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Hidden pain: Diagnostic and management challenges of burning mouth syndrome

Wei-Min Hong

Yong-Chan Liu

Zhou-Hui Wu

Yang-Zhou Huang

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Correspondence

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The term "hidden pain" aptly captures the clinical dilemma of burning mouth syndrome (BMS). A retrospective review of outpatient records at our hospital over the past decade (2016–2025) was conducted recently, and a clinical phenomenon warranting deeper reflection was double checked and identified: only seven BMS cases were confirmed, an average of less than one diagnosis per year. This strikingly low diagnosis rate starkly contrasts with epidemiological surveys reporting a prevalence of approximately 2.24 (per 10^4) up to 3.11 (per 10^4) in Taiwan,[1] despite our tertiary hospital serving an annual dental outpatient volume of approximately 15,000. This diagnostic gap underscores a critical deficiency in disease recognition and signifies significant challenges in clinical diagnosis and comprehensive management of BMS.

First, inadequate clinical recognition of BMS is the primary challenge. BMS is characterized by highly subjective symptoms without clinical signs. Patients commonly complain of burning tongue, xerostomia, and dysgeusia, but do not present with visible mucosal abnormalities such as erythema, ulceration, or inflammation.[2] Consequently, they are highly susceptible to misdiagnosis, such as nonspecific stomatitis, xerostomia, candidiasis, Sjögren's syndrome, menopausal syndrome, and autonomic dysfunction.[3] Based on our outpatient diagnostic data over the past decade, the number of diagnoses for related diseases ranges from hundreds to tens of thousands (Fig. 1), indicating widespread misdiagnosis or underdiagnosis.

Second, the high comorbidity burden and presence of nonspecific complaints pose significant diagnostic challenges. BMS frequently coexists with anxiety, depression, insomnia, and diabetic neuropathy.[4] Patients often present initially to family medicine, neurology, otolaryngology, traditional Chinese medicine, or endocrinology departments with nonspecific complaints, such as sleep disturbance, generalized discomfort, or altered taste,

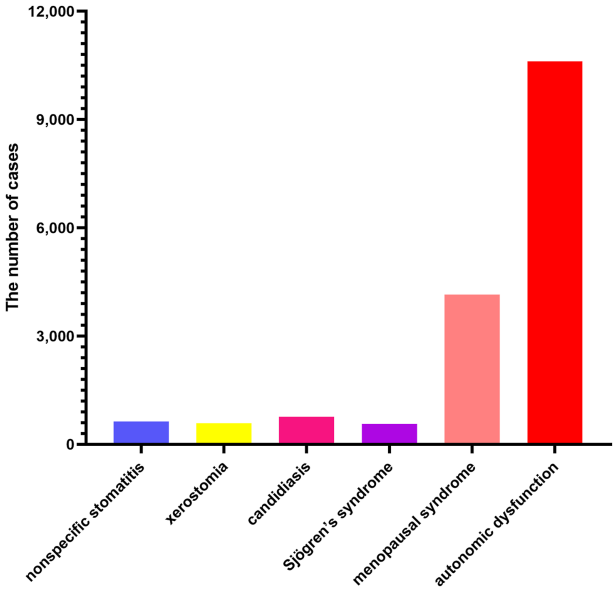

Figure 1 Number of diagnoses for related diseases based on our outpatient diagnostic data over the past decade.

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rather than directly to dental medicine. Clinicians in these specialties may have limited familiarity with BMS, which may contribute to misdiagnosis or underdiagnosis.

Third, owing to the scarcity of oral mucosal subspecialists, most hospitals, including ours, lack dedicated oral mucosal subspecialties. Among our 11 dentists, only three have ever diagnosed BMS, and none have received specialized training in its diagnosis. General dentists may lack sufficient knowledge and training in BMS, making it difficult for them to provide accurate assessment and management.

Finally, the exclusion criteria for BMS diagnosis raise the diagnostic complexity. The definitive diagnosis requires both specialized tests and systematic exclusion of secondary causes.[5] However, these procedures are difficult to implement in routine dental clinic settings.

In conclusion, the extremely low diagnosis rate of BMS in our hospital does not reflect its true prevalence, but may expose a blind spot in regional healthcare services. Future crucial countermeasures should include strengthening diagnostic training for family doctors and dentists on BMS, adding "persistent burning mouth sensation" to the initial oral examination questionnaire, increasing the number of specialists in oral mucosal diseases, and establishing a joint assessment mechanism for suspected BMS cases. Notably, gaining BMS knowledge through professional journals, such as the *Journal of Dental Sciences*, is essential. Addressing these challenges to unveil "hidden pain" and achieve precise diagnosis improves the prognosis and quality of life of patients.

Declaration of competing interest

The authors have no conflicts of interest relevant to this article.

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Wei-Min Hong
Department of Neurology, Sanming Integrated Medicine Hospital, Fujian University of Traditional Chinese Medicine, Sanming, China

Yong-Chan Liu
Department of Pain Medicine, Sanming Integrated Medicine Hospital, Fujian University of Traditional Chinese Medicine, Sanming, China

Zhou-Hui Wu
Department of Dentistry, Sanming Integrated Medicine Hospital, Fujian University of Traditional Chinese Medicine, Sanming, China

Yang-Zhou Huang*
Department of Otorhinolaryngology Head and Neck Surgery, Sanming Integrated Medicine Hospital, Fujian University of Traditional Chinese Medicine, Sanming, China

* Corresponding author. No. 13 Shazhou Road, Sanyuan, Sanming 365000, China.
E-mail address: sanmingyangzhou@fjtcm.edu.cn (Y.-Z. Huang)

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