

Session 3: Common Oral Manifestations in PLWH



Preferred PPE-USE 95 or Higher Respirator

Face Shield or Goggles
N95 or higher respirator
Isolation gown –long sleeve, elastic cuffs below knees fluid resistant
Clean Non-Sterile gloves
Optional but recommended:
Hair Cover
Shoe Covers

Preferred PPE-USE 95 or Higher Respirator

Face Shield or Goggles
Surgical Mask Type 3
Isolation gown –long sleeve, elastic cuffs below knees fluid resistant
Clean Non-Sterile gloves
Optional but recommended:
Hair Cover
Shoe Covers

How to Put On (Don) PPE Gear

More than one donning method may be acceptable. Training and practice using your healthcare facility's procedure is critical. Below is one example of donning.

1. Identify and gather the proper PPE to don. Ensure choice of gown size is correct (based on training).

2. Perform hand hygiene using hand sanitizer.

3. Put on isolation gown. Tie all of the ties on the gown. Assistance may be needed by other healthcare personnel.

4. Put on NIOSH-approved N95 filtering facepiece respirator or higher (use a facemask if a respirator is not available). If the respirator has a nosepiece, it should be fitted to the nose with both hands, not bent or tented. Do not pinch the nosepiece with one hand. Respirator/facemask should be extended under chin. Both your mouth and nose should be protected. Do not wear respirator/facemask under your chin or store in scrubs pocket between patients.*

1. Respirator: Respirator straps should be placed on crown of head (top strap) and base of neck (bottom strap). Perform a user seal check each time you put on the respirator.

2. Facemask: Mask ties should be secured on crown of head (top tie) and base of neck (bottom tie). If mask has loops, hook them appropriately around your ears.

5. Put on face shield or goggles. Face shields provide full face coverage. Goggles also provide excellent protection for eyes, but fogging is common.

6. Perform hand hygiene before putting on gloves. Gloves should cover the cuff (wrist) of gown.

7. Healthcare personnel may now enter patient room.

How to Take Off (Doff) PPE Gear

More than one doffing method may be acceptable. Training and practice using your healthcare facility's procedure is critical. Below is one example of doffing.

1.Remove gloves. Ensure glove removal does not cause additional contamination of hands. Gloves can be removed using more than one technique (e.g., glove-in-glove or bird beak).

2.Remove gown. Untie all ties (or unsnap all buttons). Some gown ties can be broken rather than untied. Do so in gentle manner, avoiding a forceful movement. Reach up to the shoulders and carefully pull gown down and away from the body. Rolling the gown down is an acceptable approach. Dispose in trash receptacle. *

3.Healthcare personnel may now exit patient room.

4.Perform hand hygiene.

5.Remove face shield or goggles. Carefully remove face shield or goggles by grabbing the strap and pulling upwards and away from head. Do not touch the front of face shield or goggles.

6.Remove and discard respirator (or facemask if used instead of respirator). Do not touch the front of the respirator or facemask.*

- 1. Respirator:** Remove the bottom strap by touching only the strap and bring it carefully over the head. Grasp the top strap and bring it carefully over the head, and then pull the respirator away from the face without touching the front of the respirator.
- 2. Facemask:** Carefully untie (or unhook from the ears) and pull away from face without touching the front.

7.Perform hand hygiene after removing the respirator/facemask and before putting it on again if your workplace is practicing reuse.*

** Facilities implementing reuse or extended use of PPE will need to adjust their donning and doffing procedures to accommodate those practices.*



The first most common oral manifestation in PLWH is Oral Candidiasis and the second is Oral Hairy Leukoplakia

Oropharyngeal Candidiasis (OPC)

The most common HIV related oral lesion is Candidiasis, predominantly due to infection by *Candida albicans*.

Non albicans species such as *C. glabrata*, *C. tropicalis*, *C. krusei* and *C. kefyr* have been reported in 1% to 20% of HIV infected patients.

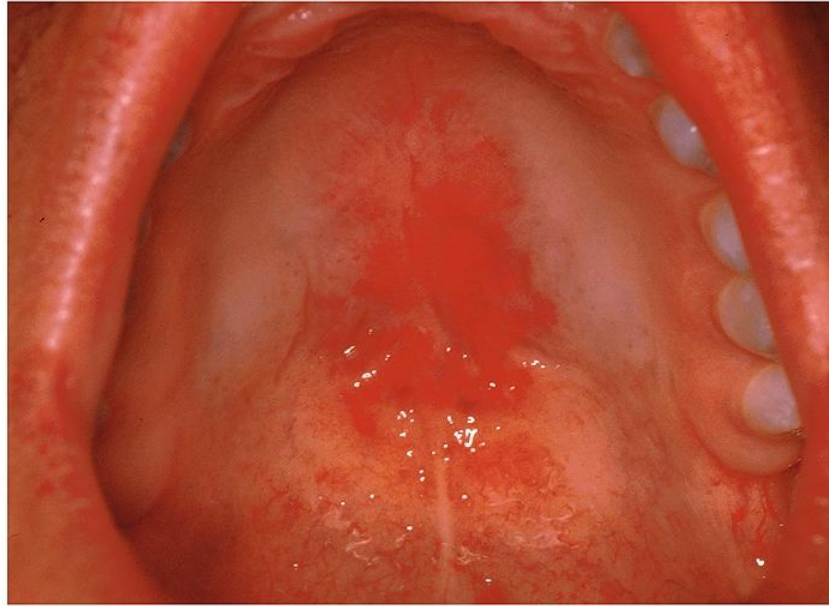
It is often the initial manifestation of symptomatic infection with HIV, and may simply imply concurrent esophageal candidiasis, which is an AIDS indicator lesion, or also be a predictor of the likelihood of other opportunistic infections.

Baccaglini L, Atkinson JC, Patton LL, Glick M, Ficarra G, Perterson DE. Management of oral lesions in HIV positive patients. Oral Surg Oral Med Oral Pathol Oral Radiol Endod 2007;103(suppl1):s50.e1



Pseudomembranous candidiasis: Acknowledged as the most common variant, it presents as creamy, white, curd like plaques on the oral mucosa or tongue which can be wiped away, leaving a red erythematous surface. Patients may complain of soreness or burning in the mouth

[AAkpan](#), R Morgan - Postgraduate medical journal, 2002 - pmj.bmj.com



Erythematous candidiasis: It presents as a red, flat, subtle lesion on the dorsum of tongue. A kissing lesion occurs when the lesion present on the tongue has a matching counterpart on the hard or soft palate where it comes in contact. The lesion is often symptomatic, with burning mouth sensations.



Hypertrophic Candidiasis: Thick white plaques that cannot be readily removed may indicate the presence of hyperplastic candidiasis. This may occur concurrently with oral hairy leukoplakia.

Angular Cheilitis: It presents as cracking, fissuring, ulceration or erythema of the corners of the mouth, and may occur with or without the presence of erythematous or pseudomembranous candidiasis. It tends to persist for long periods of time without treatment.

Oropharyngeal Candidiasis (OPC) Treatment

- **Early treatment of oral candidiasis is warranted not only because of the discomfort caused by the lesions, but also because the foci may act as reservoirs of organisms for local spread of disease.**
- **It takes longer to eradicate candidiasis in HIV infected population, and relapse rates are high.**
- **High fungal counts and smoking appear to increase the tendency for poor response.**
- **Use of topical agents for treatment of OPC is recommended as initial therapy, more so owing to concerns of drug interactions**
- **between systemic antifungals and antiretroviral therapy.**

Oral manifestations of HIV infection and their management. I. More common lesions. Oral Surg Oral Med Oral Pathol 1991;71:158

Oropharyngeal Candidiasis (OPC) Treatment

ORAL HAIRY LEUKOPLAKIA



Hairy leukoplakia (also known as oral hairy leukoplakia, or HIV-associated hairy leukoplakia), is a white patch on the side of the tongue with a corrugated or hairy appearance. It is caused by Epstein-Barr virus (EBV) and occurs usually in persons who are immunocompromised especially those with HIV/AIDS). This white lesion cannot be scraped off. The lesion itself is benign and does not require any treatment, although its appearance may have diagnostic and prognostic implications for the underlying condition.

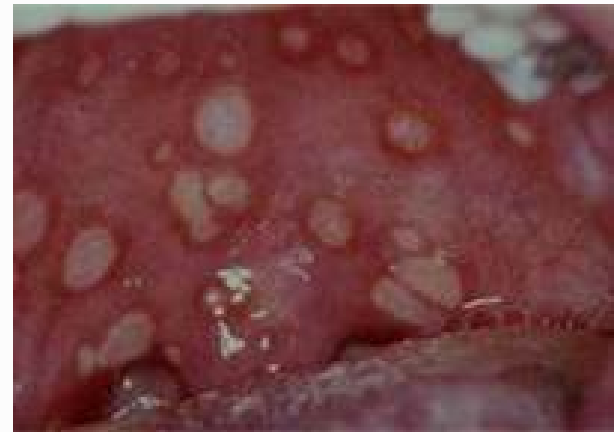
ORAL HAIRY LEUKOPLAKIA

Treatment

- Usual resolution with ARV
- Valacyclovir
- Podophyllin resin combined with acyclovir cream
- Oral Hairy Leukoplakia is a manifestation early or later HIV disease and an important sign of immunosuppression

Viral Lesions

Herpes simplex (HSV) causes both primary and secondary or recurrent disease in the oral cavity



Herpes Simplex

Treatment

- **Oral Valacyclovir, Famciclovir, or Acyclovir for 5 to 10 days. Intravenous Acyclovir may be required for severe mucocutaneous disease**
- **Patients may opt for episodic treatment or for daily suppressive therapy if they experience frequent or severe outbreaks.**
- **Long term suppressive therapy reduces the number of recurrences of mucocutaneous HSV disease in HIV-infected patients. Acyclovir 400 mg twice daily, Famciclovir 500 mg twice daily, and Valacyclovir 500 mg twice daily are recommended options for chronic suppressive therapy in HIV-infected patients.**

Aphthous Ulcers



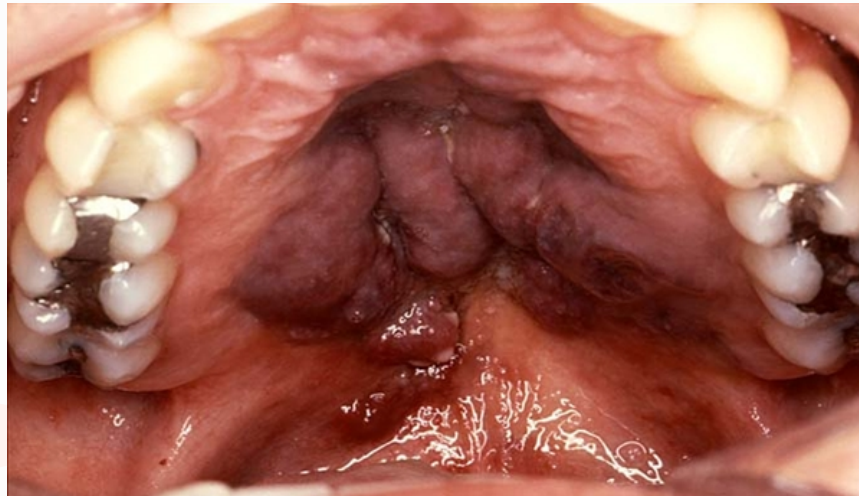
Aphthous Ulcers

- Aphthous ulcers (also called aphthous stomatitis) affect up to 15% of HIV-infected patients
- Patients with HIV typically have oral ulcers that are more extensive, more frequent in occurrence, and slower to heal.
- Cause unknown

Diagnosis

- Diagnosis of aphthous stomatitis is based on clinical presentation
- Exclusion of other possible causes, including HSV, syphilis, neoplasm, or drug reaction

Kaposi's Sarcoma Lesions



Kaposi's Sarcoma

The mouth is involved in about 30% of cases and is the initial site in 15% of AIDS-related KS. In the mouth, the hard palate is most frequently affected, followed by the gums. Lesions in the mouth may be easily damaged by chewing and bleed or suffer secondary infection, and even interfere with eating or speaking.

With AIDS-related KS, antiretroviral therapy ART has been shown to prevent, or induce regression of, KS. Some AIDS patients have complete resolution of the lesions and prolonged remission while continuing the therapy. Therefore, ART should be considered first-line treatment for these patients, though they may require other treatments at the same time.

It is the single most common neoplasm occurring in patients with AIDS, but there has been a dramatic decrease in its incidence since the advent of ART.

Squamous Cell Carcinoma

- In face of HIV infection, Squamous Cell Carcinoma (SCC) is the third most common head and neck cancer, after Kaposi's sarcoma and non-Hodgkin's lymphoma. These tumors present in younger individuals in HIV infected population, have a unique course, and may be associated with poorer overall survival.
- The presentation of SCC usually precedes the development of AIDS and is often the initial presentation (in about 33% of cases.) The hastened development to AIDS and the drop in CD4+ cell count has been attributed to the stress of undergoing treatment and HIV associated factors.

Squamous Cell Carcinoma



Case Study 1

- 37 year old male comes to your clinic for his initial visit. He is HIV positive with an undetectable viral load and a CD4 of 475. Patient also reports he is an insulin dependent diabetic for the last 10 years and always has been under control but reports the last several months he has had difficulty controlling his blood sugar.



Case Study 1

Upon performing an intraoral/extraoral exam you observe the following. What is the most likely diagnosis for this patient?

- A. Methamphetamine usage
- B. Advanced periodontal disease
- C. Dental Caries
- D. HIV Salivary Gland Disease



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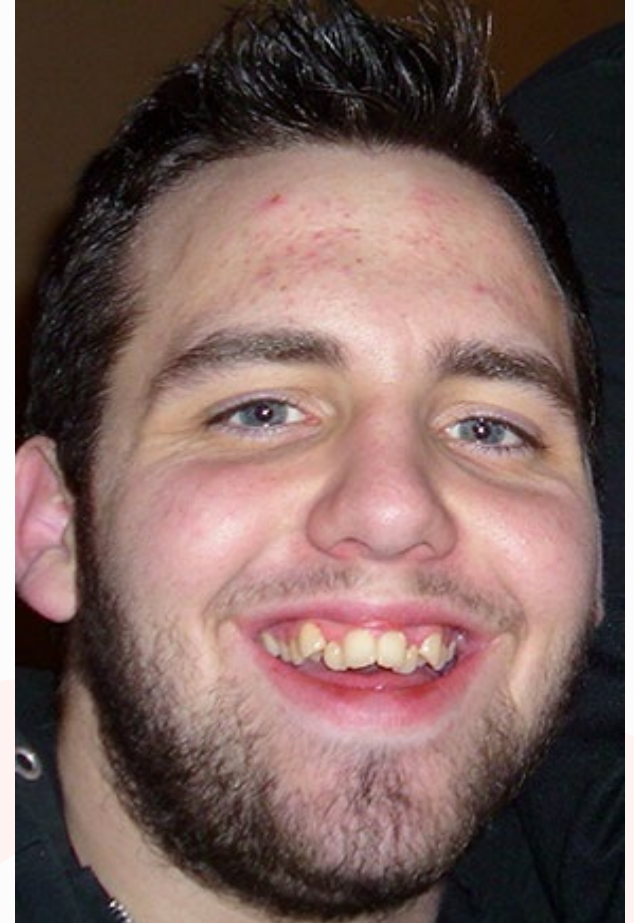
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Case Study 1

What would you prescribe for the patient and what type of referral would you make?

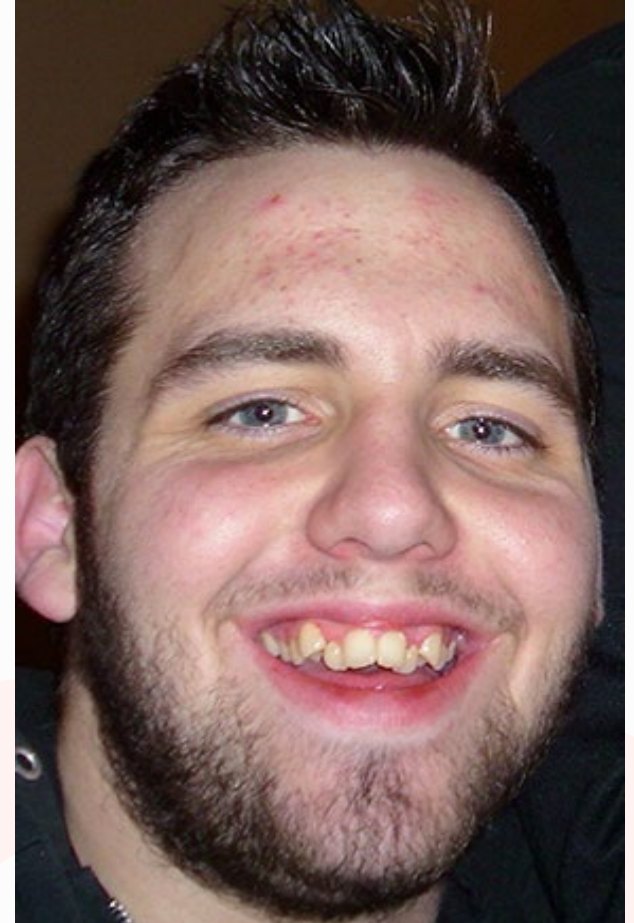
- A. Tetracycline 250mg 3x day for 5 days and refer to dentist
- B. Amoxicillin 250mg 3x/day with Metronidazole 250mg 3X/day x 5-7 days and Antimicrobial rinses (0.12% Chlorhexidine) 15cc 2xday x 14 days/refer to dentist and reevaluate in two weeks
- C. Change the amount of insulin you are giving the patient



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Case Study 2

- 27-year-old male comes to your clinic for his initial visit. He reports he is sexually active and does not always use a condom. He also reports his mouth seems very dry. You perform an intraoral/extraoral exam and notice the following:



Case Study 2

What is your differential diagnosis?

- A. Dental infection of unknown origin
- B. Blockage of a salivary gland
- C. Mumps
- D. HIV Salivary Gland Disease (HIV-SGD)

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Case Study 2

What initial diagnostic test would you perform?

- A. CBC
- B. WBC
- C. Rapid HIV
- D. None of the above



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B. WBC

C. Rapid HIV

D. None of the above

Rule of Thumb

ANY ORAL LESION THAT REMAINS MORE THAN
TWO WEEKS REQUIRES ADDITIONAL TESTING
INLCUDING BIOPSY

Case Study 3

- A 48-year-old Haitian female presents to your office for a new patient visit. Patient current meds include Lipitor 20mg once per day and Lisinopril 10mg daily. BP is 132/84. Patient chief complain is tiredness and sweating. Pt reports no significant social history, denies use of drugs alcohol and smoking. Pt is married and has one 8-year-old daughter.



Case Study 3

Upon performing an intraoral/extraoral exam you observe the following. What is the most likely diagnosis for this patient?



- A. Food burn
- B. Trauma
- C. Kaposi Sarcoma
- D. None of the above

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Case Study 3

- You perform a rapid HIV Test which is positive and then order a full battery of tests for this patient including CD4 and Viral Load
 - A. CD4 892/Viral Load 65
 - B. CD4 12/Viral Load 175,000
 - C. CD4 500/Viral Load 175,000
 - D. None of the above
- Which of the tests results most likely represent this patients' findings?

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 - D. None of the above
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Case Study 4

- A 27-year-old white male HIV patient. presents to your office. You have been seeing this patient for several years and his current medication consists of Genvoya for the last two years. His last Viral Load test six months ago was undetectable and his CD4 one year ago was 532. His chief complaint today is a burning sensation in his mouth.



Case Study 4

Upon performing an intraoral/extraoral exam you observe the following. What is the most likely diagnosis for this patient?

- A. Food burn
- B. Trauma
- C. Aphthous ulcers
- D. Candidiasis



Case Study 4

Upon performing an intraoral/extraoral exam you observe the following. What is the most likely diagnosis for this patient?

- A. Food burn
- B. Trauma
- C. Aphthous ulcers
- D. **Candidiasis**



Case Study 4

What would be the best way to ensure your diagnosis.

- A. Biopsy
- B. Wipe the lesion with a piece of gauze
- C. Wait two weeks and see if it goes away
- D. None of the above



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Case Study 4

If you order a new viral load and CD4 would you expect the CD4 to?

- A. Increase
- B. Decrease
- C. Remain the same
- D. None of the above



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- A. Increase
- B. **Decrease**
- C. Remain the same
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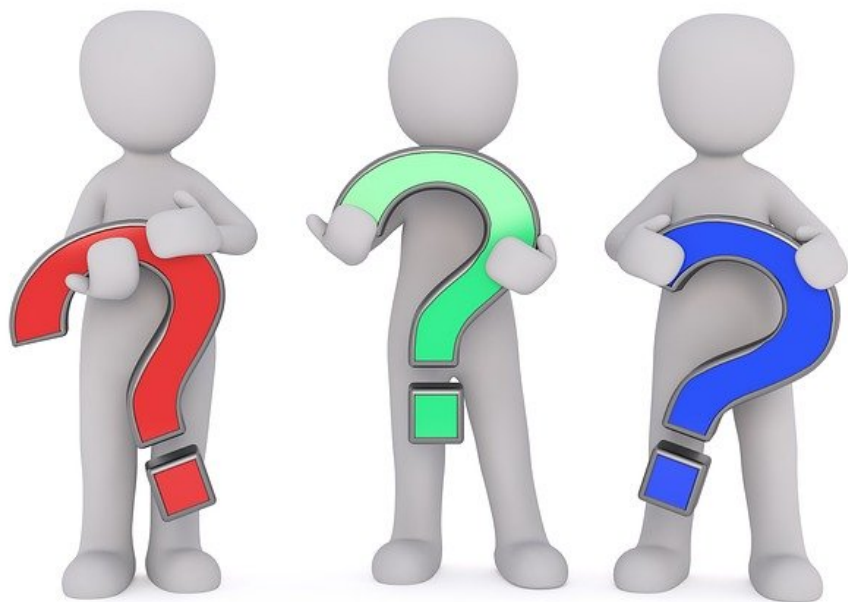


Key Takeaways

- **1. Oral manifestations are common in people with HIV infection. More than 90% of HIV infected patients are seen to have at least one HIV related oral manifestation.**
- **2. Oral lesions may be an early indicator of decline in immune function and may warrant further investigations**
- **3. Control of focal infection within the oral cavity may retard adverse consequences such as progression to systemic diseases.**
- **4. Poorly functioning dentition can adversely affect quality of life, and exacerbate weight loss in HIV infected patients, who may already be malnourished.**
- **5. Combination ART has been documented to play a critical role in the prevention of oral manifestations of HIV because of its role in the reconstitution of the immune system.**

References

- Baccaglini L, Atkinson JC, Patton LL, Glick M, Ficarra G, Perterson DE. Management of oral lesions in HIV positive patients. Oral Surg Oral Med Oral Pathol Oral Radiol Endod 2007;103(suppl1):s50.e1
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- Guidelines for the prevention and treatment of opportunistic infections in HIV-infected adults and adolescents: recommendations from the Centers for Disease Control and Prevention, the National Institutes of Health, and the HIV Medicine Association of the Infectious Diseases Society of America. Available at http://aidsinfo.nih.gov/contentfiles/lvguidelines/adult_oi.pdf.



THANK YOU

