NSDA
Nova Scotia Dental Association

BURNING MOUTH SYNDROME: A RESOURCE FOR DENTISTS

Background

Burning mouth syndrome (BMS) is an idiopathic chronic or recurrent burning sensation of the oral mucosa. Some patients may also describe the sensation as scolding, tingling, dry, and sandy, etc. While a burning sensation in the mouth can be a resulting symptom from local or systemic causes, BMS is distinguished by its lack of underlying dental or medical causes.

Symptoms

Symptoms of BMS are variable, but common ones include:

- Usually a bilateral sensation
- Most often located on the tongue, but can be widespread to other mucosa including the lips, palate, buccal and alveolar mucosa
- Subjective numbness, xerostomia and altered taste
- Increased thirst
- Bitter or metallic taste
- Bad breath
- Sudden or gradual onset of symptoms with no noticeable physical changes
- Patients can waken with no symptoms but worsen as the day progresses
- Can last months to years

Risk Factors

Though there is no known cause in primary BMS risk factors can include the following:

- Women, over the age of 50 who are postmenopausal
- Wearing of dentures (material or fit) or having recent dental work
- Recent illness including antibiotic therapy
- Those who suffer from food allergies
- Stress
- Anxiety
- Depression
- Medications such as those for blood pressure (ace inhibitors, angiotensin receptor inhibitors) and antivirals

Causes and Diagnosis

BMS is typically the diagnosis reached through the exclusion of all possible explanations for the symptoms presented by the patient. Though there are no clinical or lab abnormalities found in primary BMS a complete oral examination including a medical history update noting the most recent medications should be performed as well as laboratory tests as follows:

- Blood tests
- Allergy tests
- Salivary flow tests
- Tests to rule out candidiasis including swabs, smears and saliva samples
- Biopsies when needed
- Appropriate imaging

Complete oral examinations and laboratory tests are important to rule out a differential diagnosis of secondary BMS with may include the following causes:

- Anemia
- Hypothyroidism
- Type 2 diabetes
- Parafunctional activity such as bruxism or tongue thrusting
- Radiation of head and neck
- Hypo-salivation (Sjögrens Syndrome) and dry mouth caused by salivary changes in composition, volume or pH
- Candidiasis
- Mucocutaneous conditions such as lichen planus, benign mucous membrane pemphigoid, pemphigus and migratory glossitis
- Ill-fitting dentures
- Allergies to dental materials or food additives and flavoring
- Excessive mucosal irritation through acidic drinks, alcohol based mouth rinses, tobacco and toothpastes
- Psychological factors including stress, anxiety and depression
- Acid reflux
- Cranial nerve injury

Treatment
In cases where an underlying cause can be identified, notably any of the above which can be associated with secondary BMS, once the fundamental factors are treated, the symptoms of the secondary BMS should subside. Treatment of primary BMS proves more difficult due to its idiopathic nature. Some supportive approaches and treatment recommendations include:

- Set realistic goals. Management can be supportive and aimed at reducing symptoms rather than eliminating. Frustration and dissatisfaction is very common when treating patients who suffer from primary BMS
- Referral to a specialist in oral medicine or oral pathology
- Low dose benzodiazepines (such as clonazepam in a topical formation or chlordiazepoxide), tricyclic antidepressants (including amitriptyline and nortriptyline), anti-convulsants (gabapentin), topical capsaicin and lidocaine

- Low dose laser therapy
- Pain killers to block nerve pain
- Home remedies including baking soda, mouth rinses, honey, alpha-lipoic acid, stress relieving activities, lavender oil, mints, aloe vera, apples, glycerin and papaya
- Control of para-functional habits
- Sucking on ice chips and drinking cold water
- Avoidance of alcohol, tobacco and acidic drinks
- Sugar free gum