HIV Oral Health and Systemic Health

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Links Between Oral Health and Systemic Health:
developing a causal link between oral conditions and morbidity and mortality
The Importance of Oral Health

- Diabetes
- Heart Disease
- Stroke
- Pregnancy Issues
- Osteoporosis
- Respiratory Infections
Oral Health Links to Systemic Diseases

- Periodontal Oral Health and Diabetes
  - Persons with noninsulin–dependent diabetes mellitus are three times more likely to develop periodontal disease than non-diabetics.
  - Evidence exists that a history of chronic periodontal disease can disrupt diabetic control.
Oral Health Links to Systemic Diseases

- Periodontal Disease and Heart Disease:
  - Oral bacteria can affect the heart when entering blood stream, attaching to fatty plaques in the coronary arteries contributing to clot formation.
Oral Health Links to Systemic Diseases

• Strokes
  • Studies do suggest that a relationship between periodontal disease and stroke.
  • One study showed people diagnosed with acute cerebrovascular ischemia were found more likely to have an oral infection.
Oral Health and Systemic Disease

• Preterm Low Birth Weight Babies
  • Severe periodontal disease in pregnant women can lead to significant increase in the risk of delivering preterm low birth weight babies
  • Theorize that oral pathogens release toxins that reach the human placenta via mother’s blood and affect fetal growth
Oral Health Links to Systemic Disease

- **Osteoporosis**
  - Studies suggest that osteoporosis may lead to tooth loss because the density of supporting tooth bone may be decreased
Oral Health Links to Systemic Diseases

- **Respiratory Diseases**
  - Scientists have found that oral bacteria can be aspirated into the lung to cause respiratory diseases (pneumonia) or exacerbate existing respiratory diseases (COPD)
Oral Infections and Chemotherapy

• Oral mucositis can be a major problem during chemotherapy with some anticancer drugs
  • Estimates that approximately 400,000 patients will experience oral complications from chemotherapy
  • Ulcerated mucosa is susceptible to infection by microbial flora that normally inhabit the oral cavity
Xerostomia

• Causes
  • Dry mouth may be brought about through medications (antihypertensives, antidepressants), chemotherapy or radiation, Sjorgen’s syndrome or HIV-associated salivary gland disease

• Treatments
  • OTC or prescription (pilocarpine)
Facial Signs and Symptoms of Systemic Disease

A number of signs and symptoms of disease can be detected in or around the head and neck.
Diseases and Conditions causing lesions of oral mucosa: viral

<table>
<thead>
<tr>
<th>Disease</th>
<th>Usual Location</th>
<th>Clinical Features</th>
<th>Course</th>
</tr>
</thead>
<tbody>
<tr>
<td>Herpes Simplex</td>
<td>Palate and gingiva</td>
<td>Small vesicles that can rupture then coalesce</td>
<td>Heals spontaneous in approx. 7d</td>
</tr>
<tr>
<td>Herpes Zoster</td>
<td>Cheek, tongue, palate</td>
<td>Gingiva, palate and pharynx</td>
<td>Gradual healing post neuralgia</td>
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<tr>
<td>Primary HIV infection</td>
<td>Gingiva, palate and pharynx</td>
<td>Acute gingivitis and oral pharynx ulcers</td>
<td>Followed by HIV sero-conversion</td>
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Diseases and conditions causing lesions of oral mucosa: bacterial and fungal

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<tr>
<td>Primary syphilis (chancre)</td>
<td>Lip, tongue, tonsils</td>
<td>Small papule developing into ulcers</td>
<td>Chancre heals in 1 – 2 weeks</td>
</tr>
<tr>
<td>Gonorrhea</td>
<td>At site of inoculation</td>
<td>Dryness or heat in month; intense pain</td>
<td>Resolves with antibiotic therapy</td>
</tr>
<tr>
<td>Candidiasis</td>
<td>Any area of oral mucosa</td>
<td>White patches or red patches</td>
<td>Resolves with antifungal</td>
</tr>
</tbody>
</table>
Oral Health-Related Quality of Life Dimensions

- Physical well-being
- Mental well-being
- Social well-being
Oral Health-Related Quality of Life Dimensions

- **Nutrition**: Oral dysfunction can seriously impact nutritional status
- **Patients who are edentulous (full or partial)** favor diets higher in carbohydrates and lower in protein content
  - **Maintaining muscle mass**
Oral Health-Related Quality of Life Dimensions

- Eating and Chewing
  - Missing teeth are qualitatively linked to a poorer diet
  - Chewing ability declines as tooth loss increases, regardless of denture replacement
Oral Health-Related Quality of Life Dimensions

- Sleep Issues
  - 3 to 5% percent of the population reported trouble sleeping because of pain or discomfort from dental problems.
Oral Health-Related Quality of Life Dimensions

• Psychosocial Dimensions
  • Avoidance of social contact due to facial appearance
  • Depressive effects of persistent oral pain
Drug Regimen Compliance and Oral Health

HIV treatment compliance may be impacted by oral pain, xerostomia, dysphagia
The Special Importance of Oral Health in HIV Patients

Oral lesions in patients with HIV may be particularly large, painful or aggressive.

Necrotizing Ulcerative Periodontitis

Aphthous Ulcerations
HIV-associated oral lesions

- Early studies reported that approximately 90% of HIV+ patients will present with at least one oral lesion in the course of their illness.
- Current studies report the prevalence or oral lesions has significantly declined.
Comparative Prevalence of Oral Manifestations of HIV at UNC Early (preHAART) vs. Late (post HAART)

Any Oral
OHL
OC
PERIO
APHTH
HPV
SALGLD
HSV
KS
ULCRNOS
NHL

Percent Prevalence

Early (2/95-9/96), n=272
Late (10/96-2/99), n=298
The Special Importance of Oral Health in HIV Patients: Oral Lesions

• Oral lesions may act as markers for seroconversion
• Oral Lesions may herald decline in immune function

• Pseudomembranous candidiasis
Additional References

