Oral Manifestations of HIV Disease
Viral Infections
Human Herpes Viruses
Human Herpesviruses

- **Alpha Herpesviruses:**
  - Herpes Simplex Virus Type 1 (HSV-1)
  - Herpes Simplex Virus Type 2 (HSV-2)
  - Varicella Zoster Virus (HZV)

- **Beta Herpesviruses:**
  - Cytomegalovirus (CMV)
  - Human Herpesvirus Type 6 (HHV-6)
  - Human Herpesvirus Type 7 (HHV-7)

- **Gamma Herpesviruses:**
  - Epstein-barr Virus (EBV)
  - Human Herpesvirus Type 8 (HHV-8)
  - Kaposi’s Sarcoma Asso. Herpesvirus
Viruses Herpes; HSV-1 & 2

- **HSV-1:**
  - Oral/genital/mucocutaneous lesions;
  - Acute gingivostomatitis;
  - Pharyngitis;
  - Herpes labialis;
  - Keratoconjunctivitis;
  - Encephalitis;
  - Herpetic Whitlow;

- **HSV-2:**
  - Oral/genital/mucocutaneous lesions;
  - At least 1:4 persons > 12 y.o. infected;
  - 70-90% asymptomatic shedding;
  - Only about 20% of HSV-2 Ab+ know they are infected
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,
  - Hard palate
- Herpetic lesion lasting longer than 30 days is an AIDS defining lesion
HSV with HIV Infection

Extensive aciclovir-resistant herpes

Oral herpes simplex

Images courtesy: AIDS Images Library www.aidsimages.ch
HSV with HIV Infection
Herpes Viruses

• EBV (HHV-4):
  - Infects > 85% of population;
  - Agent of infectious mononucleosis
  - Cause of oral hairy leukoplakia;
  - Oncogenic: Burkitt’s Lymphoma;
  - Linked to:
    • Hodgkin’s Disease
    • Nasopharyngeal carcinoma
    • Other malignancies
EBV: Mostly spread by asymptomatic salivary shedding
Oral Hairy Leukoplakia

- White, often corrugated in appearance, or plaque-like or hair-like projections that do not wipe off

- Histopathology must demonstrate intracellular EBV for definitive diagnosis
HHV-8

- Kaposi’s Sarcoma associated virus
  - Strong evidence for KS etiology
  - Clearly STD
  - Shed in virtually all body fluids
    - Present in 12% of blood donors
- Need immunosuppression to cause disease
- Other suspected oncogenic roles
  - HHV-8 gene products promote spindle cell proliferation and angiogenesis and therefore may eventually lead to neoplasia.
- Possible link to prostate cancer
Kaposi’s Sarcoma (KS)

- HHV-8 is a recently discovered herpesvirus that 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
Herpes Simplex Virus Treatment

- **When to treat?**
  - Antivirals most effective within first 72 hours

- **Stages**
  - Prodrome
    - Itching, burning, tingling
  - Vesicle
  - Ulcer
  - Crust
  - Peeling crust/healing

- **What to treat with?**
  - Systemic
  - Topical
Herpes Simplex Virus Treatment Systemic

Genital Herpes: Oral Antiviral Therapy

- Valacyclovir [Valtrex®]
- Famciclovir [Famvir®]
- Acyclovir [Zovirax®]
Systemic Rx Antiviral Agents

- Acyclovir (Zovirax) 200 mg capsules
  - Disp: 50-60 capsules
  - Sig: Take one capsule 5 times/day or 2 capsules 3 times/day for 10 days

or

- Valaciclovir (Valtrex) 500 mg caplets
  - Disp: 42 caplets
  - Sig: Take 2 caplets 3 times/day for 7 days

Treatment Regimens for Recurrent HSV

- **Systemic Rx Antiviral Agents**
  - **Valaciclovir (Valtrex) 500 mg caplets**
    - Disp: 8 caplets
    - Sig: Take 4 caplets 2 times/day for 1 day
      - Separate doses by 12 hrs
      - Should be started at 1st signs of prodrome
  or
  - **Famciclovir (Famvir) 500 mg tablets**
    - Disp: 3 tabs
    - Sig: Take 3 tablets in a single dose
      - Should be started at 1st signs of prodrome

Topical Rx Antiviral Agents

- Denavir topical cream 1% (penciclovir)
  - Disp: 1.5 g tube
  - Sig: Apply locally to lesion every 2 hrs during waking hours
    - Apply as soon as symptoms occur

or

- Acyclovir (Zovirax) ointment 5%
  - Disp: 15 g tube
  - Sig: Apply thin layer to lesion 6 times/day for 7 days

Treatment Regimens for Recurrent HSV

• Topical OTC Antiviral Agents
  - Abreva (Docosanol) cream
    - Disp: 2 g tube
    - Sig: Apply locally to lesion 5-6 times/day for 4 days
      • Apply as soon as symptoms appear
  
or
  - Viroxyn solution (Benzalkonium 0.13% in isopropyl alcohol)
    - Disp: 1 pack of 3 individual swab kits
    - Sig: Apply locally as directed
      • Apply as soon as symptoms appear

Recurrent Oral Herpes Simplex Infection Treatment

- **Penciclovir 1% cream; Rx**
  - Denavir 1.5 gram tube; 10mg penciclovir/gram
  - Apply every 2 hrs when awake X 4 Days*

- **Acyclovir (Zovirax) ointment (5%)**

- **Docosanol 10% cream; OTC**
  - Apply 5x daily when awake X 4 days*

- **Valacyclovir (Valtrex)**
  - PO, 2grams q12h x 1 day*

- **Viroxyn solution**
  - Single application

*As soon as prodromal symptoms appear