AETC AIDS Education & Training Center Program South Central

Oral Manifestations of Sexually Transmitted Infections in PWH

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Conflicts of Interest

- C. Mark Nichols, DDS has no financial conflicts of interest to disclose.
- Evidence-based, off-label use of some medications are referenced in this presentation.

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- Adult Day Treatment
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Learning Objectives

1. Review the categories of oral sexually transmitted infections (STIs).
2. Identify oral manifestations of STIs.
3. Discuss the difference of oral STIs in people with HIV (PWH).

Photos included in this slide set are from C.Mark Nichols, DDS unless otherwise specified.

Oral Sexually Transmitted Infections in HIV

- Human Papilloma Virus
- Herpes Simplex Virus
- Molluscum contagiosum
- Syphilis
- Gonorrhea
- Chlamydia

Higher prevalence of Oral HPV in PWH

- Prevalence of any oral HPV for adults 18-69yo increasing
  - 2009-2010: any HPV: 6.9% (men 10.1%, women 3.6%); HPV-16: 1%
  - 2011–2014: any HPV: 7.3%; high-risk HPV: 4.0%
  - 2013–2014: any HPV: 45.2% men, 39.9% women; high-risk 25.1% men, 20.4% women
- High risk HIV-negative adults has a prevalence of 25% (men 28%, women 18%); HPV 16 – 5.3% (2009-10)
- Adult PWH prevalence of 40% (men 45%, women 35%); HPV 16 – 6.1% (2009-10)

McQuillan et al, NCHS Data Brief, No. 208, 2017, CDC.gov "Oral Human Papillomavirus Infection: Hazard of Intimacy" Schlecht JAMA 2012 ,Letter to the editor that summarizes Gillison et al, JAMA 2012

HPV in Oral Cavity and Peri-Oral Region

- Condyloma acuminatum – HPV 6,11 *
- Verruca vulgaris – HPV 1,2,4,7
- Verruca plana - HPV 3,10,28,41
- Multifocal epithelial hyperplasia – HPV 13,32 *
- HPV induced dysplasia – HPV 16,18 *

- *Sexual transmission: oral-genital, oral-oral, genital-genital

Condyloma acuminatum

- Solitary or multiple lesions on the oral mucosa or vermillion border with a finger-like projections or cauliflower surface
- Etiology: HPV 6,11; usually sexual transmission
- Dx: clinical but biopsy preferred
- Tx: excision

Case History: Growth on Tonsil

- 56yo MSM with HIV
- Meds: ART, warfarin, carvedilol
- CD4: 498 (Stage 2)
- HIV PCR: <20 (controlled)
- CBC: WNL
- DX: condyloma acuminatum

ART= antiretroviral therapy; WNL= within normal limits

Case History: Growths on lips

- 26yo MSM with HIV
- Meds: ART x 1 year
- CD4: 100 (Stage 3)
- HIV PCR: 1.4 million (uncontrolled)
- HPV-18
- Anal cancer

Multifocal Epithelial Hyperplasia (MEH; FEH, Heck's Disease)

- Raised or slightly nodular lesion on oral mucosa with stippled surface
- Color can vary from normal to white
- Usually multiple lesions but can be solitary; most often appear where tissue is easily traumatized by teeth
- Etiology: HPV 13,32; often CD4 <300
- Dx: clinical, biopsy preferred
- Tx: excision, keratolytic agents, alpha-interferon

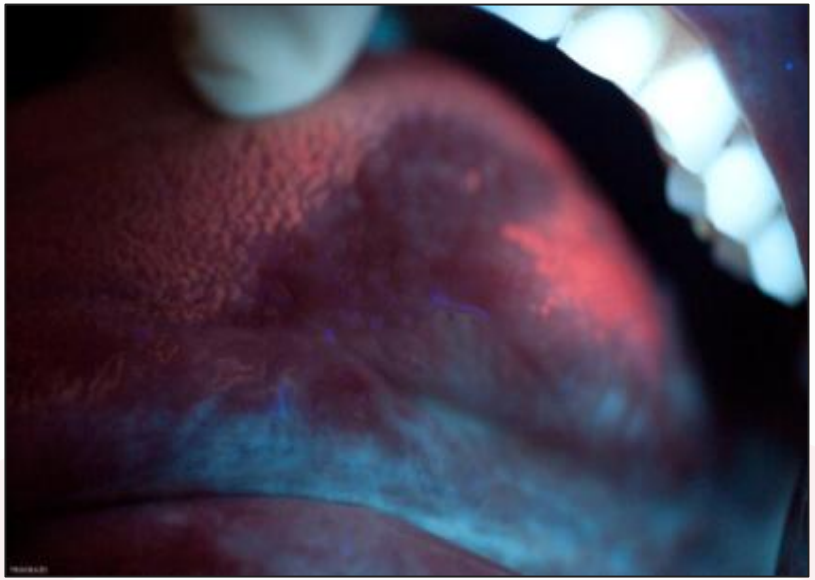
Case History: HPV-16 Induced Severe Dysplasia

- 41yo MSM
- Meds: ART
- CBC wnl
- CD4: 247 (Stage 2)
- HIV PCR 553 (uncontrolled)
- Smokes tobacco

Case History: Invasive Squamous Cell Carcinoma

- 59yo MSM
- Meds: ART >10 years; darunavir, ritonavir, etravirine, TMP/SMX, gemfibrozil, insulin, fluconazole
- CD4 111 (Stage 3)
- HIV < 20 (controlled)
- Severe neuropathy
- Wasting disease
- Diabetes

Case History 2: Invasive Squamous Cell Carcinoma



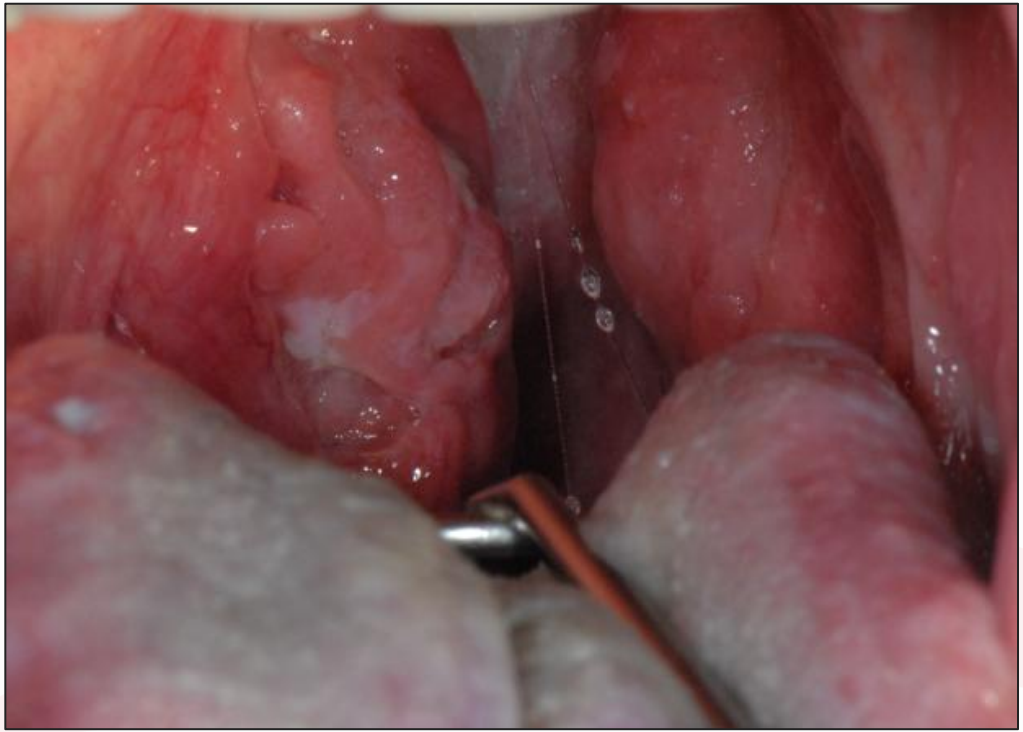
OraRisk HPV – 84 (unknown risk)

Case History 3: Invasive Squamous Cell Carcinoma

- Progression at 7 months and development of severe anal cancer

Case History 4: Invasive Squamous Cell Carcinoma

- Tonsillar HPV-induced squamous cell carcinoma
- OraRisk HPV - 16

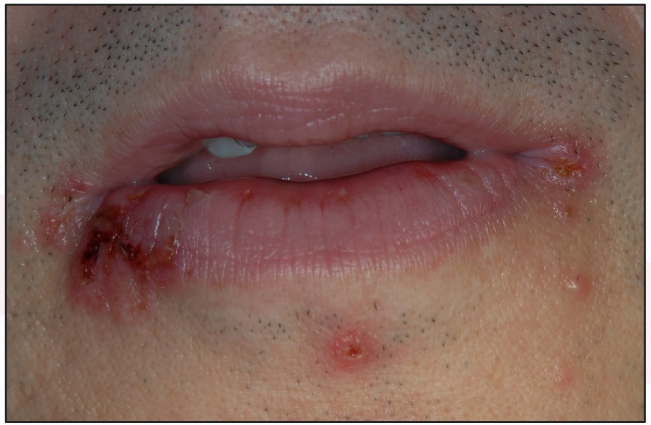


Herpes Simplex Virus (HSV)

- HSV is among the most prevalent STI
- Most infections are subclinical; recurrent, painful lesions
- Most genital HSV infections in U.S. are caused by HSV-2, while HSV-1 infections are typically orolabial and acquired during childhood
- Prevalence of genital HSV-1 appears to be increasing among young adults
  - Decline in orolabial HSV-1 infections
  - Increasingly common oral sex behavior

HSV Lesions - Labialis

- Multiple vesicular lesions with slight crusting surface, usually appearing on vermillion border or perioral area
- Painful; proceed by prodromal period of tingling sensations
- Etiology: HSV-1 > HSV-2
- Dx: clinical or cytology
- Tx: may resolved spontaneously; if CD4 low, antivirals may be indicated; acyclovir, famciclovir, valacyclovir
- Oral manipulation should be postponed until lesions resolve



HSV Lesions - Intraoral

- Ulcerations with irregular margins on keratinized tissue, typically on palatal or attached gingival tissue
- Extremely painful
- CD4 usually <200
- Etiology: HSV
- Dx: clinical or biopsy
- Tx: acyclovir, famciclovir, valacyclovir

Molluscum Contagiosum - Poxvirus

- Molluscum contagiosum lesion classification:
  - 1. commonly seen skin lesions found largely on the faces, trunks, and limbs of children
  - 2. sexually transmitted lesions found on the abdomen, inner thighs, and genitals of sexually active adults
  - 3. diffuse and recalcitrant eruptions of patients with Stage 3 HIV (AIDS) or other immunosuppressive disorders
- PWH can develop “giant” lesions (≥15 mm in diameter), larger numbers of lesions, and lesions that are more resistant to standard therapy

Molluscum contagiosum

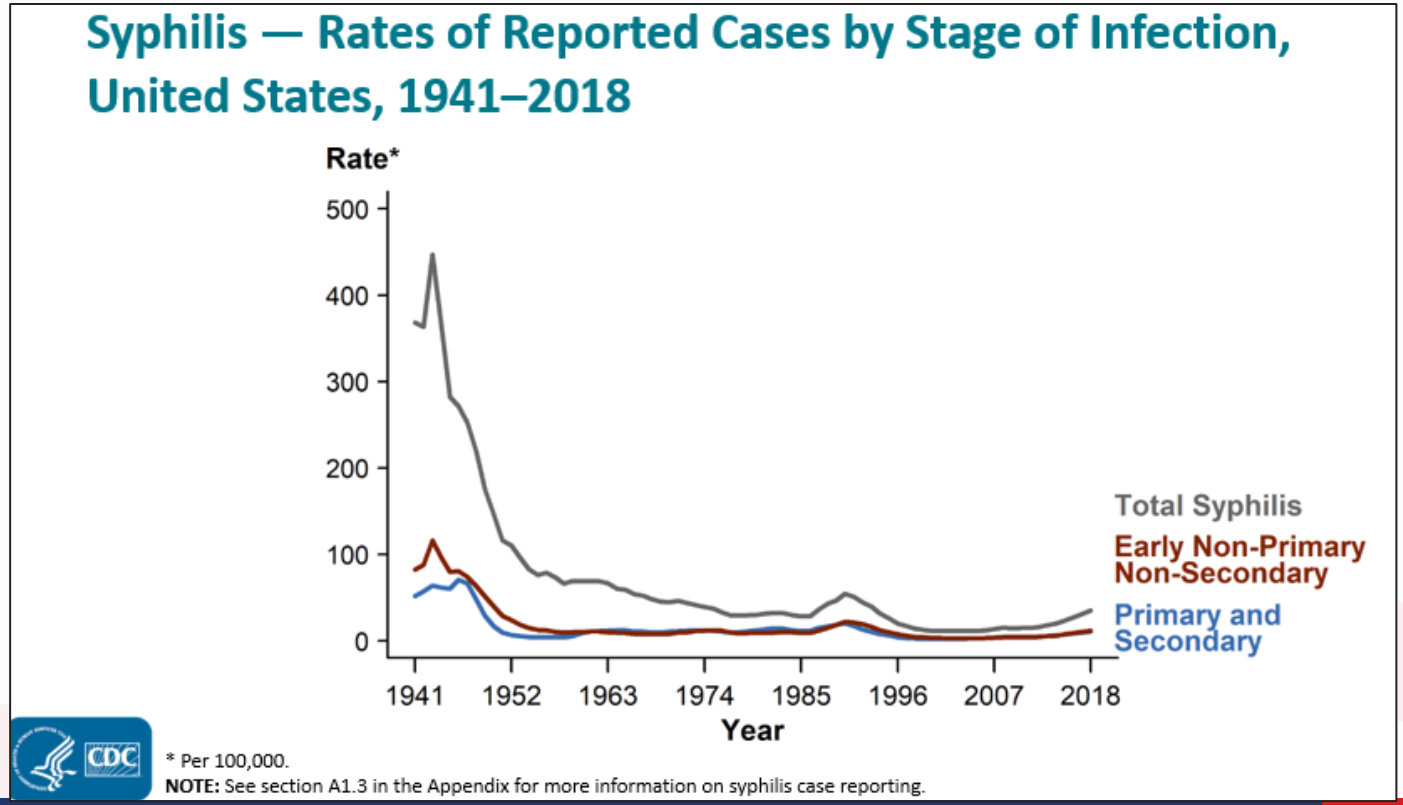
- Multiple raised or nodular lesions with a white core usually seen on vermillion border or skin
- Etiology: Poxvirus and direct skin contact; Patient can auto inoculate from other sites (i.e. genital)

Molluscum contagiosum

- Dx: clinical, biopsy preferred
- Tx: enucleation or topical tretinoin gel, systemic acitretin

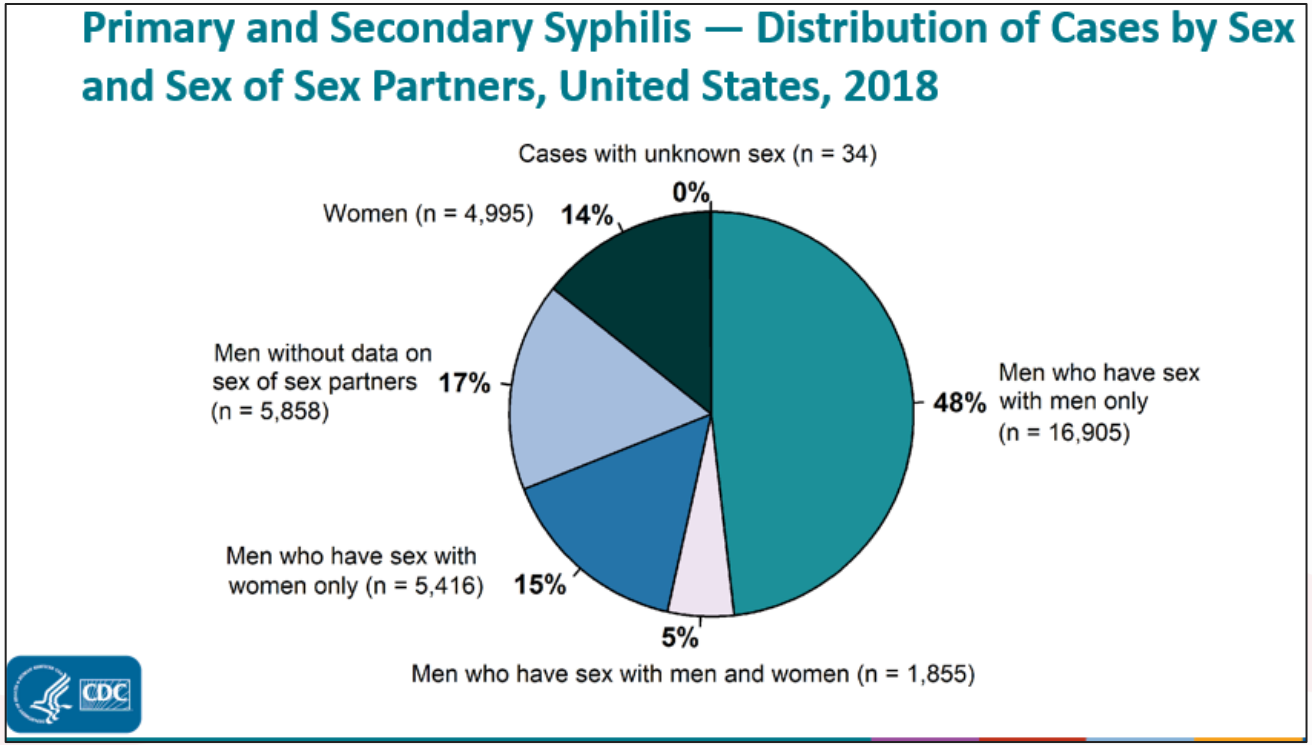
Syphilis: *Treponema pallidum*

- Cases are on the rise



Syphilis: *Treponema pallidum*

- Highest rates in MSM
- Highest rates in men: 25-29yo
- Highest rates in women: 20-24yo



Syphilis Stages

- Syphilis is a complex STI that has a highly variable clinical course (“The great imitator”)
- Early Syphilis: Primary Syphilis, Secondary Syphilis
- Latent Syphilis: no symptoms; may last for years; symptoms may never return, or the disease may progress to the third (tertiary) stage
- Tertiary Syphilis: develops years later in 15-30% without treatment
- Congenital Syphilis: babies infected through placenta or during birth
- Neurosyphilis: invasion of neuro system; can occur at any stage

Syphilis and HIV

- PWH tend to have more than one chancre, a larger and deeper primary lesion, higher rate of asymptomatic primary syphilis, more aggressive secondary syphilis and increase rate of early neurological involvement

Syphilis and HIV: a dangerous combination ,Lynn, Lightman Lancet Inf Dis. 2004
Case series of syphilis and HIV co-infections ,Wahab et al, Pak J Med Sci 2013

Primary Syphilis

- One or more ulcerative lesions (chancre)
- Usually appear at site of initial exposure (penile, oral, rectal, vaginal) about three weeks after exposure
- Usually painless
- Will spontaneously heal in 3-6wks
- Dx: clinical
- Tx: penicillin IM

cdc.gov; MayoClinic.org

Secondary Syphilis

- Localized or diffuse muco-cutaneous lesions; generalized lymphadenopathy
- Can include mucous patches, condyloma lata
- Usually appears 3-6wks after primary lesions resolves
- These signs and symptoms may disappear within a few weeks or repeatedly come and go for as long as a year
- Dx: serology; Tx: penicillin IM

Case History – Swollen Tongue

- 44yo MSM c/o 2wk tongue enlargement; has started biting it occasionally
- Meds: ART
- CBC wnl
- CD4 552 (Stage 1)
- HIV PCR <48 (controlled)

Case History – Swollen Tongue

- DDX: HPV, sarcoidosis, amylodosis, dysplasia, SCC
- Pt reported recurrence of “anal HPV” that coincided with enlargement of tongue
- HPV DNA – 83 high risk
- Biopsy dx: condyloma lata, secondary syphilis

Case History – Secondary Syphilis

- 30yo MSM
- CD4: 563 (Stage 1)
- HIV PCR < 40 (controlled)
- Non painful white adherent plaques on soft palate, duration unknown
- Bx: reactive hyperplasia with heavy concentration of spirochetes
- DX: condyloma lata; RPR:1:128
- TX: penicillin IM

Tertiary Syphilis

- Gumma in hard palate
- Extremely painful
- Granulomatous with ulceration

Case History - Neurosyphilis

- Almost complete paralysis of the muscles of the upper face.
- Appeared years after the initial diagnosis of primary syphilis
- Appears to be permanent.
- In photo, patient is trying to elevate his upper lip.

Neisseria gonorrhoeae

- Gonorrhea is the second most commonly reported communicable disease
- Causes infections in the genitals, rectum, and throat
- Can be acquired by having anal, vaginal, or oral sex with someone who has gonorrhea

Case History – gonorrhea

- Intracellular Gram-negative diplococci in biopsy
- Also had red maculopapular lesions in pharynx
- Lesions may be severe in immunocompromised patients
- Dx: NAAT, gram-stain/culture
- Tx: Ceftriaxone + azithromycin

Chlamydia trachomatis

- Chlamydia, caused by infection with *Chlamydia trachomatis;* most common notifiable disease in U.S.
- Can cause a pharyngitis but oral lesions have never been identified in my practice
- Dx: NAAT
- Tx: azithromycin or doxycycline

References

- CDC.org
- MayoClinic.org
- Oral Pathology, Clinical Pathologic Correlations, Regezi& Sciubba, 2nd
- Differential Diagnosis of Oral Lesions, Wood & Goaz, 4th
- Prevalence of Oral HPV Infection in the United State, 2009-2010, Gillison et al, JAMA 2012
- Oral Human Papillomavirus Infection Hazard of Intimacy Schlecht, JAMA 2012 (Letter to the editor)
- Syphilis and HIV: a dangerous combination ,Lynn, Lightman Lancet Inf Dis. 2004
- Case series of syphilis and HIV co-infections ,Wahab et al, Pak J Med Sci 2013

Resources

- Clinical Consultation Center
  http://nccc.ucsf.edu/
  - HIV Management
  - Perinatal HIV
  - HIV PrEP
  - HIV PEP line
  - HCV Management
  - Substance Use Management
- Present case on ECHO
  http://echo.unm.edu
  hivecho@salud.unm.edu
- Additional trainings
  scaetcecho@salud.unm.edu

- AETC National HIV Curriculum
  https://aidsetc.org/nhc
- AETC National HIV-HCV Curriculum
  https://aidsetc.org/hivhcv
- Hepatitis C Online
  https://www.hepatitisc.uw.edu/
- AETC National Coordinating Resource Center
  https://targethiv.org/library/aetc-national-coordinating-resource-center-0
- HIV Clinical Guidelines
  https://clinicalinfo.hiv.gov/en/guidelines
- www.scaetc.org