

Oral Lesions: When to Treat, Biopsy, or Ignore



Eli Whitney, DDS, FRCD(C)

Presented at the University of British Columbia's U-Picked Em! Conference, May 2009.

Oral mucosal disease, including gingivitis and periodontitis, is increasing as the population ages and there are more individuals with a lifetime exposure to:

- unhealthy habits (tobacco and excessive alcohol),
- comorbid medical conditions and
- polypharmacy.

Many patients will consult their primary care physician rather than their dentist for assessment and treatment of oral mucosal disease.

Traumatic buccal mucosal lesions

Linea alba is a common condition that presents as a white line along the inner cheek (buccal mucosa) at the biting plane due to frictional irritation or cheek sucking (Figure 1). Morsicatio buccarum (cheek biting) typically presents as irregular, shaggy, white areas bilaterally in the anterior buccal mucosa. Patients may not be aware of either condition and, once identified, neither requires further treatment.

Ulcerative conditions

Trauma is the most frequent cause of oral ulcers. The physician should inquire about sharp teeth

or recent dental treatment. Recurrent or persistent ulcers at the same site may suggest trauma. If an ulcer appears to be trauma-related, the patient should be referred to their dentist for elimination of the cause. Any non-responsive, persistent lateral and ventral tongue ulcers should be biopsied to rule out malignancy.

Oral mucosal disease, including gingivitis and periodontitis, is increasing as the population ages.

Recurrent aphthous ulcers (RAUs) or canker sores affect at least 20% of the population and are almost always confined to the:

- lip mucosa,
- soft palate,
- ventral tongue,
- floor of mouth, or
- buccal mucosa.¹

In some cases, there is an underlying medical condition such as Behçet disease, inflammatory bowel disease, hematinic deficiencies, systemic lupus erythematosus or cyclic neutropenia. RAUs that begin in childhood are less likely to



Figure 1. Right cheek linea alba.



Figure 2. Erosive oral lichen planus in a 58-year-old female.

be associated with an underlying medical disorder. Episodes may be triggered by stress, foods and in some cases, smoking cessation. The treatment of RAUs is palliative and can include corticosteroid mouthrinses or creams during the prodrome or early ulcer development. Non-responsive lesions may be treated with intralésional corticosteroid injections or immunomodulating medications.

RAUs or canker sores affect at least 20% of the population and are almost always confined to the lip mucosa, soft palate, ventral tongue, floor of mouth, or buccal mucosa.

Occasionally, immunocompetent patients will develop a unilateral crop of intraoral herpes simplex virus-related ulcers on the hard palate masticatory mucosa of the after dental treatment. The physician may need to reassure the

patient that it is not due to contaminated dental instruments. The treatment is palliative and the lesions resolve in seven to 10 days.

Oral lichenoid lesions

Lichenoid lesions form a spectrum of clinically similar conditions that include:

- dental material contact stomatitis (especially dental amalgam),
- lichenoid drug reactions,
- oral lichen planus (OLP),
- discoid lupus erythematosus and
- oral graft-versus-host disease.²

Whether focal or widespread they typically feature white reticular striae on an inflamed base and may include plaques, atrophy, or ulcers. When symptomatic, patients often complain of sensitivity to spicy or acidic foods and sometimes to toothpaste. OLP affects about 2% to 3% of the general population and is more common in women between 30- and 60-years-old (Figure 2). Patients with oral lichenoid lesions should be referred to a dental specialist with experience in mucosal disease diagnosis and management and patients should be advised that a biopsy may be required. Treatment can



Figure 3. Hyperplastic candidiasis in a 53-year-old male smoker with dry mouth.



Figure 4. Right ventral tongue dysplastic leukoplakia in an 81-year-old female former smoker.

include local or systemic corticosteroid administration. There is debate concerning some forms of OLP as a pre-malignant condition.

Oral candidiasis

The most recognized oral *Candida albicans* infection is Thrush with white material that can be wiped away revealing inflamed mucosa. Other forms include erythematous candidiasis (denture sore mouth), median rhomboid glossitis on the mid-dorsal tongue, angular cheilitis (red and white fissuring at the corners of the mouth) and chronic hyperplastic candidiasis (white or mixed red/white lesions that cannot be wiped away [Figure 3]).³ The common risk factors for oral candidiasis are:

- Xerostomia
- Continuous denture wear
- Antibiotic therapy
- Corticosteroid therapy
- Hyperglycemia

The physician should ask the patient about any changes related to these risk factors that have allowed candidiasis to develop. Sometimes a cytology smear or even a tissue biopsy may be needed for diagnosis.

Oral precancer and oral squamous cell carcinoma (SCC)

Approximately 3,200 cases of oral SCC (OSCC) occur annually in Canada. Many develop from premalignant (dysplastic) lesions. The main risk factors for oral dysplasia and OSCC are:

- Increasing age
- Tobacco
- Alcohol more than two to three drinks per day
- Paan, betel quid
- Previous upper aerodigestive tract cancer
- Immunosuppression

The clinical features that suggest that a particular oral lesion may be worrisome include:⁴

- Red lesion (erythroplakia)
- Mixed red/white or irregular surfaced white lesions




Dr. Whitney is an Assistant Professor, Department of Oral Biological and Medical Sciences; Program Director, Oral Medicine-Oral Pathology Residency; Certified Specialist in Oral Medicine and Pathology, Faculty of Dentistry, University of British Columbia; and Active Staff, Department of Dentistry, Vancouver General Hospital, Vancouver, British Columbia.

- Ulcers with fissuring or raised exophytic margins and induration
- Paresthesia
- Non-healing extraction sockets

If an oral lesion is suspicious for dysplasia or OSCC, biopsy and microscopic examination are required. In general, the earlier an OSCC is treated the greater a patient's chance of survival.

Summary

When patients present with oral mucosal lesions, with some key questions the primary care physician may be able to determine if monitoring or intervention is required. Any oral soft tissue abnormality that is persistent or non-responsive to treatment may need further investigation. Oral medicine and pathology specialists or oral and

maxillofacial surgeons are the specialist dentists with the most knowledge, training and expertise in the diagnosis and management of oral mucosal lesions. 

References

1. Scully C: Clinical Practice. Aphthous Ulceration. N Engl J Med 2006; 355(2):165-72.
2. Edwards PC, Kelsch R: Oral Lichen Planus Clinical Presentation and Management. J Can Dent Assoc 2002; 68(8):494-9.
3. Neville BW, Damm DD, Allen CM, et al: *Fungal and Protozoal Disease in Oral and Maxillofacial Pathology*. Third Edition. 2008. p.213-24.
4. Warnakulasuriya S, Johnson NW, van der Waal I: Nomenclature And Classification Of Potentially Malignant Disorders Of The Oral Mucosa. J Oral Pathol Med 2007; 36(10):575-80.

Help for today. Hope for tomorrow...

Heads Up for Healthier Brains

Here are 4 simple things that you can do at any age to improve your brain health and that may help reduce your risk for Alzheimer's disease:

1. **Challenge your Brain** – make it work!
2. **Be Socially Active**
3. **Choose a Healthy Lifestyle**
4. **Protect your Head**, by wearing a seatbelt and a helmet for sports

Take action for a healthier brain today.

Find out more at: www.alzheimer.ca or your local Alzheimer Society

Alzheimer Society

