Clinical Significance

Dentists have a significant role in helping young people to avoid making poor choices with respect to smoking and e-cigarette use. Much of the information needs to be gathered and time has to pass to truly understand the effects of these devices. Keeping meticulous records and advising patients about the dangers we can already document are important ways dentists can help consumers to avoid unhealthy behaviors.

detect changes that develop. This can help in answering questions such as whether harmful tissue changes will contribute to a higher rate of human papillomavirus infection, if oropharyngeal or oral cancer rates are increased among people who use these devices, and what long-term effects result from the use of such high quantities of nicotine. Reporting information regarding such concerns will help to establish a registry for cases and contribute to publications that can spread the word about the dangers of vaping and juuling.

Burkhart NW: Is your patient juuling? *RDH* 38:38,40,42-45, 2018

Reprints not available

Benign migratory glossitis

BACKGROUND

Benign migratory glossitis (BMG), also termed geographic tongue, annulus migrans, erythema migrans, benign wandering glossitis, exfoliation areata linguae, and transitory benign plaque of the tongue, is an asymptomatic inflammatory disorder often found on the dorsal surface of the tongue. Its prevalence in multiple studies ranges from 1% and 4.8%. It's more common among children and adults under age 30 years than in other age groups. Clinically, its appearance is as multifocal, annular, erythematous patches that have raised white margins (Figure 1). Many patients are asymptomatic and require no treatment. For symptomatic patients, no treatment has been established as the best course of management. Possible approaches have included antihistamines, anxiolytics, corticosteroids, topical anesthetics, nutritional supplements, and avoiding acidic or spicy foods. A review of the literature was undertaken to determine the best treatment for BMG.

Figure 1. BMG is often described as multifocal, annular, erythematous patches with slightly elevated white margins, resulting in a map-like appearance. (Courtesy of Gushiken de Campos W, Esteves CV, Fernandes LG, et al: Treatment of symptomatic benign migratory glossitis: A systematic review. *Clin Oral Invest* 22:2487-2493, 2018.)

METHODS

The literature search included the databases of the Cochrane Library, EMBASE, LILACS, PubMed, Scopus, and Web of Science. Criteria included English language and evaluation of treatment of symptomatic BMG in children and adults; the time frame extended up to September 2017. Eleven articles were selected for review, covering 150 patients with BMG.

RESULTS

Study quality was very low for 8 studies, low for 1, moderate for 1, and high for 1. Weaknesses often found included small sample size, absence of a control group, unclear methods, and insufficient statistical analysis and reporting.

The treatment methods used most often in these reports were topical triamcinolone acetonide 0.1%, topical tacrolimus 0.1%, topical diphenhydramine, and various nutritional supplements. Five studies reported no benefits with treatment, 5 reported significant improvement of symptoms, and 1 reported total resolution of the problem. The treatment that resulted in total resolution was topical and systemic diphenhydramine 12.5 mg/5 ml 4 times a day used for 2 patients. Symptoms resolved in 24 hours. Treatments producing a significant improvement of symptoms were topical tacrolimus twice daily for 10 to 14 days, topical ozonized olive oil, topical diphenhydramine and lidocaine, and systemic cyclosporine 3 mg/kg/day. The treatments that provided no benefit included topical triamcinolone acetonide 0.1% alone or

combined with retinoic acid 0.05%, nutritional supplements, antimycotics, sex hormones, and zinc sulfate 110 mg/day for 30 days.

None of the treatments had sufficient high-quality support to be recommended as the best course of action for managing BMG.

DISCUSSION

The study did not identify the best course of treatment for BMG. Some of the major characteristics of BMG, specifically intermittent worsening and remission, make treatment challenging. Recurrent lesions commonly affect new areas, producing a migratory pattern. Epithelial proliferation at one site combined with exfoliation at another produces the map-like appearance of the disorder. Lesions can change location, intensity, and appearance in minutes to hours. In addition, the etiology of BMG is not well established, with some connections with several systemic disorders and a possible hereditary component, with patients often having a positive family history. Further study is needed.

Clinical Significance

There is no scientifically proven treatment for symptomatic BMG at the present, so clinicians will need to use the available evidence to formulate an appropriate approach for each patient. Although none of the treatments reported can be recommended, they may offer a starting point for further research into the characteristics and treatment of BMG.

Gushiken de Campos W, Esteves CV, Fernandes LG, et al: Treatment of symptomatic benign migratory glossitis: A systematic review. *Clin Oral Invest* 22:2487-2493, 2018

Reprints available from W Gushiken de Campos, Dept of Stomatology, School of Dentistry, Universidade de São Paulo, Av Prof Lineu Prestes 2227 (Butantã), São Paulo, Brazil; e-mail: wgushiken@hotmail.com

ORAL PATHOLOGY

Effect of crack cocaine use on oral and cellular lesions

BACKGROUND

Systemic problems are more likely to occur in persons who use psychoactive substances, especially crack cocaine, so it's plausible to expect these individuals to also experience changes in the oral mucosa. This expectation is based on the local effects related to the heat of the smoke, harmful effects related to the chemicals in the drug, tissue necrosis caused by friction over the gingiva, insufficient blood supply caused by vasoconstriction, and diminished salivary flow as well as harmful effects on the immune response. An investigation was done to evaluate the occurrence of oral lesions and micronuclei in crack cocaine users.

METHODS

One hundred six crack users and 106 non-users matched for age, sex, and tobacco use participated in this cross-sectional study. The evaluation included sociodemographic characteristics, use of psychoactive substances, and the occurrence of fundamental oral lesions, specifically, spots, plaques, nodules, papules, vesicles, blisters, erosions, ulcers, fissures, pseudomembranes, and hyperplastic lesions. A careful examination of the oral mucosa was undertaken and any lesions were documented and photographed. Oral mucosa cells were collected to detect micronuclei (MN) exhibiting abnormalities.

RESULTS

Characteristics of Participants

Participants ranged in age from 13 to 46 years, and most were smokers and white, had 8 years or less of education, and had a household income 1.4 times the monthly minimum wage or less. The crack users reported taking the drug for a mean of 5 years and consumed a mean of 24.4 rocks daily. All used smoking to deliver the drug. Users reported using marijuana, cocaine, solvents, and other street drugs previously or concurrently with crack cocaine use.

Oral Lesion Analysis

Fundamental oral lesions were found in 27.4% of the crack users and 10.4% of the non-users. Users were also more likely to have 2 lesions than non-users. The lesion types found most often were spot/plaque, ulcer/fissure, papule/nodule, erosion/sulcus, and vesicle/blister (Fig 2). In 37.9% of crack users, lesions were found on the floor of the mouth/palate/alveolar ridge; in 31% the lesions were on the buccal mucosa. Non-users were more likely to have lesions on the labial commissure and lip (50% of cases). Only crack users had tongue lesions, and buccal lesions in crack users showed an association with the duration of drug use.

Oral lesions were more likely among crack users than in non-users. Adjusting for sociodemographic and behavioral variables, the