
C. Mark Nichols, DDS
Director of Dental Services, Bering Omega/ Houston Area Community Services, Houston
Dental Director, South Central AETC
Background information

- Most patients are in treatment for HIV and are maintaining adequate immune systems.
- Typical presenting oral lesions: HPV and dysplasias, OHL, candidiasis, RAS.
- However, due to various psychosocial factors some patients don’t seek medical intervention until a crises presents.
- Some patients do not respond well to CARV and develop health crises.
- Some of these crises are severe oral lesions.
By the end of the session, participants should be able to:

- Identify 3 common oral conditions seen in immune-compromised individuals with HIV/AIDS who present in crisis
- State at least 2 signs and symptoms commonly associated with necrotizing stomatitis, tumors, malignancies, infections, and hematological dysfunction
- Identify and describe “meth mouth” and discussed related psychosocial events.
Domestic Partner Physical Abuse 2014

- 47 yo, Black HS female
- HAART, CD4 658, HIV non detectable,
- CDC WNL
- Years of physical abuse to the face from her husband
Human Papilloma Virus Lesions

HPV

- Condyloma acuminatum – HPV 6,11
- Verruca vulgaris – HPV 1,2,4,7
- Verruca plana - HPV 3,10,28,41
- Focal epithelial hyperplasia – HPV 13,32
- HPV induced dysplasia – HPV 16,18,
HPV-16 induced severe dysplasia 2016

- 41 year old, white MSM
- HAART
- WBC – 5.7k, Hgb – 16.5, Plt – 163k
- CD4 – 247, HIV PCR 553
- Smokes tobacco
Tonsillar HPV-induced Squamous Cell Carcinoma

OraRisk HPV - 16
Tonsillar HPV-induced Squamous Cell Carcinoma
Tonsillar HPV-induced Squamous Cell Carcinoma

Severe dysplasia, R lat tongue

Referred to ENT. DX: stage IV disease
TX: exts, radiation, chemo. Ongoing
Case History 2015-16

- 49 yo, white MSM
- Hg 16.9, WBC 6.0, Plt 125k,
- CD4 435, HIV RNA 3700
- On no medication
- CC - abscessed tooth
- Dental visit 6 wks prior, dx: odontogenic infection, extracted #18.
- Infection did not resolve, advised to have #17 surgically removed at dental school
- Patient encountered some barriers and did not receive treatment, referred to Bering Omega
Case History
Differential Diagnosis?
Differential Diagnosis

- Squamous Cell carcinoma
- Lymphoma
- Metastatic disease
- Ameloblastic carcinoma
Treatment

- Ext 17,19
- Biopsy mass
Treatment
Diagnosis: Squamous cell carcinoma with nodal involvement

- Extract remaining teeth except for #32
- Refer to Ben Taub for imaging and staging
- Patient had surgical resection of the mandible and hard and soft tissue grafts and doing well.
- Currently making him dentures.
Medication Induced Necrotic Bone Disease
Bisphosphonates or Biologics 2016

- 53 yo, latino MSM
- On HAART
- CD4 283, HIV <20
- CBC WNL
- DX: Multiple Myeloma, treated with chemo and 22 doses of Zometa
Deep Fungal Infection – Histoplasmosis 2016

- 38 yo latino HS
- Recently started HAART and Px,
- CD4 -9, HIV 52000
- CBC WNL,
- Smokes
Severe Ulcerations 2014

- 42 yo white MSM
- CD4 125 (nadir <50)
- HIV 271180
- CBC WNL, ANC 1.4k
- Meds: Epivir, Truvada, Cymbalta
- Ulcerations on palate and buccal gingivina
Severe Ulcerations 2014
Severe Ulcerations 2014

- Wk dx: HSV ulceration
- Tx: Valtrex 500 bid
- No response in 1 wk
- Bx: buccal ging and hard palate
- Dx: coccidiodomycosis
- Refer to med for ROS and management
- Fluconazole 200mg bid
Candidiasis in 2014 to 2016

- 39 yo latino MSM
- CD4 33, HIV-160000
- CBC WNL
- Meds: Stribild,
- Voriconazole,
- Previously tried: fluconazole, itraconazole
Candidiasis in 2014

Non-responsive to any antifungals.
Case History 2013 – Swollen Tongue

- 44 yr old AfAm MSM
- Hmg 14.5, WBC 4.6, Plt 233k
- CD4 552, HIV PCR - <48
- Meds: Epzicom, Prezista, Norvir, Isentress
- CC: tongue seems to be larger for two weeks and has started biting it occasionally.
Case History 2013 – Swollen Tongue
Case History 2013 – Swollen Tongue
Case History 2013 – Swollen Tongue

- DDX: HPV, sarcoidosis, amyloidosis, dysplasia, SCC
- Patient reported recurrence of “anal HPV” that coincided with enlargement of tongue
- HPV DNA – 83 high risk
- Biopsy dx: condyloma lata, secondary syphilis
Case History 2013 – Swollen Tongue
Primary syphilis in 2013
Severely painful gums 2014

- 48 yr old, white MSM
- CBC – WNL
- CD4 23, PCR 186500
- Meds: Prezista, Norvir, Truvada, Prednisone, Bactrim
- Rapid onset of mouth pain
Severely painful gums 2014
Severely painful gums 2014

- Ulcerations appear on both keratinized and nonkeratinized tissue, irregular borders
- The palatal lesions are typical of intraoral HSV
- 5 days prior to symptoms had been with a group of children
- No previous history of HSV labialis
- Dx: Primary herpetic gingivostomatitis
- Tx: Valtrex 1000mg bid for 10 days.
Necrotizing Stomatitis

- CD 4 cell counts usually below 100
- Leukopenia and neutropenia are common
- Most patients are unable to eat and have difficulty in swallowing pills
- Fear and anxiety levels are high
- Breath smells really bad
- When localized to peridontium – NUG, NUP
- Ulceration – necrotizing ulcer or NOMA-like lesion
NUP – necrotizing ulcerative periodontitis
Necrotizing ulcerations
NOMA-like lesion
Necrotizing ulcerations
NOMA-like lesion
Necrotizing ulcerations
NOMA-like lesion
Necrotizing Ulcerative Periodontitis 2014

- 52 yo latino MSM
- CD 694, HIV <20
- CBC WNL
- Prezista, Norvir,
- Epivir, Viread
- Hx: Bilateral hip replacement
- Tx: S/RP.
- Metronidazole,
- Chlorhexidine
Necrotizing Ulcerative Periodontitis 2014
Necrotizing Ulcerative Periodontitis in 2014

- 41 yo white MSM
- CD4 172, HIV-574610
- CBC WNL
- Meds: Reyataz, Norvir, Truvada
- Presents for routine cleaning
Necrotizing Ulcerative Periodontitis in 2014
Necrotizing Ulcerative Periodontitis in 2014
Necrotizing Stomatitis in 2014

- 32 yo white MSM
- CD4 494, HIV-6690
- Meds: Prezista, Norvir, Truvada
- Valtrex 1gm tid
- Viscous lidocaine
- Seroquel, Paxil, Remeron
Necrotizing Stomatitis in 2014

- **Wk Dx:** nonspecific ulceration
- **TX:** prednisone 60mg qd for 2wks, then begin taper and transition to clobetasol gel
- **Augmentin875 bid**
Necrotizing ulcerations
Historical case from 1995

- 44 yr old, AfAm MSM in renal failure
- Hemodialysis M-W-F
- CD4 < 50, HIV viral load ??? >750k
- Bx to rule out viral etiology
- Prednisone 60mg qd
- Amoxicillin/Clavulanate, clindamycin, metronidazole, chlorhexidine rinse
- Thalidomide 200mg qd hs
- Debride as necessary
Necrotizing ulcerations
Necrotizing ulcerations

12 weeks thalidomide 200mg qd
Adverse events of thalidomide

- Teratogenic effects (anti-angiogenesis)
- Somnolence – 97%, duration variable
- Skin Rash – 30%
- Peripheral neuropathy
  - Exacerbation of pre-existing neuropathy
  - Almost 100% with delaviridine
- Decreased libido
- Neutropenia
- Nausea, headache, constipation
Thalidomide (α-phthalalimide glutarimide)

Mechanism of Action

- Immune Modulation - Inhibits production of TNF-α by destabilizing the TNF-α mRNA

- HIV Inhibition
  - Reduces HIV-1 gag mRNA expression in latently infected monocyte cell lines
  - May inhibit HIV replication in macrophages by inhibition of NF-κB. (NF-κB is an enhancer for transcription of HIV)
Thalidomide

**BIRTH DEFECTS**

If a woman taking THALOMID™ (thalidomide) gets pregnant, her baby will almost certainly have severe birth defects—or may even die. Women taking THALOMID™ (thalidomide) MUST NOT become pregnant, and men taking THALOMID™ (thalidomide) must not have sex with a woman without using a latex condom. If you are a woman and you have sex without birth control for any reason, you should stop taking THALOMID™ (thalidomide) immediately and talk to your doctor. If your doctor is not available, call 1-888-668-2528 for information about emergency contraception.

**OTHER SIDE EFFECTS**

THALOMID™ (thalidomide) can cause other health problems called “side effects,” including:

- **Nervous system damage:** Numbness is a common and potentially severe side effect that may be irreversible. Numbness, tingling, and cold, and feel may begin, halt, or get worse. If so, stop taking THALOMID™ (thalidomide) and call your doctor right away.
- **Dizziness:** THALOMID™ (thalidomide) often causes dizziness. If you feel dizzy, you should not operate machinery or drive a car while taking THALOMID™ (thalidomide).
- **Diarrhea:** To avoid diarrhea, sit up for a few minutes prior to standing up from a lying down or sitting position.

**PRECAUTIONS**

Do not drink alcohol or take any other medicine that has not been prescribed by your doctor, especially nonprescription drugs that make you sleepy.

**Allergic reactions:** If you have a red, itchy rash, contact your doctor right away. You may also have a fever, tiredness, or feel dizzy. If you feel dizzy, do not get up quickly from a lying down or sitting position or you may fall.

**IF YOU ARE A WOMAN:**

Your doctor will give you a pregnancy test. If you are pregnant or breast-feeding a baby, you may not take THALOMID™ (thalidomide).

You must sign a form that says you understand the risk of birth defects (see information on birth defects above), and that you agree not to become pregnant while taking THALOMID™ (thalidomide). If there is ANY chance that you may become pregnant, you must use TWO forms of birth control for 1 year after stopping taking THALOMID™ (thalidomide), and for at least 4 weeks after you stop taking it.
Thalidomide use in females

- Fecundity status – surgically sterilized or PM
- If of child bearing potential:
  - begin IFC process very early
  - Frank discussion of sexual activity
  - Commercial sex worker?
  - Control in sexual situations
  - Ability to use two forms of birth control
  - Number of dependent children, sole caretaker?
  - Good communication with OBGYN
  - Consider involving a social worker

- Also, reproductive intercourse should be discussed with any male patient
Necrotizing stomatitis in 2012

- 55 yr old AfAm HS male
- Hypertension, AIDS, renal transplant, Type I diabetes
- CD4 110, HIV - <48
- ANC – 880, ALC – 392
- CARV: abacavir, lamivudine, lopinavir/ritonavir
- Other meds: tacrolimus (Prograf), mycophenolate mofetil (Cellcept), prednisone 5mg, carvedilol (Coreg), clonidine, insulin
- Recommended thalidomide to MD
Necrotizing stomatitis in a 55 yr old AfAm HS male in 2012
Severe Ulcerations 2014

- 47 yo, AfAM HS male
- CD4 98, HIV ???
- Hgb 10.6, WBC 3.0
- Plt 260k, ANC 0.3k
- Meds: Prezista, Norvir, Isentress (4wks)
- Large, deep ulcerations for 3 months
Severe Ulcerations 2014
Severe Ulcerations 2014

- Bx: to rule out CMV
- Most consistent with neutropenic ulcers with a necrotizing component
- Prednisone 60mg qd
- Pain Meds
Kaposi’s sarcoma

- Multifocal reticuloendothelial cancer
- Most common when CD4 < 200 (0 – 600)
- Coinfection with HHV 8
- Occurs primarily in MSM
- Incidence of oral KS lesions decreased sharply after CARV from 7 new cases a month to 1-2 each year at Bering Omega
Kaposi’s sarcoma from 7/2012

- 39 yr old latino MSM
- CD4 160, HIV PCR 41,900, platelet 80k
- No antiretrovirals, only Bactrim
- Dermatology had biopsied a lesion on the head.
- Patient did not return for any follow up appts.
Kaposi’s sarcoma from 7/2012
Kaposi’s sarcoma from 7/2012
Treatment of Kaposi’s Sarcoma

- Watchful waiting with CARV (mild/mod)
- Surgical excision in some cases
- Systemic chemotherapy
- Radiation therapy
- Local chemotherapy
- Combined local/systemic chemotherapy
Kaposi’s sarcoma in 2013

- 33 yr old, white MSM, LSP 10
- Dx with HIV in 2005 but inconsistent with medical care
- Started feeling tired and weak 3 months prior
- CD4 96, HIV PCR 100,000 copies
- Begin Atripla 2 weeks before dental visit
- Was referred by MD for examination of oral lesions
- Multiple exophytic purple lesions primarily in maxilla, OHL bilateral tongue, HPV 68(high)
Kaposi’s sarcoma in 2013
Kaposi’s sarcoma in 2013
Kaposi’s sarcoma in 2013
Kaposi’s sarcoma in 2013

- Treatment plan with physician consultation
- Intralesional vinblastine - up to 4mg per session
- Estimate 4 sessions
- Manage pain with oxycodone and tramadol
- Manage any nausea with promethazine 25mg
- Watchful waiting of dermal lesions
ILV - Intralesional vinblastine

- 0.4mg/cc dilution with saline
- Local anesthesia
- 0.1mg/cm² of lesion
- Repeat every 2-3 weeks
Kaposi’s sarcoma in 2013

Injecting 3.6mg vinblastine sulfate, 0.4mg/cc for a total volume of 9cc
Kaposi’s sarcoma in 2013

2 weeks post first series
Kaposi’s sarcoma in 2013

2 weeks post second series of 3.6mg
Kaposi’s sarcoma in 2013

3 weeks post third series of 3.6mg

Nichols et al, JADA Vol. 124, No.11-78-84 November 1993
Kaposi’s sarcoma in 2013

5 weeks after 4th treatment

Nichols et al, JADA Vol. 124, No.11-78-84 November 1993
Kaposi’s sarcoma in 2013

5 weeks after 4\textsuperscript{th} treatment
Soft palate lesion - 2014

CC – “something is in my throat”
Soft palate lesion - 2014

- 51 yr old, AFAM MSM identifies as HS
- CBC WNL
- CD4 18, PCR 63,800
- Meds: Epzicom, Prezista, Norvir, Bactrim
- DDX: salivary gland tumor, lymphoma, Kaposi’s sarcoma, SCC
Soft palate lesion - 2014

- Bx – revealed Kaposi’s sarcoma with lymphoid hyperplasia. Probably responding to HAART
- Tx: Watchful waiting or ILV
Lymphoma

- Ki 1 Large cell lymphoma
- Plasmablastic lymphoma
- B small cell lymphoma
- Diffuse large B-cell lymphoma
- Burkitt’s lymphoma
Lymphoma in 2013

- 45 yr old latino MSM,
- CD4 302, HIV PCR 111,000, HPV normal
- Atripla (sporadically – nausea)
- Headaches, spontaneous paresthesia of bilateral lower lip, multiple masses consistent with metastatic disease
- Biopsy
Lymphoma in 2013
Lymphoma in 2013
Lymphoma in 2013
Lymphoma in 2013
Lymphoma in 2013
Lymphoma in 2013

- Dx: EBV positive immunodeficient Burkitt’s lymphoma with strong plasmacytic features
- Aggressive B cell lymphoma
- One of the first types of lymphomas seen in the AIDS epidemic
- Patient was referred to MD Anderson and has received 3 rounds of chemo
- Tumors are in complete remission
Lymphoma in 2014

- 33 yo white MSM
- CD4 195, HIV-126240
- CBC WNL
- Meds: Prezista, Norvir, Truvada, Valtrex, Seroquel
- Hx: crack cocaine, meth, MTN Dew
- CC: bleeding gums and loose teeth
Lymphoma in 2014

- Bx: high grade diffuse B cell lymphoma,
- Minor HPV in retromolar area
- Tx: ext of all maxillary teeth prior to chemo
- Referral to oncology
Meth Mouth

- 29 year old white MSM
- CD4 100, HIV PCR 20k
- CARV semi adherent
- Used methamphetamine various route
- Acquired drug through sexual encounters.
Meth Mouth
Meth Mouth

- 26 yo white MSM
- CD4 460, HIV<20
- CBC WNL
- Meds: Stribild
- Hx of meth use for 7 years
- Reports trading sex for drugs at times
Dermoid Cyst in 2013

- 55yo AfAM MSM
- CD4 426, HIV – 42
- CBC WNL
- Meds: Atripla, Albuterol
- Dermoid cyst present for 2 years
- Patient becoming suicidal
Dermoid Cyst in 2013
Dermoid Cyst in 2013
Summary

- Even with significant advancements in the management of HIV disease, patients still present with critical or severe oral health conditions.
Thank you!

www.aidseducation.org
www.hivdent.org
mnichols@beringomega.org
713 341-3793

Preceptorships available
C Mark Nichols, DDS
Dental Director, South Central AETC
Director of Dental Services, Bering Omega/ Houston Area Community Services

DENTAL MANAGEMENT OF THE HIV/AIDS PATIENT
Invasive Procedure Risk Assessment

- ITP - Idiopathic thrombocytopenia purpura
  - < 150,000 plts/mm³ common in AIDS
  - > 60,000 plts/mm³ usually safe for dental/oral surgery
  - > 20,000 plts/mm³ usually safe for minor dental proc.
  - < 20,000 plts/mm³ any tissue manipulation contraind.
- Aspirin (acetylsalicylic acid) - extreme caution with prolonged use
- Anemia (Normal hemoglobin 12.7-18.1g/dL)
  - Minor surgery routine with hemoglobin >7g/dL
  - Any dental procedure, extreme caution <7g/dL
  - Respiratory depressing drugs contraind. <10g/dL
Invasive Procedure Risk Assessment

- Antibiotic Prophylaxis for Infective Endocarditis
  - no special consideration
- General Antibiotic Coverage
  - no specific indication for HIV/AIDS
  - neutrophils <500 cells/mm³ & procedure 出血 bleeding
  - chlorhexidine rinse recommended
- Antibiotics for Post Procedural Local Infections
  - HIV/AIDS patients not at increased risk
  - if one develops, use PO systemic antibiotics (amoxicillin, azithromycin, clindamycin, metronidazole, amoxicillin/clavulanic acid)

From the JADA (Journal of the American Dental Association)
Dental Management of the HIV-Infected Patient, 1995 & the American Academy of Oral Medicine
CD4 cell count considerations

- No special indication for premedication based on CD4 cell count.
- From the JADA (Journal of the American Dental Association) Dental Management of the HIV-Infected Patient, 1995 & the American Academy of Oral Medicine
- However, if CD4 cell count low, <50, may consider prophylaxis for candidiasis for delicate procedures such as sinus lifts, bone grafts, implants, and sinus fistula closures, or if patient needs corticosteroid treatment.
- Fluconazole 100mg qd