BMS, significant gaps in knowledge persist, particularly regarding optimal diagnostic criteria and evidence-based treatment modalities. This case report aims to provide a comprehensive overview of Burning Mouth Syndrome, encompassing its epidemiology, clinical presentation, pathophysiology, and management strategies. By synthesizing current literature and expert insights, we seek to enhance understanding of this enigmatic condition and stimulate dialogue surrounding future research directions and clinical innovations.

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CASE REPORT

A 45-year-old female presented to the internal medicine clinic with complaints of persistent burning sensation in her mouth for the past six months. The sensation was described as a constant burning pain affecting primarily the tongue and palate. The patient reported exacerbation of symptoms throughout the day, particularly during meal times and stressful situations. She denied any history of recent dental procedures, oral trauma, or systemic illnesses. Medical history was unremarkable, and there were no known allergies to medications. On intraoral examination, no significant mucosal abnormalities, lesions or signs of inflammation were noted. Salivary flow appeared adequate, ruling out xerostomia as a potential cause of oral burning. The patient's oral hygiene was satisfactory, with no evidence of dental caries or periodontal disease (Figure 1). Neurological assessment revealed no abnormalities suggestive of neuropathic pain syndromes. Given the absence of apparent mucosal lesions or systemic diseases, a provisional diagnosis of BMS was considered. However, a comprehensive diagnostic workup was conducted to exclude other possible causes of oral burning, including candidiasis, nutritional deficiencies, hormonal imbalances and psychological factors. Laboratory investigations, including complete blood count, serum iron, vitamin B12 and thyroid function tests, were within normal limits, ruling out systemic causes. Pharmacotherapy was provided by prescribing low-dose tricyclic antidepressants (amitriptyline), which have been shown to alleviate neuropathic pain associated with BMS. Additionally, topical agents such as benzocaine-containing lozenges were recommended for temporary oral relief. Considering the contribution of psychosocial factors to the patient's symptoms, behavioral interventions like stress management techniques and cognitive-behavioral therapy were also implemented. The patient was followed up regularly to monitor the response to treatment and adjust management as needed. Over the subsequent months, she reported gradual improvement in her symptoms, with a reduction in the intensity and frequency of oral burning episodes. The patient expressed satisfaction with the treatment approach and reported a significant enhancement in her overall quality of life.

Figure 1. No significant mucosal abnormalities, lesions, or signs of inflammation and no evidence of dental caries or periodontal disease

DISCUSSION

BMS poses a diagnostic and therapeutic challenge due to its complex etiology and diverse clinical manifestations.[4] A systematic approach to diagnosis, including thorough history-taking, clinical examination, and exclusion of potential causes, is crucial in differentiating BMS from other oral and systemic conditions. BMS management strategies are primarily symptomatic and may involve a combination of pharmacotherapy, behavioral interventions, and lifestyle modifications tailored to individual patient needs.[5] The management of BMS in this patient involved a multidisciplinary approach aimed at addressing both symptomatic relief and underlying contributory factors.[6] Pharmacotherapy included the prescription of low-dose tricyclic antidepressants (e.g., amitriptyline) and anticonvulsants (e.g., gabapentin), which have been shown to alleviate neuropathic pain associated with BMS.[7] Additionally, topical agents such as benzocaine-containing lozenges were recommended to temporarily relieve oral discomfort.[8] Behavioral interventions, including stress management techniques and cognitive-behavioral therapy, were incorporated to address psychosocial factors contributing to the patient's symptoms. Dietary modifications, such as avoiding spicy or acidic foods and beverages, were suggested to minimize exacerbation of oral burning. Moreover, proper oral hygiene and regular dental check-ups were emphasized to maintain oral health and prevent secondary complications. The role of psychosocial factors in the etiology and exacerbation of BMS symptoms underscores the importance of a holistic management approach, addressing the condition's physical and psychological aspects. Furthermore, the effectiveness of pharmacotherapy in providing symptomatic relief highlights the neuropathic component of BMS, supporting the use of medications targeting neuropathic pain pathways.

Conflict of Interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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Ethical Statement

Informed consent was obtained from the patient to publish this case report and any accompanying images.

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