PAIN UPDATE

Oral dysesthesia

A perplexing problem for practitioners

Christopher J. Spencer, DDS; Gary D. Klasser, DMD

CLINICAL PROBLEM

Patients may seek care at a dental office with a chief concern of unusual sensations after routine dental procedures. When this occurs, it presents a diagnostic challenge for the dentist because abnormal unpleasant sensations, dysesthesias, occur infrequently and are not well defined or understood. The clinical challenge often is compounded by the lack of objective clinical evidence to verify the reported dysesthesia. Because this type of sensation is annoying, uncomfortable, and long-lasting for the patient, the patient often pursues an invasive or surgical resolution for the problem. This dilemma can lead to both misdiagnosis and potentially misguided dental interventions.

CASE PRESENTATION

A 54-year-old woman sought care from a dentist with the goal of having her worn and discolored existing maxillary anterior restorations replaced to achieve a more esthetic result. The dentist restored her 6 maxillary anterior teeth (incisors and canines) with porcelain crowns and veneers without any irregularities or complications noted during the procedure. The day after cementation of these restorations, she experienced an unusual "slick plastic" sensation on her tongue. Over a matter of weeks, the sensation changed. The patient described a sensation of a bump on the distal lingual aspect of tooth no. 8 that would develop spontaneously and pop, followed by the extrusion of a clear liquid that dripped on her tongue (Figures 1 and 2). She contacted her dentist regarding this sensation, and the dentist informed her that she likely was experiencing postoperative sensitivity of the involved gingival tissues surrounding the recently cemented restorations and that this sensation would resolve spontaneously. However, this sensation did not resolve.

She consulted another dentist who claimed that the recently cemented restorations were fabricated poorly, with improper contours being the likely cause of gingival irritation and the unusual sensation she was experiencing. The second dentist extracted the recent restorations after the patient received a local anesthetic and replaced them with temporary acrylic restorations for a 1-month trial to determine whether this would benefit the patient. The patient was without any symptoms during this 1-month trial. However, when the dentist took the final impression for fabrication of new replacement restorations, the unusual sensations returned and have not resolved.

The patient reported a medical history of hypothyroidism, osteoarthritis, and depression, as well as an allergy to penicillin. She managed her medical conditions with escitalopram, lamotrigine, lithium, and levothyroxine sodium. She disclosed cigarette smoking (one-half of a pack per day) for the past 25 years. Results of recent serologic tests and neuroimaging performed by her physician were unremarkable. The dentist who replaced the restorations provided the patient with an examination that included dental radiographic imaging, endodontic testing, and periodontal evaluation. The maxillary anterior teeth displayed normal pulpal findings, normal periapical findings, periodontal probe depths no greater than 3 millimeters, and normal marginal gingival findings. There was no evidence of any clinical or radiographic pathosis associated with any of the maxillary anterior teeth or surrounding soft tissues.

The patient did not receive a diagnosis for her sensation and became apprehensive about the likely outcome of the intended final restorations. The dentist then referred her to a university-based orofacial pain center, where we provided a diagnosis of a spontaneous oral dysesthesia associated with the lingual gingiva of the maxillary anterior incisors on the basis of the International Association for the Study of Pain definition.[1] We also clinically diagnosed candidiasis and frictional hyperkeratosis of the tongue that were caused by the tongue's constant rubbing against the lingual surfaces and incisal edges of the maxillary anterior teeth (Figure 3). We included a possible adverse reaction to the patient's medications in the original differential diagnosis because adverse effects of many pharmaceutical agents include oral manifestations such as taste change, glossodynia, and irritation of oral tissues.[2] We excluded the patient's medications as the likely cause for her chief

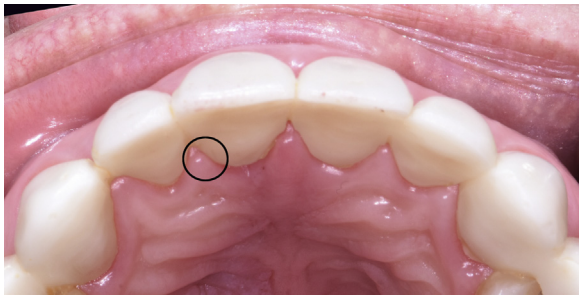

Figure 1. Maxillary anterior restorations after replacement. The circle denotes the perceived area of the bump reported on the distal lingual aspect of tooth no. 8.

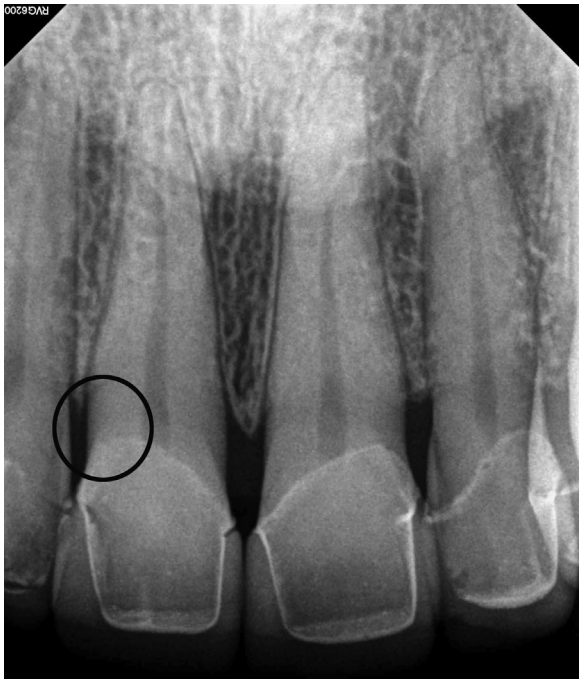

Figure 2. Maxillary anterior periapical radiograph after replacement of restorations. Circle denotes the reported area of concern.

concern because her medications had been prescribed many years before her current symptoms began and had not been altered recently. Another potential etiologic factor to be considered was the patient's report of depression. Depression and other psychological diagnoses may be comorbidities with oral dysesthesia, but in this case the patient's physicians were managing her condition well with a pharmacologic approach. Furthermore, oral dysesthesia manifests in many patients with no psychological impairments.[3] The candidiasis resolved after a 2-week treatment with a systemic antifungal medication. We managed the frictional hyperkeratosis with the provision of a maxillary soft oral

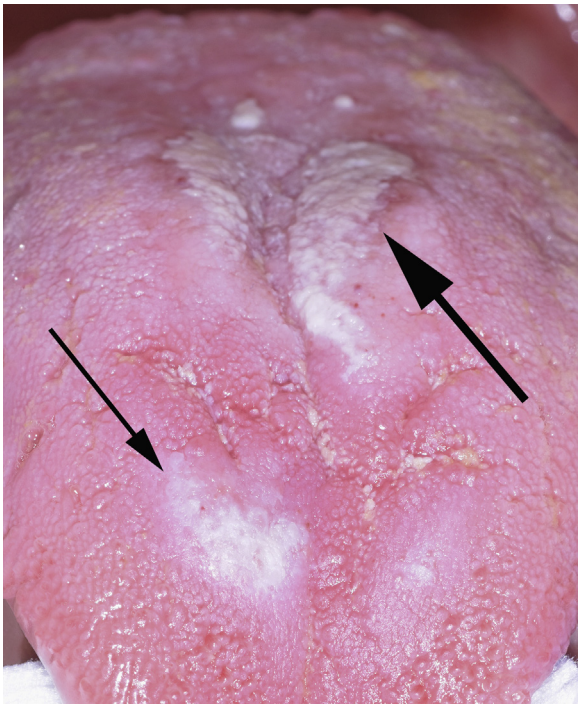

Figure 3. Dorsum of the tongue displaying candidiasis (pseudomembranous plaques on middorsum of the tongue, *thick arrow*) and frictional hyperkeratosis (shiny appearance on anterior aspect of the tongue, *thin arrow*).

appliance involving the maxillary anterior teeth. However, the oral dysesthesia remained unchanged (Figure 3).

In a situation like this, the dentist now faces a rather perplexing dilemma, and the patient is thrust into an uncomfortable position. The dentist might become frustrated because he or she believes he or she has provided the best possible care for the patient despite the lack of a positive outcome. The patient may lose faith in the abilities of the dentist because the symptoms remain. To avoid this tenuous conundrum, dentists need to expand their horizons and educate themselves better to recognize and understand these uncommon manifestations.

EXPLANATION

Oral dysesthesia is an unpleasant abnormal sensation that can be classified into 1 of 2 categories: spontaneous or evoked.[1] A dysesthesia differs by definition from a paresthesia in that a paresthesia is an abnormal sensation as well but without being unpleasant.[1]

Symptoms associated with oral dysesthesia vary widely in terms of description. In 1 study, the authors developed and described 7 symptom categories for oral dysesthesia[3]:

- feelings of a foreign body;
- exudation;
- squeezing or pulling;