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# BURNING MOUTH SYNDROME [BMS]

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**Previous used term:** *Stomatodynia or glossodynia* when confined to the tongue.

It is characterised by an ongoing (chronic) or recurrent burning sensation or dysesthesias of the oral mucosa, without an obvious clinical or laboratory finding.[1] There is a high menopausal female prevalence. The published prevalence data are highly variable, ranging from 0.11% to 16.90%.[2]

The pathophysiology of burning mouth syndrome (BMS) remains uncertain. However, a neuropathic aetiology related to trigeminal dysfunction is suggested.[3] Chorda tympani (taste) and lingual nerve (mechanical and thermal sensation) have an antagonistic relationship. It is thought that disruption to this relationship can result in either taste disturbance or pain.[4] Anxiety and depression are the most common studied psychopathological disorders among BMS patients, and they may play also an important role in this condition.[4]

## Clinical features (International Classification of Diseases-11)[5]

It recurs for more than two hours per day on 50% of the days over more than three months, without evident causative lesions on clinical investigation and examination.

Continuous, variable burning sensation that is independent of a nervous pathway.

Often bilateral and symmetrical and associated with dysgeusia, xerostomia, and chemosensory anomalies

It is characterised by significant emotional distress (anxiety, anger/frustration or depressed mood) or interference with orofacial functions such as eating, yawning, speaking etc.

The diagnosis is appropriate independently of identified biological or psychological contributors unless another diagnosis would better account for the presenting symptoms.

## Diagnostic criteria

**International Classification of Headache Disorders, 3rd edition beta version:**[6]

A. Oral pain[1] fulfilling criteria B and C
B. Recurring daily for >2 hours/day for >3 months
C. Pain has both of the following characteristics:
   1] Burning quality[2]
   2] Felt superficially in the oral mucosa
D. Oral mucosa is of normal appearance and clinical examination including sensory testing is normal
E. Not better accounted for by another ICHD-3 diagnosis

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## Management

- Comprehensive subjective assessment of the chief complaint, head and neck exam, cranial nerve exam, and review of the patient's medical and mental (psychosocial stressors), dental, medication, and social history is necessary.
- You may require blood tests such as haematinics and smears, salivary flow, allergy testing to exclude a local cause (oral candidosis, inflammatory oral mucosal diseases, hyposalivation, contact allergy) or systemic diseases (medication effect, nutritional deficiency, haematologic parameters, hormonal disturbances, Sjögren's syndrome, and diabetes). Imaging to rule out any space occupying lesions.
- Cognitive behavioural therapy and medications

| Topical | Systemic |
|---|---|
| Capsaicin | Tricyclic antidepressants e.g. Nortriptyline |
| Clonazepam | Serotonin-Norepinephrine reuptake inhibitors |
| Doxepin | Anticonvulsants |
| Lidocaine | Opioids |
| | Benzodiazepines |

**REFERENCES**

1. Liu YF, Kim Y, Yoo T, Han P, Inman JC. Burning mouth syndrome: a systematic review of treatments. Oral Diseases. 2018;24(3):325-34.
2. Kohorst JJ, Bruce AJ, Torgerson RR, Schenck LA, Davis MDP. The prevalence of burning mouth syndrome: a population-based study. British Journal of Dermatology. 2015;172(6):1654-6.
3. Forssell H, Jääskeläinen S, Tenovuo O, Hinkka S. Sensory dysfunction in burning mouth syndrome. PAIN. 2002;99(1):41-7.
4. Galli F, Lodi G, Sardella A, Vegni E. Role of psychological factors in burning mouth syndrome: A systematic review and meta-analysis. Cephalalgia. 2017;37(3):265-77.
5. World Health Organization. (2018). International classification of diseases for mortality and morbidity statistics (11th Revision).
6. Bes A, Kunkel R, Lance JW, Nappi G, Pfaffenrath V, Rose FC, et al. The International Classification of Headache Disorders, 3rd edition (beta version). Cephalalgia. 2013;33(9):629-808.