Cooling the Burning Mouth

Burning mouth syndrome (BMS), a chronic pain condition that frequently is accompanied by dry mouth and impaired taste, often affects older people, especially menopausal women. The effects of BMS can be minor or can cause complete functional disruption. Various factors may contribute to BMS, including nerve trauma; oral parafunctional habits, such as teeth grinding or clenching; salivary gland dysfunction; menopausal disorders; diabetes; or nutritional deficiencies. Researchers from Seoul National University, Republic of Korea, say that repetitive microtrauma leads to inflammation at the subclinical level, which may cause BMS sensations. As such, in a recent study they investigated the efficacy of oral habit control and use of a topical lubricant or corticosteroid to treat reported oral symptoms associated with BMS.

Study participants were patients consecutively presenting to the Department of Oral Medicine at Seoul National University Dental Hospital reporting burning or painful sensation in the mouth with the absence of visible causative signs. The first 25 patients (24 women and 1 man, with a mean [SD] age of 59.4 [8.3] years) were enrolled in the lubricant group and the next 29 patients (27 women and 2 men, with a mean [SD] age of 55 [10.6] years) were enrolled in the corticosteroid group.

At initial evaluation, all patients underwent an oral examination, panoramic radiography, and a blood test and were asked to complete a questionnaire. The questionnaire evaluated patients' subjective symptoms, including symptom duration, area of symptoms, type of discomfort (burning, aching, stinging, itching, numbness, bad taste, taste alteration, oral dryness, or sore throat), and the effect of oral symptoms on daily life (Eff-life). The researchers used a visual analog scale (VAS) of 0 to 10 (with 10 being the worst possible) to measure the intensity of patients' oral symptom reports and Eff-life.

During a second evaluation, each patient's salivary flow rate was measured and each patient was interviewed by a physician regarding BMS management strategies. All patients were instructed to avoid tongue thrusting, tongue or mucosal biting, clenching, and lip pressure or sucking.

Patients in the lubricant group received a glycerin-containing carboxymethylcellulose (CMC) solution (0.65% CMC, 10% glycerin, and 0.05% methyl parahydroxybenzoate in distilled water). Patients in the corticosteroid group received an identical solution, with an additional 0.1% dexamethasone. All patients were instructed to hold 2 mL to 3 mL of the solution in their mouths for a period of 10 minutes 3 to 4 times per day before spitting it out. Follow-up was performed every 2 weeks.

There was no significant difference in the duration of oral discomfort between the 2 groups—the mean time of discomfort was 32.5 months for the lubricant group and 26.9 months for the corticosteroid group. When responding to the questionnaire, most patients (87%) reported experiencing an oral burning sensation. Some also reported other symptoms, such as oral cavity-aching pain (70%), oral dryness (69%), sore throat (57%), taste alteration (43%), stinging pain (39%), bad taste (37%), itching (26%), and numbness (32%). Almost all (94%) reported discomfort in the tongue area. More than half of patients in both groups reported having more than 1 oral parafunctional habit—usually pressing the tongue against the teeth, clenching the jaw during the day, or grinding the teeth at night.

The researchers found that both types of treatment significantly reduced patients' burning and aching symptoms and Eff-life. In the lubricant group, mean VAS scores for burning, aching, and Eff-life were reduced significantly from baseline at 2 weeks ($P < .05$) and scores for aching ($P < .05$) and Eff-life ($P < .01$) stayed significant from baseline at 4 weeks. In the corticosteroid group, mean VAS scores for aching ($P < .05$), stinging ($P < .05$), sore throat ($P < .05$), and Eff-life ($P < .01$) were reduced significantly from baseline at 2 weeks. At 4 weeks, scores for burning stayed significant from baseline ($P < .01$) and from 2 weeks ($P < .05$).

They also found that the salivary flow rate did not affect the treatment outcome, suggesting that the effects of the lubricant or the corticosteroid are not due only to reduction of dry mouth symptoms. In fact, VAS scores of oral dryness were not reduced significantly in either group.

As the researchers found no real differences between the 2 treatments, they conclude that a topical lubricant combined with oral habit control is an effective first approach for patients with BMS. Neuropathy medications, such as selective serotonin reuptake inhibitors or clonazepam, can be reserved for patients who do not respond to this simple initial treatment.

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