

Module 7

Oral Lesions Associated with HIV Disease: Viral & Bacterial

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Valli I. Meeks, DDS, MS, RDH

Department of Diagnostic Sciences and Pathology

Dental School

University of Maryland Baltimore

and the

Pennsylvania-MidAtlantic AIDS ETC



Oral Lesions Associated with HIV Disease: Viral & Bacterial

Contributors:

Gail Cherry-Peppers, DDS, MS

Project Officer

Health Resources & Services Administration

HIV/AIDS Bureau

John McNeil, MD

Principal Investigator

National Minority AIDS ETC



Oral Viral Lesions in People Living With HIV/AIDS

- 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

Oral Viral Lesions

Herpes Simplex Virus 1 and 2 (HSV-1,2)

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



Oral Viral Lesions

Herpes Simplex Virus 1 and 2 (HSV-1,2)

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



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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**
- **Valacyclovir: 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 Viral Lesions

Epstein-Barr Virus (EBV)

Oral Hairy Leukoplakia

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



Oral Viral Lesions

Epstein-Barr Virus (EBV)

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**

Oral Viral Lesions

Cytomegalovirus (CMV)

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.



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Oral Viral Lesions

Cytomegalovirus (CMV)

- **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**



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Oral Viral Lesions

Varicella Zoster Virus (VZV)

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**



Oral Viral Lesions

Varicella Zoster Virus (VZV)

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**



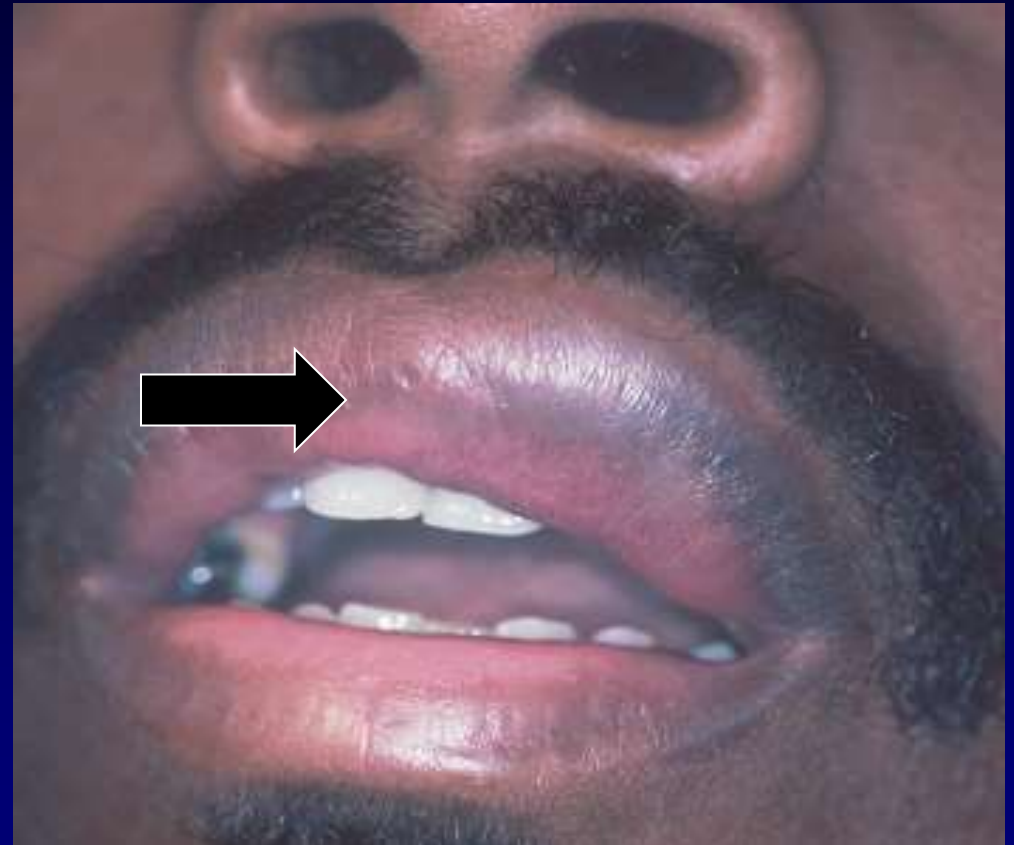
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Oral Viral Lesions

Herpes Hominus Virus (HHV-8)

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



Oral Viral Lesions

HHV-8

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 vermillion border



Oral Viral Lesions

HHV-8

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



Oral Viral Lesions

HHV-8

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.**

Oral Viral Lesions

Molluscum Contagiosum

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)

- Since HAART (highly active antiretroviral therapy), there has been a dramatic increase in the incidence of oral warts diagnosed in people with HIV disease. (Reference: Diz Dios P, Ocampo A, Miralles C. Changing prevalence of human immunodeficiency virus-associated oral lesions. Oral Surg Oral Med Oral Pathol Oral Radiol Endod 2000 October 403-4.; Patton LL, McKaig R, Strauss R, Rogers D, Enron JJ Jr. Changing prevalence of oral manifestations of human immunodeficiency virus in the era of protease inhibitor therapy. Oral Surg Oral Med Oral Pathol Oral Radiol Endod 2000;90:299-304.)

Oral Viral Lesions

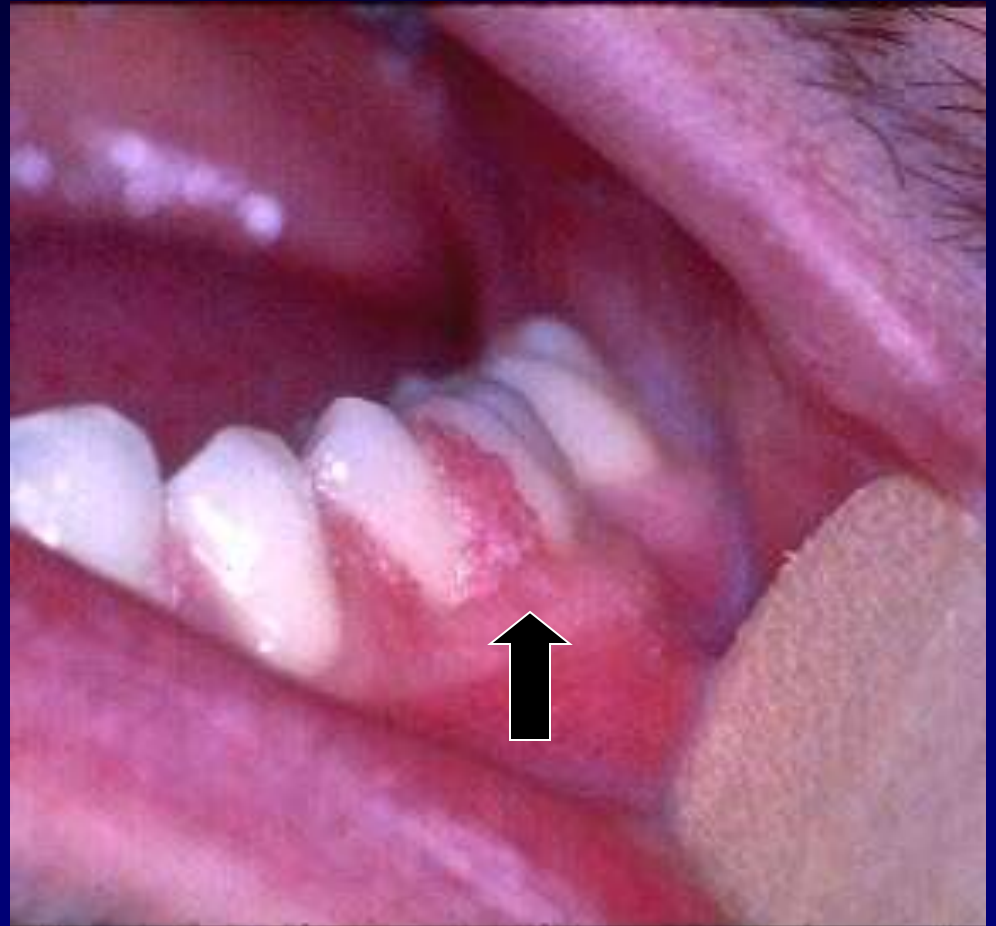
Human Papilloma Virus (HPV)

- **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

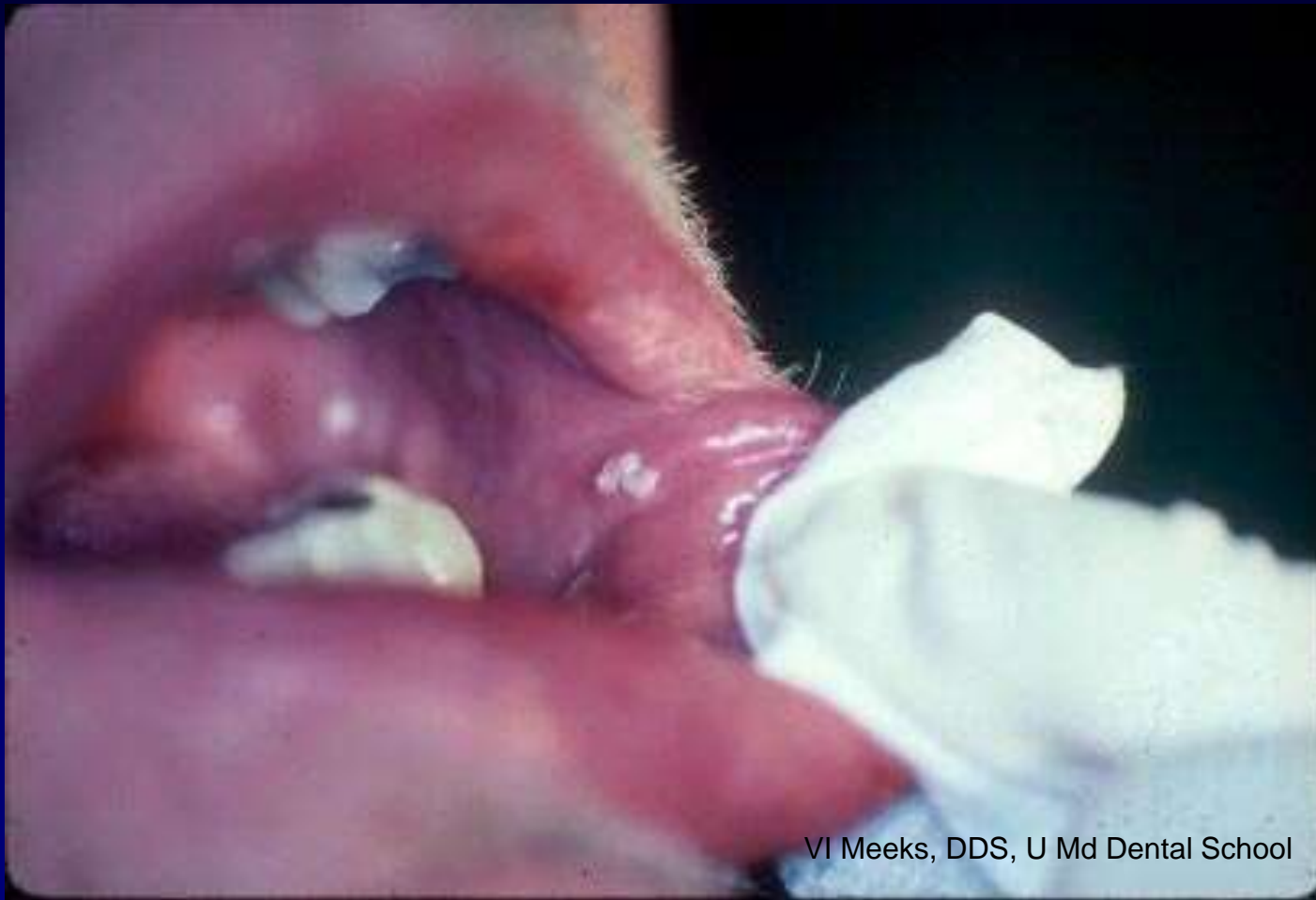
Human Papilloma Virus (HPV)

- Clinically may appear cauliflower-like; “spiky” or flat with a raised surface (known as Focal Epithelial Hyperplasia)



Oral Viral Lesions

Human Papilloma Virus (HPV)



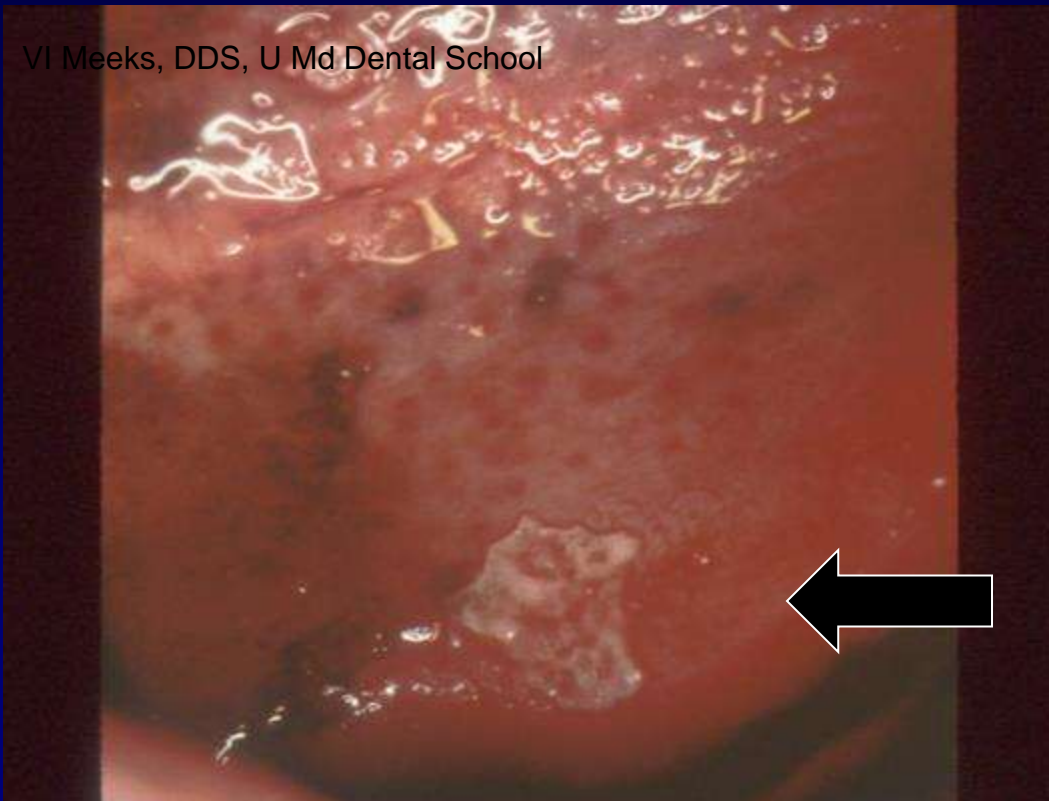
**Papilloma on
mandibular
labial mucosa
cauliflower-like
in appearance.**

Oral Viral Lesions

Human Papilloma Virus (HPV)

Focal Epithelial Hyperplasia (FEH)

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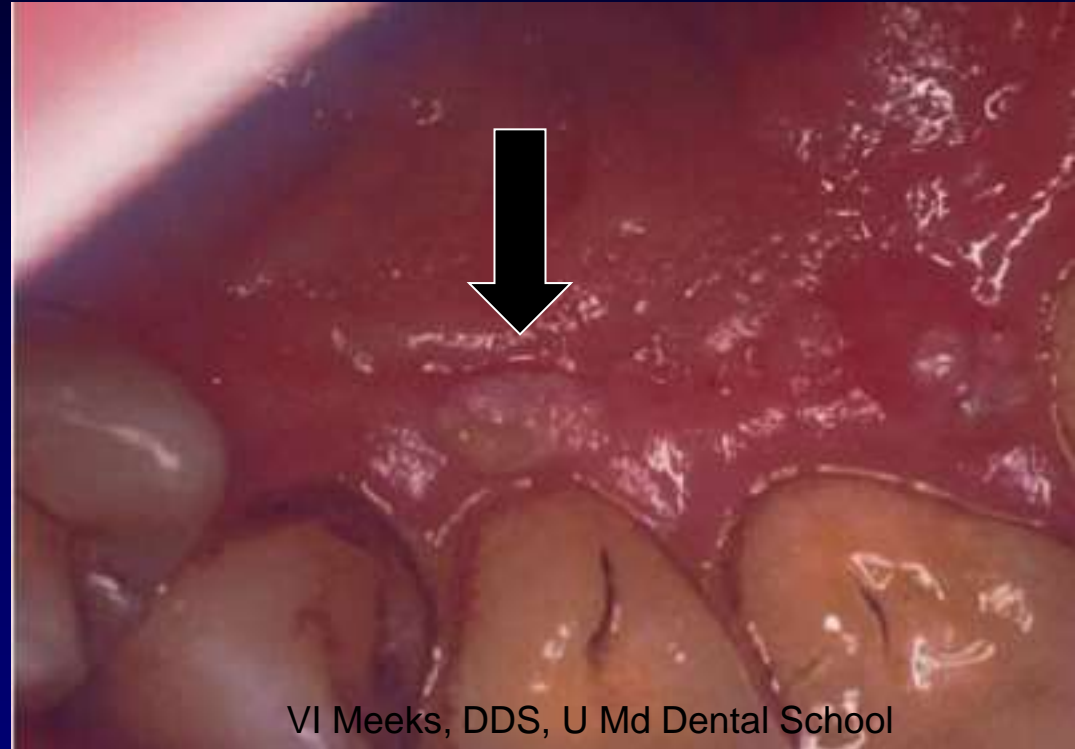


Clinical appearance
is “spiky” or flat with
a raised surface

Oral Viral Lesions

Human Papilloma Virus (HPV)

**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**

Oral Bacterial Lesions

Necrotizing Stomatitis

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



Oral Bacterial Lesions

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.**

Oral Bacterial Lesions

Bacillary (epithelioid) Angiomatosis

- Bacterial infection caused by *Bartonella henselae* / *Rochalimaea henselae*
- *These bacteria are often associated with exposure to cats*



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Oral Bacterial Lesions

Bacillary (epithelioid) Angiomatosis

- Clinical appearance is a raised, friable nodule that can be mistaken for Kaposi's sarcoma.
- Treatment: Erythromycin 500mg qid or once daily dose of Azithromax 500mg for 3-4 weeks



Oral Bacterial Lesions

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

Oral Bacterial Lesions

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



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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



Oral Bacterial Lesions

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.

