Burning Mouth Syndrome

Burning mouth syndrome (BMS) is a benign condition that presents as a burning sensation in the absence of any obvious findings in the mouth and in the absence of abnormal blood tests. BMS affects around 2% of the population with women being seven times more likely to be diagnosed than men. Female patients are predominately post-menopausal, although men and pre/peri-menopausal women may also be affected. For most patients, burning is experienced on the tip and sides of the tongue, top of the tongue, roof of the mouth, and the inside surface of the lips, although the pattern is highly variable and burning may occur anywhere in the mouth. A patient may feel he/she has burnt the mouth with hot food and there may be a sour, bitter, or metallic taste in the mouth. The mouth may also feel dry. The onset of BMS is usually gradual with no known precipitating factor or event. Three clinical patterns have been well characterized:

1. Continuous symptoms throughout the day from the time one awakens, most commonly observed presentation.
2. No or little burning upon waking in the morning, with burning developing as the day progresses, and worst by evening.
3. Intermittent symptoms with some symptom-free days, least commonly observed presentation.

Questions and Answers About Burning Mouth Syndrome

Q: What causes BMS?

A: No one really knows what causes BMS. However, it is believed to be a form of neuropathic pain. This means that nerve fibers in the mouth, for now, are functioning abnormally. It has been suggested that the nerves in the mouth that are responsible for feeling pain are easily stimulated and excited. BMS is not caused by dentures or infections. In general, hormone replacement therapy is not effective in managing BMS in post-menopausal women. Contributing factors may include diabetes, menopause (although we do not know why), adverse life events (loss of job, death of family member or spouse), and anxiety and depression. Some patients will also report trouble going to sleep and staying asleep. However, it is clear that these factors are not present in all patients, although it is present in half to three-quarters of patients.

Q: How do we know it is BMS?

A: There are many oral inflammatory conditions that may cause burning in the mouth such as iron deficiency anemia leading to a raw tongue, lichen planus, geographic tongue and yeast infections (especially if you wear dentures) (see PATIENT INFORMATION SHEETS - Oral Yeast Infections, Oral Lichen Planus, Geographic Tongue). If a patient has these conditions and burning, treatment for the specific conditions will generally get rid of the burning symptoms. It is important to have an experienced dentist or oral specialist rule out any other potential causes of burning or discomfort that may include oral mucosal diseases, infections, and dental pathology among many others.
Q: What is the prognosis of BMS?

One-half to two-thirds of patients will experience at least a partial improvement in symptoms within 6-7 years after symptoms begin. A small number of patients will return to normal with no residual burning. For those patients who do not experience a return to normal, symptoms tend to remain at about the same intensity. Patients who experience improvement with treatment can expect good control for years.

Q: How is BMS Treated?

There is no known cure for BMS. Some, if not most, of the discomfort can be alleviated using a variety of medications, many of which are used to treat anxiety, depression, and other neurologic disorders. The medications help to reduce the activity of nerve fibers. At low doses (not normally used for treating anxiety or depression), such medications have been extremely effective in treating BMS. Since many patients also have difficulty sleeping and experience anxiety, these medications may help you to sleep and rest better, and feel less anxious. These drugs are sometimes used as individual agents or in specific combinations to achieve the desired benefit.

There are also various topical regimens that your doctor may discuss with you as alternatives to systemic (pill form) medication. BMS is challenging in that some therapies may work for some patients, but not for others.

Non-pharmacologic approaches to management, which may be used alone or in addition to the above medications, include: stress management/reduction, meditation, yoga, exercise, and psychotherapy. If stress, anxiety and/or depression are contributing to BMS, regular use of these techniques or regular counseling may help to reduce symptoms and keep drug dosages low. With any therapy for BMS, it may take several weeks or even months before maximum benefits are achieved.

The information contained in this monograph is for educational purposes only. This information is not a substitute for professional medical advice, diagnosis, or treatment. If you have or suspect you may have a health concern, consult your professional health care provider. Reliance on any information provided in this monograph is solely at your own risk.