Hank George, INC.

# Burning Mouth Syndrome

## What Every Underwriter Must Know

**Hank George, FALU, CLU, FLMI**

Have you ever underwritten a case of burning mouth syndrome?

You probably have, even if you don't recognize this name.

In fact, you likely have seen many cases where the "diagnosis" given to the applicant for BMS symptoms was one of these:

- Glossodynia
- Glossalgia
- Glossopyrosis
- Oral dysesthesia
- Stomatodynia
- Stomatopyrosis
- Lingual paresthesia
- "Burning tongue"
- "Sore tongue"
- "Sore mouth"

[Cerchiari, Drage]

The majority of BMS patients first mention their symptoms to their dentist and we only see those cases that are referred on for further assessment.

**What is burning mouth syndrome (BMS)?**

There is no universal agreement regarding the precise definition. [Romeo]

This pretty well sums it up:

*"Burning mouth syndrome has been defined as burning pain in the tongue or oral mucous membranes, usually without accompanying clinical or laboratory findings."*

Miriam Grushka, MSC, DDS, PhD
University of Toronto
*American Family Physician*
65(2002):615

**How common is BMS?**

Prevalence rates vary widely because of so many overlapping diagnostic labels.

In a review paper, prevalence estimates ranged widely, from 0.7% to 3.7% of the general population.

Over 1.3 million Americans are diagnosed with BMS (using one of the above-mentioned terms) each year. The average age at diagnosis is 56 and it is rarely seen under age 30.

The incidence of BMS is greatest over age 60. Nearly 70% of cases initially involve only the tongue.

Females are diagnosed with BMS between 4 and 7 times more often than men. The most common age at onset in females is from 3 years prior to and 12 years after onset of menopause.

[Bergdahl, Grushka, Klasser, Komiyama, Maltsman-Tseikhin]

**What are the 3 main diagnostic criteria for BMS? [Komiyama]**

- Presence of an isolated complaint of pain in the tongue or oral mucosa with a normal clinical exam.
- Nonparoxysmal (not sudden) pain throughout all or a large portion of the day.
- Absence of an organic condition that could be considered as causative.

**What are the 3 subtypes of BMS? [Cerchiari]**

- Type 1 (35% of cases) – Daily pain that is not present on awakening and worsens as the day progresses

- Type 2 (55% of cases) – Constant pain throughout the day

- Type 3 (10% of cases) – Intermittent pain episodes throughout the day

**What is the cause of BMS?**

It appears to involve the interaction of local, systemic and psychogenic factors and there is no agreement upon a specific underlying mechanism. Some cases have local nerve abnormalities demonstrated with a tongue biopsy.

Most cases come to be called "idiopathic BMS" and the rest may be characterized as "secondary BMS" if an underlying disorder or specific inciting factor is discovered or strongly suspected.

When BMS is said to be "secondary" we need to know why!

[Komiyama, Malik, Romeo. Souza]

**Why do most investigators believe that the substantial majority of cases involve a psychogenic mechanism?**

The pain symptoms usually do not match the anatomy of the peripheral nerves, a common conundrum in psychogenic pain disorders.

[Cerchiari, Drage, Romeo]

**What are the 2 main reasons why persons with BMS symptoms consult dentists or physicians for their symptoms? [Drage]**

- Substantial pain that not relieved by over-the-counter analgesics

- Fear that the cause of the pain is cancer

**How does BMS present clinically?**

Most patients report pain similar in intensity to a toothache. This pain is usually absent during the night and it may be described as numbing, tingling, burning, scalding, etc.

The pain is often localized to the front of the tongue but also frequently arises at one or more other oral sites as well.

Over 80% of persons with BMS also have markedly dry mouths (xerostomia), which waxes and wanes with the degree of pain. In addition, 50% complain of an altered sense of taste.

[Drage, Grushka, Klasser, Komiyama]

**How long does this syndrome usually persistent?**

The mean duration is 2½ years; however, some cases clear up in a few weeks and others linger for nearly two decades. The length of time they have symptoms does not correlate with the odds of a serious underlying cause.

The average patient seeks help from at least four dentists and/or physicians during the course of BMS.

Many are told that they are either exaggerating or imagining their symptoms. This serves to ratchet up their anxiety, providing a fertile environment for psychiatric symptoms.

[Drage and Rogers, Grushka]

**Where else do BMA patients develop symptoms?**

Those who do not make a quick recovery may have various symptoms at a variety of sites. The more common ones are the nose, ear, eyes, skin, muscles and joints; GI tract and nervous system. In many cases, multiple sites are involved. [Mignogna]

**How is a medical diagnosis of BMS made?**

BMS is a "diagnosis of exclusion," which means that other potential causes of the symptoms must be ruled out before this label is applied.

These are the steps physicians should take to exclude other explanations for BMS symptoms: [Malik]

- Careful review of all symptoms
- Detailed medical history including tobacco use, health habits, family history and all medications currently or recently used
- Thorough oral cavity examination
- Laboratory tests, including a complete blood count (CBC), iron-related

test profile, thyroid hormone, kidney and liver screening tests; glucose and glycosylated hemoglobin (HbA1-c), and serum levels of folates, vitamin B-12 and zinc

- Culture for Candida infection

Cases with features suggesting a significant underlying cause should be referred to specialists.

Needless to say, most patients do not get anything close to such a complete evaluation!

**What other problems are often present in patients diagnosed with BMS?**

- Salivary gland dysfunction, with dry mouth (xerostomia) the prominent feature
- Periodontal disease and numerous dental caries
- Aphthous ulcers in the mouth
- Nutritional deficiencies
- Oral trauma from dental appliances and prostheses
- Some have widespread pain sites and may be diagnosed with fibromyalgia
- Heavy cigarette smoking is common

[Cerchiari, Drage and Rogers, Netto, Romeo]

**Are any major diseases associated with burning mouth syndrome?**

Yes.

This is where things get interesting from an underwriting perspective!

Both type I and II diabetes are so often seen in BMS that diabetes must routinely be ruled out.

Over half of BMS patients have low thyroid hormone levels, as well as deficient levels of one or more of three key nutrients (vitamin B-12, folates and zinc).

More ominously, 24% of persons with Parkinson disease develop BMS and this is sometimes related to being treated with the most widely used Rx (carbidopa/levodopa)

for Parkinson disease.

The connective tissue disease Sjögren syndrome (SS) must be ruled out when salivary gland dysfunction is present. This syndrome is diagnosed in females in the same age range where BMS is most common.

[Cerchiari, Coon, Drage, Femiano, Gao, Grushka]

**How do psychiatric disorders correlate with the burning mouth syndrome?**

It is said that 30% of BMS patients will be diagnosed with mental illnesses (mainly by their primary care doctors). The overall presence of one or more psychiatric symptoms is far higher.

The more severe or persistent BMS is, the greater the likelihood of an underlying mental disorder.

Depression is the most common psychiatric disorder in BMS. Tongue and oral cavity pain is considered to be a fairly common somatic (physical) symptom of depression in late middle-aged females.

If they were all thoroughly evaluated a psychiatrist (as few are), one expert projects that a sizeable number of patients with longstanding BMS would satisfy the DSM-IV diagnostic criteria for a personality disorder.

Some of these would be in what is called "Cluster A," consisting of the paranoid, schizotypal and schizoid personality disorders. All three are notoriously difficult to treat, tend to persist lifelong and are usually associated with other psychiatric conditions.

Somatoform disorders are also more prevalent in BMS than in the general population. One research group considers idiopathic BMS to represent a "complex somatoform disorder."

[Abetz, Buljan, Cerchiari, Maina, Mignona, Penza, Schiavone, Souza]

**Can BMS symptoms be induced by medication?**

Yes. [Llorca]

A small share of BMS cases can be linked to one of a handful of prescription pharmaceuticals. The ones most often blamed for inducing these symptoms are:

- Clonazepam, a benzodiazepine that has many uses

- The antidepressants fluoxetine, sertraline and venlafaxine

- High blood pressure drugs from 2 classes: angiotensin converting enzyme (ACE) inhibitors and angiotensin receptor blockers

- BMS is also more prevalent in women taking hormone replacement therapy (HRT)

There is no relationship between the duration of treatment these drugs and the appearance of BMS symptoms; they may first occur years after starting the medications.

**How Is BMS treated?**

There are a many medications and other remedies used by dentists, physicians and alternative/complementary medicine practitioners to manage BMS symptoms.

Treatment is effective in reducing or eliminating one or more symptoms in at least 75% of cases. In addition, eating cold food, working intensely or being distracted will frequently ameliorate the oral symptoms.

These are the more widely used medications:

- Topical analgesics, especially capsaicin
- Benzodiazepines
- Antidepressants
- Anticonvulsants such as gabapentin and topiramate
- Antipsychotics (always a RED FLAG for severe/complicated cases)
- Moclobemide, a 2nd generation monoamine oxidase inhibitor (MAOI)
- Pilocarpine, cevimeline, bethanechol and other salivary gland stimulants

In addition, BMS sufferers may use any of the following (based on advice from healthcare professionals or what they have read on the Internet):

- St. John wort, an herbal antidepressant
- Alpha-lipoic acid
- Catuama, another herb
- Vitamin and mineral supplements, especially those with B vitamins and zinc

Given the kinds of pharmaceuticals used in BMS, some cases will be mistaken for other (and often serious) ailments solely on the basis of how they are treated.

[Cerchiari, Drage and Rogers, Grushka, Klasser and Epstein, Maina and Vitalucci, Pekiner, Romeo, Spanemberg, Zakrzewska]

**What are the 9 major underwriting RED FLAGS scenarios in burning mouth syndrome?**

- Vitamin B-12, zinc and folate deficiencies can be incited by alcohol abuse/ dependency, pernicious anemia and poor nutrition in frailty elders. Therefore, isolated GGT elevations, AST 2 times higher than ALT, high mean corpuscular volume (MCV) and low hemoglobin take on added significance in BMS cases.
- Persistent aphthous ulceration is sometimes associated with serious underlying disease and must be fully evaluated even if it is attributed solely to BMS.
- BMS in diabetics heightens the risk of diabetic neuropathy. [Moore]
- BMS with tremor or other neurologic symptoms, especially at older ages, may be an early presentation of Parkinson disease.
- Continuous or frequent benzodiazepine use confers substantial medical and trauma morbidity/mortality, especially in elders and independent of the diagnosis for which these sedative/hypnotics are prescribed.
- Given the link between BMS and mental illnesses such as major depression, somatoform disorders and personality disorders, all cases where potent psychiatric drugs are prescribed (especially MAOIs and antipsychotics) as well as those treated on an inpatient basis require careful assessment with medical records.
- There is an increased risk of suicidal behavior in BMS patients with severe chronic pain who do not get adequate relief, especially in the presence of a mood or personality disorder. All cases with comorbid psychiatric features need to be evaluated for suicide risk factors.
- Every applicant with BMS should have fasting glucose and HbA1-c tests unless diabetes as already been diagnosed.
- If an applicant has dry mouth (xerostomia) and either dry eyes (keratoconjunctivitis) or salivary gland problems, the possibility of Sjögren syndrome needs to be considered based on all the evidence at hand.

**What are the bottom lines with burning mouth syndrome?**

- 95% of cases pose no mortality concerns.
- The other 5% are at considerable risk for being glossed over and not adequately

assessed by underwriters.

- Morbidity is a major concern when there are severe or treatment-resistant symptoms and in the presence of psychiatric issues.

Note: this paper is formatted like the courses in our Continuing Education (CE) Program. We hope you found it useful. For more information visit www.hankgeorgeinc.com/ContinuingEducationProgram.

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