

Burning Mouth Syndrome
Symposium held at the 9th Congress of the
European Association of Oral Medicine
September 18–20, 2008
Salzburg, Austria

The overall topic of the Congress was “Translational oral medicine: the potential impact of lab based research on patient care.” It was organized by the Austrian Dental Society on behalf of the European Association of Oral Medicine and one of the two main foci was a symposium on burning mouth syndrome (BMS). The symposium, perfectly organized and chaired by Dr Joanna Zakrzewska, fulfilled very well the aims of the meeting as it was based on scientific reports and tried to define an evidence-based consensus for treatment of BMS.

Dr Andrea Sardella from Italy is an oral medicine specialist and is particularly interested in pain control and has published several major papers on BMS. He developed a well-documented and comprehensive description of epidemiology, diagnosis, comorbidity, and prognosis of BMS. He noted that epidemiological data are limited owing to a lack of strict diagnostic criteria. The reported prevalence values in general populations range from 0.7% to 15%. However, these prevalence values are to be taken with caution since many studies relate to the symptoms of burning mouth rather than BMS itself. The prevalence of BMS increases with age in both men and women. The ratio between women and men varies from 3:1 to 16:1. The evaluation of a patient with oral burning pain or sensations should be extensive, including a history of systemic diseases and medication treatments. Detailed review of the patient’s complaint should focus on pain onset, location, character, and course. Other symptoms such as xerostomia, dysgueusia, and thirst should be documented. Comorbidity is frequent with headache, temporomandibular joint pain, or pain in masticatory muscles. Previous or current psychosocial events possibly related to the onset of oral burning symptoms should be sought. Usually, pain or burning sensation increases in intensity during the day but very rarely interferes with sleep. The several clinical and laboratory features generally investigated as causative aspects of BMS could help to exclude

dental or medical causes of an oral burning sensation. Medical delay in diagnosing, referring, and appropriately managing BMS patients occurs frequently. Very few studies on its natural course or spontaneous remission are available. From the few existing data, the spontaneous remission of oral symptoms is rare, occurring in less than 4% of patients.

Dr Satu Jääskeläinen is a Finnish researcher specializing in human electrophysiology. She noted that different methodologies of research were used by her group to study BMS. First she reported recent histo-immunologic studies performed after biopsies of the mucosa in areas where burning sensation was felt. Degeneration of small nerve fibers was observed, confirming previous data of Italian and English groups. Emphasis was placed on the fact that mostly intra-epithelial fibers were involved. The group had also worked in characterizing BMS patients by electro-physiologically recording the modifications of both the threshold and the habituation of the blink reflex. They also reported quantitative sensory testing data with special emphasis on thermal tests. As a whole, the neuropathic nature of BMS was well confirmed. The obtained data also emphasized the heterogeneity of BMS patients in terms of the features of the neuropathic changes. Finally, Dr Jääskeläinen strongly insisted on the need in clinical practice to systematically perform this kind of characterization as much as possible.

Dr Eli Eliav from New Jersey is well known for his work in orofacial pain control and is involved in many clinical and basic research projects on this topic. He presented one of the best substantiated pathophysiological theories of BMS. According to this theory, the neuropathic nature of BMS is based on a disturbed neuronal balance between taste mechanisms and sensory function. Application of a local anesthetic solution to the tongue of BMS patients reduced dysgueusia. In addition, the burning sensation was not reduced and was even aggravated in 40% of cases. It was suggested that in the healthy state, the chorda tympani and the lingual

nerves exert mutual inhibitory mechanisms. Consequently, altered chorda tympani function can disrupt equilibrium. The dysregulation would be created by a lingual nerve hyperfunction being perceived by the patient as a burning sensation. Dr Eliav reported on the former description of individuals who suffer from BMS and who are likely to be “supertasters” and have large numbers of fungiform papillae. These are innervated mostly (75%) by the trigeminal nerve and partly (25%) by the chorda tympani nerve. Hyperactivity of the sensory component of the trigeminal nerve following loss of central inhibition as a result of taste damage in the chorda tympani may induce a burning sensation.

Dr Alain Woda from France, also a clinician with a scientific background and involved in orofacial pain control, has developed an evidence-based approach to the management of BMS. The audience was first reminded of the basic requirements for this type of approach. The treatment for true BMS (stomatodynia) is medically based and should include management of psychological factors. Overtreatments, including surgical modalities, may be harmful. A new experiment based on the result of an anesthetic block of the lingual nerve was presented. It showed that the neuropathic mechanisms of BMS may be both peripheral and/or central. Of the very few randomized, placebo-controlled trials (RCTs) that have been performed, only two pharmacological treatments have been shown to be significantly better than placebo. The RCT advocating the use of topical clonazepam has been described. Alpha-lipoic acid, an anti-oxidant nutritional supplement, has been favored and contested in different RCTs. Finally, another RCT has shown that cognitive-behavioral therapy 1 hour per week

for 4 months was successful in decreasing pain intensity. Other proposals have arisen from open-label studies and case reports, some echoing therapy used for other neuropathic pain syndromes. For example, systemic clonazepam, tricyclic antidepressants, anticonvulsants, antipsychotics, and anxiolytics have been proposed, but with a rather poor outcome. Several topical treatments including xylocaine gel, capsaicin cream, salivary substitutes, and systemic analgesics such as tramadol are frequently used, although there is little literature to support their use for BMS.

Dr Zakrzewska as chairperson concluded the session by emphasizing the role of reassurance. Explaining to the patient that there is a physiological basis for the symptoms is very important and allows many patients to come to terms with their condition. Patients with BMS are often anxious about their symptoms, in part because of the absence of a proved organic cause and a known pathophysiology; there is some evidence that counseling may be helpful. Patient information in the form of a written leaflet is also helpful. Finally, after a discussion period with all the speakers and the audience, a reformulated treatment algorithm was presented which represented a consensus view of all present.

As indicated by the evaluation made for the whole Congress, the symposium was greatly appreciated and many participants left with the feeling that the symposium had been comprehensive, well organized, and provided an up-to-date clarification about this difficult but very interesting problem.

Alain Woda
Associate Editor