

Common Oral Lesions

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At the completion of this course, the learner will be able to:

1. Explain why taking the patient's history is important prior to examining the oral cavity.
2. Explain how a clinician can quickly differentiate between oral candidiasis and leukoplakia.
3. Describe where cancer of the oral cavity metastasizes.
4. Describe the first step in your evaluation of a pigmented oral lesion.
5. Describe how an infection of the oral cavity by the Herpes virus evolves.

It's not unusual for a health care provider to frequently see and treat patients with lesions of the lips, buccal mucosa, tongue or palate. Many of these lesions are readily diagnosed and treated in the outpatient clinic or emergency room. Occasionally, asymptomatic oral lesions are found incidental to an unrelated examination. The possible causes of oral mucosal defects are numerous and include infectious diseases, autoimmune disorders, neoplastic disease, local trauma and toxic reactions.¹⁻⁵ Proper identification and treatment of oral lesions, as well as the appropriate referral of patients with lesions suggestive of serious disease or neoplastic processes is essential in the primary care setting.

A comprehensive oral examination can produce numerous findings on the lips and oral mucosa, ranging from benign to malignant. Within this list are many lesions which can be treated by the health care provider. The purpose of this article is to assist the health care provider in the differential diagnosis of common oral lesions and the more serious types of oral lesions. Categorizing the lesion based on appearance (white, pigmented, vesicular or ulcerated) facilitates the differential diagnosis. Oral soft tissue masses are not covered in this paper because they should often be referred for biopsy.

Initial Assessment

The clinician should do both a systematic examination of the lips, dentition, oral mucosa, tongue, palate, pharynx and floor of the mouth, and an assessment of the head and neck for lymphadenopathy.⁶⁻⁸ This examination should be preceded by an assessment of risk factors for oropharyngeal cancer, human deficiency virus (HIV) infection and sexually transmitted diseases (STDs). When examining the oral mucosa of any patient – especially those with increased risk factors – oral cancer and HIV need to be considered.

In patients with risk factors for oral cancer, the physical examination should include direct visualization and palpation of all mucous membranes including the lateral surfaces of the tongue which is a frequent site of asymptomatic oral cancer.⁴ The tongue should be fully inspected by grasping the tip of the tongue with a gauze and moving it sideways and up to permit complete examination of its lateral and ventral surfaces.

Oral manifestations are important in the diagnosis and treatment of HIV infection and acquired immunodeficiency syndrome (AIDS).⁹ In addition, oral lesions are among the most frequent problems associated with HIV infection, and more than 90% of patients have at least one oral manifestation during the course of the disease.⁵

Following is a list of common oral lesions which may be seen by the health care provider:

Candidiasis

White lesions on the oral mucosa can be differentiated based on the location of the defect. Surface debris that is easily wiped off is suggestive of candidiasis (thrush), while an epithelial defect which cannot be removed is consistent with precancerous leukoplakia, carcinoma *in situ* or squamous cell carcinoma. Subepithelial defects, such as the normal finding of Fordyce spots (prominent oral sebaceous glands) are often benign and are of little clinical significance.⁷

Candidiasis is a disease primarily of the skin or mucous membranes caused by the organism *Candida albicans*, a yeast-like fungus. Oral candidiasis is often the earliest recognized sign of opportunistic infection and therefore should be considered as possible evidence of immunocompromise such as is seen in patients with HIV infection. It appears as adherent white patches on the underlying mucosa. Predisposing factors in the immunocompetent patient include prolonged antibiotic or corticosteroid use treatment.⁷

Early thrush is frequently asymptomatic; as the infection becomes more extensive it can cause ulceration, pain and discomfort with eating. The white exudate on the mucous membranes is easily scraped or wiped off, and the underlying mucosa may be normal or inflamed. Thrush is an opportunistic infection usually associated with debilitating conditions that lower resistance, such as nutritional deficiencies, AIDS, cancer, tuberculosis, diabetes, measles, scarlet fever, influenza and radiation therapy. Oral candidiasis is the most common white lesion found in the mouths of HIV-positive patients and will affect three-quarters of HIV-infected patients at some time during the disease course.⁹ Once candidiasis is acquired, it is persistent – a characteristic of many fungal infections.

Oral candidiasis can present as either a white lesion with minimal mucosal reaction or as an invasive ulceration of the mucosa. There are two distinct forms of oral candidiasis that may be present at the same time; one involving the lips and the other involving the mucous membranes.⁸ Infection of the lips produces symmetric erosion of the labial commissures (perlèche). The upper layers of the epidermis are lost, with considerable

inflammation beneath them. In some instances, deep cracks form at the corner of the mouth which are often covered with a gray-white membrane. The oral form shows a white plaque that when removed reveals a brightly inflamed base. In the chronic adult type, the oral mucosa is bright red and smooth. The tongue is dry, fissured and cracked, with the appearance of raw beef. Eating is difficult, for the tongue and oral mucosa are often dry, burning and painful.

Diagnosis is usually made by clinical appearance of the lesion because no chair-side or office test is yet available to readily diagnose candidiasis.¹⁰

The most useful agent involved in the treatment of oral candidiasis is nystatin which comes in a liquid or troche. Stubborn or more severe cases may require the use of fluconazole (Diflucan[®]), a systemic antifungal agent taken orally. If patients use a corticosteroid inhaler, they should be instructed to brush their teeth and rinse their mouth after every use. Acidophilus or yogurt is recommended to take with broad-spectrum antibiotics to reduce the incidence of candidiasis infection.¹¹

Oral Cancer

The most common type of oral cancer is squamous cell carcinoma.⁸ Sixty percent of oral cancers are well advanced by the time they are detected, even though clinicians and dentists frequently examine the oral cavity.⁴ The two most important risk factors for oral cancer are tobacco use and heavy alcohol consumption.

Leukoplakia (literally “white patch”) is a precancerous lesion of the mucosa. It is strictly a clinical term and does not designate a histological appearance. It appears as a white or red patch (or may be a combination of both) that cannot be wiped or scraped from the surface of the mucosa. Leukoplakia can be found anywhere but favors the sides of the tongue and floor of the mouth.⁷ Local irritants, such as chewing tobacco, can create this type of lesion. Persistent or changing leukoplakia should be biopsied to rule out neoplastic changes to the squamous cell layer.

If left untreated, leukoplakia can evolve into squamous cell carcinoma. Clinically, squamous cell carcinoma starts as a non-healing, painless red ulceration with white rolled borders.⁴ Treatment includes cessation of the use of tobacco and consumption of alcohol, as well as close monitoring of the lesion.² Growth of squamous cell carcinoma can progress very rapidly. As with all oral cancers, it spreads from the oral cavity to the submandibular and cervical lymph nodes. Any suspicious lesion should be evaluated by an otolaryngologist or oral surgeon.

Oral Hairy Leukoplakia

Oral hairy leukoplakia (OHL) is primarily seen in patients with HIV infection and may precede clinical diagnosis of the disease. It is important for the clinician to be able to recognize the significance of this lesion; however, one study assessed the ability of

primary care physicians to recognize oral findings associated with HIV disease and found that only 22.7% were able to diagnose OHL.⁵

OHL presents as a painless, white, lichenous plaque-like lesion, most commonly seen on the lateral surfaces of the tongue. Initially it may resemble thrush, which is also frequently seen in patients with HIV; unlike thrush, however, lesions of OHL cannot be scraped off. OHL can be an early manifestation of moderately severe immunodeficiency and can remit and relapse.

A presumptive diagnosis can be based on the lesion's clinical appearance and location. Numerous treatments have been advocated, but the lesion generally reoccurs when treatment is completed.⁵

Pigmented Lesions

The initial step in evaluating a pigmented lesion of the oral mucosa is to determine if it is localized to the oral cavity or is generalized. Generalized pigmentation is associated with hereditary patterns or various medical conditions such as Peutz-Jeghers syndrome and Addison's disease.⁷ Localized or solitary pigmented lesions are more suggestive of a vascular, traumatic or neoplastic process; melanoma should be considered in any pigmented lesion of the oral mucosa. Many pigmented lesions do not need treatment; however, Kaposi's sarcoma is a pigmented lesion that any clinician should be able to recognize.

Kaposi's Sarcoma

Kaposi's sarcoma (KS) is a common oral manifestation of HIV infection, occurring in up to 15% of male patients and much less frequently in women. It is estimated that the first appearance of KS will occur in the mouth of 60% of patients.⁹ Depending on the clinical stage of the disease, KS can have a number of clinical presentations. Initially, KS appears as a reddish or purple asymptomatic macule which, over time, progresses to a papule, then finally to an ulcerative stage. During the ulcerative stage, KS can be painful and interfere with eating and can therefore be confused with oral candidiasis.⁵ If the lesion appears nonmacular, referral to an otolaryngologist or oral surgeon is required.

Aphthous Ulcers

The most common acute oral ulcer is the traumatic ulcer with the aphthous ulcer ("canker sore") as the next most common. Both are relatively superficial with raised borders, and, unlike early cancer, are very painful. Usually these lesions heal without treatment in two to three weeks. Extensive or multiple ulcerations that are preceded by vesicles may be evidence of an infectious process or immunodeficiency.

HIV-positive patients frequently develop painful ulcers in the mouth. Aphthous stomatitis is not a viral infection, and it is not infectious; however, a genetic predisposition may be present.¹¹ Aphthous ulcers are difficult to treat; small ulcers may respond to topical

anesthetics such as viscous lidocaine while large oral or esophageal ulcers may respond to corticosteroids.

Herpangina

Herpangina is a mild disease characterized by fever, malaise and sore throat. Within two days after onset of the symptoms, small one-to-two millimeter grayish papulovesicular lesions with erythematous areolas appear, most frequently on the tonsillar pillars, but also on the soft palate, uvula or tongue. These lesions are painful and may make swallowing difficult. Over the next 24 hours, the lesions become shallow ulcers with healing occurring within the next one to five days. Herpangina is caused by a number of coxsackieviruses.¹² Since the illness is self-limited, treatment is symptomatic; swishing the mouth and gargling with viscous lidocaine can provide much needed (though temporary) relief. Advise your patient to spit-out the medication when done gargling because the medication may cause nausea if swallowed.

Herpes Infections

Initial or primary herpetic infection occurs mostly in or about the mouth when the virus contacts nonkeratinized epithelium of susceptible individuals. Most primary HSV infections occur in early childhood and are asymptomatic with the incubation period averaging seven to 12 days.¹² A stomatitis then develops with small, pinhead-sized vesicles covering much of the oral mucosa. The vesicles then rupture, forming yellowish-white, superficial painful ulcers surrounded by a white halo. Even in moderate infections, the gingival margins are inflamed and bright red. In more severe cases, the gingivae are grossly swollen and bleed easily.

Fever may begin even before the lesions appear, may reach 105⁰ F and may last for several days. Maintaining proper hydration may be difficult because of the pain. The initial attack is usually self-limiting and seldom lasts more than 14 to 16 days. Although HSV-1 is usually considered a lesion of the lips and oral cavity while HSV-2 is usually considered a genital lesion, sexual practices are making this distinction irrelevant.⁸

Even after the initial infection subsides, the herpes virus permanently remains in the cervical nerve ganglia for HSV-1 and the sacral ganglia for HSV-2. The presence of the virus in either of these ganglia can allow recurrent HSV lesions. Factors which alter resistance, such as physiological and emotional changes, along with bright sunlight, illness and menses may activate the latent virus. This results in vesicles that quickly develop, break down and heal without scarring.

Treatment for oral herpes infections is symptomatic, though many clinicians place their patients on an antiviral such as acyclovir, famcyclovir or valacyclovir for five to ten days. Topical anesthetics such as viscous lidocaine can provide quick symptomatic relief.

Syphilis

Treponema pallidum, the causative organism of syphilis, is usually transmitted during sexual activity. *T. pallidum* can penetrate the slightest abrasion of the skin or mucosa, multiplying locally, then disseminating throughout the body. The initial lesion is an erythematous macule that develops into a papule, which then erodes to form a chancre. After about two to six weeks, the chancre heals, at which point the disease enters the second stage. During the second stage, the spirochete disseminates throughout the body. The patient may have unexplainable fevers, headaches and malaise. Recurrent cutaneous macules and papules in the oral cavity are characteristic secondary lesions. The most common lesion, occurring in about 40% of cases, is a small, grayish papule which is teeming with spirochetes.⁸ After two to four years, the recurrent lesions become less frequent and then finally subside. The disease then enters the third, or latent, phase. About one-third of patients develop no further symptoms. In about two-thirds of untreated patients, the infection persists in a late or tertiary form in which chronic, Proliferative, inflammatory and destructive reactions involving the viscera, skeleton, cardiovascular and neurological systems develop.

Conclusion

Examination of the oral mucosa is important in the early diagnosis of squamous cell carcinoma, HIV infection, and in syphilis infection. The clinician should be able to treat common disorders of the oral mucosa, but should also be able to recognize those conditions which require further investigation.

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