Recognizing Oral Lesions and Oral Cancers in Family Medicine

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For more than 35 years, Dr. Deutchman has been involved in rural medical practice or teaching. In 2000, he received the American Academy of Family Physicians’ (AAFP’s) Exemplary Teaching Award for Full-Time Faculty. He has experience performing and teaching maternity care, ultrasonography, and other clinical procedures in ambulatory and hospital settings. He is founding director of the University of Colorado School of Medicine’s rural track for students who are planning a career in rural medical practice. In addition to his focus on rural physician workforce development, Dr. Deutchman is engaged in interdisciplinary training and is a co-author of Smiles for Life: A National Oral Health Curriculum.

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Dr. Sievers earned her medical degree from the University of Missouri in Columbia, and completed her residency in family medicine with the University of Missouri in Kansas City. Her medical practice responsibilities include full-spectrum family medicine care at St. Mary’s Medical Center in Grand Junction, Colorado. In addition, she teaches full-spectrum family medicine, including inpatient and outpatient services, obstetrics, and pediatrics. Dr. Sievers serves on the national Smiles for Life committee, which helps bring dental education and training to family physicians. She also serves as a deputy editor for the Family Physicians Inquiries Network’s Help Desk Answers.

Learning Objectives

1. Identify patients who are at risk for having inadequate dental care and may need to be examined for oral lesions, especially among pregnant or older patients.
2. Identify red flags, such as oral manifestations (e.g. oral mucosal lesion) that may be manifestations of immunologic diseases, endocrinopathies, hematologic conditions, systemic infections, and nutritional disorders.
3. Follow evidence-based recommendations for diagnosing oral cancer.
4. Develop collaborative care plans for referral and management of patients with oral cancer.
Audience Engagement System

Professional practice gaps
- Less than half of the US population receives routine dental care
- Oral lesions can be clues to systemic disease
- Oral cancer frequently escapes early detection

Oral Health Literacy
- Very low in the general public
  - “They’re just baby teeth”
  - “Bring him in when he’s 4 years old and can sit still”
  - “My 3 year old brushes his own teeth”
  - “Fluoride is dangerous”
  - “You lose a tooth for each pregnancy”
- Most medical providers get essentially no oral health education.

Surgeon General's Report on Oral Health in 2000:
- Dental care is the most common unmet health need.
- Oral disease can severely affect systemic health.
- Much oral disease is preventable or at least controllable.
- Profound disparities in oral health and access to care exist for all ages.

Oral conditions we will address:
- Teeth:
  - Early childhood caries (ECC)
  - Adult caries
- Gums: periodontal disease
- Oral Mucosa:
  - Signs of systemic disease
  - Oral cancer

Teeth: caries
Caries is the process; cavities and the complications of cavities are the result: pain, missed school and work, expensive restoration, infection, tooth loss. Oral bacteria (Mutans Strep) break down dietary sugars into acids which eat away the tooth.
ECC starts with white spots

- White spots are demineralized enamel
- Typically starts at gumline of upper teeth
- Topical fluoride varnish can arrest the process
- Dental referral is indicated
- Counsel about diet and oral hygiene

ECC leads to brown cavitations

- Loss of enamel - exposed underlying dentin
- Immediate dental referral
- Counsel about diet and oral hygiene counseling
- Topical fluoride varnish to arrest lesions not requiring restorations

Advanced ECC and complications

- Multiple dark cavities in anterior and posterior teeth
- Abscesses, draining fistulae, cellulitis
- Pain
- Poor school performance
- Poor self-esteem
- Urgent dental referral
- Diet and oral hygiene counseling

Adult caries

- High bacterial counts
- Family history of caries
- Frequent eating of sugar-containing foods
- Inadequate fluoride
- Low socioeconomic status

Gum disease: gingivitis

- Tenderness, erythema, bleeding
- Caused by plaque buildup, hormone levels, etc.
- Gum inflammation but no destruction of periodontal ligament or bone
- Good home hygiene
- Regular dental visits

Chronic periodontitis

- Chronic plaque exposure causes inflammation
- Destruction of periodontal ligament
- Loss of supporting bone
- Tooth loosening and loss
- Good oral hygiene and regular dental visit
- Tobacco and other irritants, such as cannabis, should be avoided
- Dental referral for deep root scaling
- Oral antibiotics and solutions such as chlorhexidine
Periodontitis is linked to systemic disease

- Good evidence for oral/systemic link
  - Infective endocarditis (6% of cases)
  - Prosthetic device infection
  - Diabetes – reciprocal effects
- Emerging evidence for oral/systemic link
  - Obesity
  - Coronary artery disease
  - Adverse pregnancy outcome
    - Preterm birth and low birth weight and preeclampsia
    - Lower respiratory disease

Inflammation & host response is the link

- Macrophages
- Neutrophils
-Toxins
- Anaerobic bacteria in plaque

Circulating inflammatory mediators
- IL-1
- TNFα

Oral-Systemic Manifestations

- Oral exam may reveal signs/symptoms of:
  - Endocrinopathies
  - Hematologic conditions
  - Systemic infections
  - Immunologic disease
  - Nutritional disorders

<table>
<thead>
<tr>
<th>Signs/Symptoms</th>
<th>Clinical Presentation</th>
<th>Associated condition</th>
<th>Oral manifestations</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Endocrinopathies</td>
<td>Periodontal bleeding</td>
<td>DM</td>
<td>Gingivitis, periodontitis, candidiasis</td>
<td>Glycemic control may be improved with treatment</td>
</tr>
<tr>
<td></td>
<td>Mucosal pigmentation</td>
<td>HIV-associated PD, Addison</td>
<td>Gingiva hyperpigmentation</td>
<td>May be ethnic pigmentation</td>
</tr>
<tr>
<td>Hematological and/or Nutritional disorders</td>
<td>Mucosal pallor and atrophy</td>
<td>Anemia</td>
<td>Mucosal pallor, oral ulcers, candidiasis</td>
<td>May be hard to appreciate</td>
</tr>
<tr>
<td>Immunological</td>
<td>Oral lesions: ulcers, erosions, swelling</td>
<td>Lichen Planus, SLE, Crohn, Behcet</td>
<td>Erythema, ulcers, discoid lesion</td>
<td>Topical corticosteroids, resolve with flu corticosteroids</td>
</tr>
<tr>
<td>Systemic infection</td>
<td>Fever, malaise</td>
<td>HSV</td>
<td>Vesicles, ulcers</td>
<td>Antivirals</td>
</tr>
</tbody>
</table>


AES Question:
Bleeding gums and a beefy lump in a pregnant woman. Which one of the following is correct?

A. The lump is a pyogenic granuloma; should be removed as soon as possible
B. Gingivitis is rare in pregnancy
C. Gingivitis is a mild form of periodontitis
D. The patient should avoid dental care until after her pregnancy

Pyogenic granuloma

- Rapidly growing, tumor-like lesion
- Erythematous, non-painful, smooth or lobulated mass that bleeds easily when touched
- Common on the gingiva, but less common include the lip, tongue, or buccal mucosa
- Treatment: conservative surgical excision
- Recurrence if inadequately removed
- Higher recurrence rate if removed during pregnancy

AES Question: Gingival hyperplasia is associated with all of these medications except:

A. Phenytoin  
B. Loop diuretics  
C. Methotrexate  
D. Cyclosporine  
E. Calcium channel blockers

Gingival hyperplasia

Symptoms
- Unusual gingival enlargement
- Teeth become hard to clean
- Increased risk for periodontitis

Etiology
- Poor hygiene
- Drug induced
- Underlying systemic disease

Treatment
- Meticulous hygiene
- Regular cleanings
- May require gum resection surgery
- Consider alternative medications

Other oral effect of medications: xerostomia

- Decreased saliva promotes periodontal disease
- Many medications reduce salivary flow
  - steroids
  - antihistamines
  - diuretics
  - antihypertensives
  - anticholinergics
  - antidepressants
- Counsel patients about oral hygiene when prescribing these meds

Oral candidiasis – think of antibiotic complication and diabetes

- Pseudomembranous
- Erythematous
- Angular cheilitis

Oral ulcerations – aphthous stomatitis

- Has three forms
- Also called canker sores
- May be associated with Behçet’s disease
- Can be associated with vitamin deficiencies
- Severe forms may be treated with topical or systemic steroids

AES Question: Which treatment would you choose for recurrent vesicular lesions?

A. Topical antiviral medication  
B. Topical anesthetic  
C. Vitamin supplements  
D. Topical corticosteroids

Photo: Ellen Eisenberg, DMD

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Photo: Brad Neville, DMD. MUSC
Behçet’s syndrome
- Rare, unknown etiology
- Inflammation of various areas of the body
- Triad of symptoms: mouth ulcers, genital ulcers, and uveitis
  - Most common lesion is RAS seen in crops (few millimeters to 20 millimeters)
- Treatment
  - Corticosteroids, benzocaines are helpful for painful lesions, systemic corticosteroids

Lichen planus (LP)
- Two forms
  - Reticular LP
    - Asymptomatic white lacy striations or papules bilaterally on posterior buccal mucosa
    - May have other locations such as tongue or gingiva
  - Erosive LP
    - Present with zones of tender erythema and painful ulcers, surrounded by peripheral white radiating striae
    - Wax and wanes over years
    - No treatment for asymptomatic lesions
    - Symptomatic lesions treated with topical steroid gels, or corticosteroid mouth rinses
    - Possible increased risk of oral cancer; requires periodic flu

AES Question: Which of the following statements is correct about oral cancer?
A. Painful ulcerations are highly suspicious for oral cancer
B. Oral cancers commonly occur on the hard palate
C. HPV infection is a risk factor for oral cancer
D. The USPSTF recommends routine screening asymptomatic adults for oral cancer

Oral cancer
- Oral cancers are often not very symptomatic – leads to late Dx
- Alcohol, tobacco and HPV are risk factors
- USPSTF finds insufficient evidence for screening asymptomatic adults
- White lesions (leukoplakia) and red lesions are suspicious
- Cancer-prone locations are overlooked when the patient says “aaahhh”
- Lesions lasting more than 2 weeks should be biopsied

Cancer-prone areas
- Lateral tongue margins
- Floor of the mouth
- Soft palate
- Lower lip vermilion border

White and red lesions

Diagnosis: AAPM Home Study Program
Adult oral exam: neglected areas

Soft palate

Inside lips

Photos: Mark Deutchman, MD

Practice Recommendations

1. Look in the mouth for dental caries, periodontal disease and signs of systemic disease.
2. Provide diet counseling, oral hygiene counseling and fluoride varnish to prevent dental caries.
3. Biopsy oral lesions that have been present for 2 weeks.
4. Know the oral effects of medications and counsel patients about oral hygiene.
5. There are NO contraindications to dental treatment during pregnancy.

Smiles for Life National Oral Health Curriculum

www.smilesforlifeoralhealth.org

SFL provides free AAFP CME credit

8 annotated 50 minute modules - Web and PowerPoint
1. Relationship of oral to systemic health
2. Child oral health
3. Adult oral health
4. Dental emergencies
5. Oral Health for Women: Pregnancy and Across the Life Span
6. Risk Assessment, Fluoride Varnish and Anticipatory Guidance
7. Oral examination
8. Geriatric oral health

Interactive cases, test questions, Post test CME credit with certificate

Questions