Module 7

Oral Lesions Associated with HIV Disease: Viral & Bacterial
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Oral Lesions Associated with HIV Disease: Viral & Bacterial

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The viral etiological agent of HIV-related oral lesions is most often due to viruses in the herpesvirus family:

- Herpes simplex virus 1 and 2 (HSV-1; HSV-2)
- Epstein-Barr virus (EBV)
- Cytomegalovirus (CMV)
- Varicella-zoster virus (VZV)
- HHV-8
Herpes Simplex 1 and 2

- Vesicular lesions which rupture becoming painful, irregular ulcerations;
  - HSV-1 (oral; perioral) and HSV-2 (genital) infection clinically identical
  - most oral lesions are caused by HSV-1; an HSV-2 etiology usually secondary to oral-genital contact
  - Must be sub-typed in lab
Herpes Simplex 1 and 2

- Intraorally, usually found on tissue bound to bone, e.g. hard palate
- Herpetic lesion lasting longer than 30 days is an AIDS defining lesion
Oral Viral Lesions
Herpes Simplex Virus 1 and 2 (HSV-1,2)

TREATMENT

- Acyclovir: 400mg tablet TID for 10 days
- Famciclovir: 500mg tablet TID for 10 days
- Valacccyclovir: 1g tablet BID for 10 days
- Topical Penciclovir 1%
- 50/50 mixture Liquid Benadryl & Maalox: swish and expectorate (palliative)
- Campho-Phenique®; Herpecin® (OTC)
Oral Viral Lesions
Epstein-Barr Virus (EBV)

Oral Hairy Leukoplakia

- White, often corrugated in appearance, or plaque-like or hair-like projections that does not wipe off
- Histopathology must demonstrate intracellular EBV for definitive diagnosis
Oral Hairy Leukoplakia

- White, corrugated plaque-like clinical appearance on the lateral border of tongue
- Histopathology must demonstrate intracellular EBV for definitive diagnosis
ORAL HAIRY LEUKOPLAKIA

- Treat for cosmetic reasons; otherwise no treatment is warranted
- Use of Acyclovir or topical Podophyllum resin has been reported to provide relief
Cytomegalovirus

- Spread via direct contact
- Usually causes eye complications
  - CMV retinitis
- Can cause intraoral ulceration(s)
- CMV is found in virtually all body fluids;
- Crosses transplacental barrier
  - Caution - pregnant dental providers.
Biopsy and histopathologic confirmation needed for definitive diagnosis

Treatment: Ganciclovir; Foscarnet

Oral lesion may be indicative of systemic infection; patient’s physician should be informed as IV medication may be indicated
Herpes Zoster (Shingles)
• Activation of *Varicella zoster* virus which has been dormant in sensory nerve
• Activation of VZV in Trigeminal nerve can result in lesions appearing intraorally or extraorally
• ALWAYS UNILATERAL
Shingles

- Begin as painful vesicular lesions that rupture and crust over; clinically appearing ulcerated
- Initial chief complaint may be pain or toothache with patient unable to specify which tooth is causing pain
Kaposi’s Sarcoma (KS)

- HHV-8 is a recently discovered herpesvirus that has been found to be a co-factor in AIDS related as well as non-AIDS related KS
- This reactive lesion is a malignant neoplasm of blood vessels; usually red to purple or bluish-red in appearance
Kaposi’s Sarcoma (KS)

• First clinical appearance may be firm purple to brown macules or papules. Lesion becomes more exophytic (and red to bluish-red) in appearance as it progresses

• Notice flat, purple lesion intraorally becoming more exophytic as it progresses extraorally from labial mucosa to vermilion border
Kaposi’s Sarcoma

- Differential diagnosis includes: hemangioma; melanoma; bacillary angiomatosis; pyogenic granuloma
- Treatment: Intralesional sclerosis agents like Vinblastine; Cryotherapy; Radiation therapy; Laser or Surgical removal
KAPOSI’S SARCOMA

- It has been found that potent antiretroviral drug combinations used in HAART that suppress HIV replication reduce the frequency of KS in HIV-infected individuals.
Oral Viral Lesions
Molluscum Contagiosum

- Molluscum contagiosum
  - Caused by a poxvirus
  - Appears as a skin-colored, smooth, waxy papule.
  - Lesions are typically seen on the trunk, however, molluscum contagiosum is frequently seen on the face of HIV seropositive individuals.
Molluscum Contagiosum

- Viral wart
- Spread via direct contact
- Clinical appearance as smooth skin-colored waxy “bumps”
- Treatment with cryotherapy or electrocautery with frequent recurrence
Oral Viral Lesions
Human Papilloma Virus (HPV)

Oral Viral Lesions
Human Papilloma Virus (HPV)

- Immunosuppression and immune reconstitution (as a result of HAART) are possible causes for this increased incidence.
- The human papillomavirus (HPV) is the viral etiological agent responsible for oral warts.
Oral Viral Lesions
Human Papilloma Virus (HPV)

- Clinically may appear cauliflower-like; “spiky” or flat with a raised surface (known as Focal Epithelial Hyperplasia)
Oral Viral Lesions
Human Papilloma Virus (HPV)

Papilloma on mandibular labial mucosa cauliflower-like in appearance.

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Oral Viral Lesions
Human Papilloma Virus (HPV)

Focal Epithelial Hyperplasia (FEH)

Clinical appearance is “spiky” or flat with a raised surface
Papilloma on palatal gingiva of central incisor is cauliflower-like in appearance.
Oral Viral Lesions
Human Papilloma Virus (HPV)

• Treatment consists of cryotherapy; laser or surgical removal; lesions often recur
Oral Viral Lesions
Human Papilloma Virus (HPV)

- Treatment is indicated if lesion tends to be secondarily traumatized (which can lead to autoinnoculation) or for cosmetic reasons
Oral Bacterial Lesions

• Bacterial manifestations of oral lesions seen in people with HIV disease is usually associated with HIV-related periodontal disease. (See “HIV-related Periodontal Disease”)

• Oral bacterial lesions covered in this section will include Tuberculosis; Syphilis; Bacillary (epithelioid) Angiomatosis
Necrotizing Stomatitis

- Extensive soft tissue necrosis exposing underlying bone; often no etiologic agent found.
- Compare appearance to aphthous ulcer on right.
Necrotizing Stomatitis

• 10 days after treatment with Decadron® (dexamethasone) elixir 0.5mg/5ml (swish & expectorate TID)

• Note exposed root as a result of necrosis of soft tissue and bone
Oral Bacterial Lesions

Necrotizing Stomatitis

- Thalidamide has also been shown to be effective. However, thalidamide has been associated with birth defects.

- Nutritional supplements may be necessary as pain may prevent patient from eating.
Bacillary (epithelioid) Angiomatosis

- Bacterial infection caused by *Bartonella henselae* / *Rochalimaea henselae*

- *These bacteria are often associated with exposure to cats*
Bacillary (epithelioid) Angiomatosis

- Clinical appearance is a raised, friable nodule that can be mistaken for Kaposi’s sarcoma.
- Treatment: Erythomycin 500mg qid or once daily dose of Azithromax 500mg for 3-4 weeks.
Bacillary (epithelioid) Angiomatosis

- Definitive diagnosis with Warthin-Starry stain biopsy where bacteria stains black
- Treatment
  - Erythromycin 500mg qid
  - Azithromax 500mg once a day
- Treatment can last for 4-6 weeks
Bacterial Infections
- *A. israelii; E. coli; K. pneumoniae* etiological agents cultured from oral ulcerative or granulomatous lesions; possible cause of slow/poor wound healing.
- Extraction site pictured to the right is 3 mos. post extraction; example of poor wound healing
Oral Bacterial Lesions; Syphilis

- **Bacterial STD:**
  - Infectious agent: *T. pallidum*
  - Rates among adolescent females twice as high as males
  - Rates among AA women 7 times greater than in entire female pop.
  - Current epidemic associated with crack cocaine

- **Stages:**
  - Primary:
    - Chancre, oral/genital
  - Secondary
  - Latent stages

- **Treatment:**
  - Penicillin, cephalosporins, tetracyclines
    - Prevents congenital syphilis in 90% of cases
  - If untreated, serious illness and death
Mycobacterium Tuberculosis (TB)

- Usually presents as a pulmonary infection; however, extrapulmonary lesions appear as painful, indurated, nonhealing ulcerated lesions.
- Sputum infected with M. tuberculosis can infect oral mucosal tissues in areas of localized trauma causing oral lesions.