Distinguishing the Benign from the Deadly: Oral Pathology Update

Susan Muller, DMD, MS
Professor Emeritus, Emory University

Goals
1. How to evaluate an oral lesion

Stages for Evaluating Oral Lesions
1. Recognition of tissue alteration
2. Generating a differential diagnosis
3. Definitive diagnostic procedures
4. Recommendation for treatment
5. Clinical follow-up

CASE 1
Which one of these two lesions would cause you to be most concerned?

A

B

CASE 2
These lesions are the same color. Which one would cause you to be most concerned?

A

B
CASE 3
Which one of these two lesions would cause you to be most concerned?

CASE 4
Which one of these two lesions would cause you to be most concerned?

CASE 5
Which one of these two lesions would cause you to be most concerned?

Step 1. Recognition
The Thought Process

- History of the condition
  - How long has it been there?
  - Is this the first time, or has it happened before?

CASE 3
When did they first notice these lesions?

Step 1. Recognition
The Thought Process
Step 1. Recognition
The Thought Process

- History of the condition
- Observation of the lesion
- Location

CASE 1

Have they ever had anything like this before?

Step 1.
Recognition
The Thought Process

- History of the condition
- How long has it been there?
- Is this the first time, or has it happened before?
- If it happened before, was it in the same spot or in a different area?
Step 1. Recognition
The Thought Process

History of the condition

Observation of the lesion
Location
Color
Size
Shape

CASE 5
What is the texture?
What is the growth pattern?

Stages for Evaluating Oral Lesions

1. Recognition of tissue alteration
2. Generating a differential diagnosis
Step 2. Differential Diagnosis:
The Objective

- The objective of developing a list of possible diagnoses is to make sure that all significant conditions that could present in a specific manner are considered.
- In other words......

You cannot make a diagnosis if you do not think of it.

Step 2. Differential Diagnosis

What is your impression of the condition?
- Developmental or congenital?
- Reactive - inflammatory?
- Infectious?
- Tumor?
- Traumatic?
- Systemic Disease?

Reactive – Inflammatory  DX- Pyogenic Granuloma

Step 2. Differential Diagnosis

What is your impression of the etiology of this lesion?

Reactive – Inflammatory  DX- Pyogenic Granuloma
Step 2. Differential Diagnosis

What is your impression of the etiology of this lesion?

- Reactive – Inflammatory  
  **DX**: Nicotine Stomatitis

- Developmental  
  **DX**: Normal physiologic pigmentation

- Infectious  
  **DX**: Candidiasis
Step 2. Differential Diagnosis

What is your impression of the etiology of this lesion?

Traumatic

DX: Traumatic ulcer

Step 2. Differential Diagnosis: Helpful Pointers

- Normal anatomy at the site: Frequent encounters with normal soft and hard tissues provides a ready framework for making a diagnosis.
- Tissue types contributing to the normal anatomy
- Lesions that could develop from the different tissues

Gum Bumps

Pyogenic Granuloma

Peripheral Ossifying Fibroma
Localized Juvenile Spongiotic Gingivitis

Smokers Melanosis

Increased melanin pigment in the basal layer of the epithelium

Mandibular Sequestration

- Most often involves the lingual mandible near the mylohyoid ridge
- Spontaneous or related to extractions or dental work.
JAWS STAYED IN KENTUCKY AFTER FILMING GOLDFINGER

How Cheeky

Cheek Biting

Chronic cheek chewing show thickened, shredded areas with zones or erythema or superficial ulcerations

Cinnamon Reaction

Lichenoid Reaction to Brackets or Bands
Lip Bumps

Aphthous Ulcer

Condyloma
**Melanotic Macule**

- Unknown etiology which represents a focal increase in melanin deposits
- Occurs at any age
- Vermilion zone of the lower lip is the most common site followed by buccal mucosa and palate
Diagnosis

- Foreign material giant cell reaction consistent with dermal filler
- Sculptra®
- Poly-L-lactic acid, to replace lost collagen
- Corrects shallow to deep facial wrinkles, and folds

Palatal Lesions

Torus

Melanotic macule
Osteonecrosis due to bisphosphonates

Salivary Gland Tumors

Nicotine Stomatitis

Vomiting Trauma

Funny Tongues
Geographic Tongue

This is a 48 year old Hispanic female who presented to the ODR clinic.
CC: “Something is wrong with my tongue it looks funny.”

Varix

Aspirin Burn

Tongue Biting

Scalloped Tongue

- AF Cadet with lesions on tongue that “come and go”
- No hx of tobacco use
- No obvious rough-surfaced restorations
- Asymptomatic
Smokeless Tobacco Keratosis

- Smokeless tobacco keratosis has a much smaller risk of developing cancer than oral leukoplakia that develops in tobacco smokers.
- Smokeless tobacco keratosis, after habit cessation, is routinely reversible.
In the last year uses 1 ½ cans of Skoal daily

27 M with a 10 year history of ST use

6 weeks after stopping

Other Tobacco Use in Illinois

In 2017, 4.4% of adults used e-cigarettes and 2.6% used smokeless tobacco.

In 2017, 13.2% of high school students in Illinois used electronic vapor products on at least one day in the past 30 days. Nationally, the rate was 13.2%.

In 2017, 5.6% of high school students in Illinois used chewing tobacco, snuff or dip on at least one day in the past 30 days. Nationally, in 2017, 4.4% of adults used e-cigarettes and 2.6% used smokeless tobacco.

In 2017, 8.1% of high school students in Illinois smoked cigars, cigarillos or little cigars on at least one day in the past 30 days. Nationally, the rate was 8.0% and the rate was 5.5%.
BUSINESS

Illinois Continues Record-Breaking Marijuana Sales Streak, New State Data For September Shows

For the fifth month in a row, Illinois is again reporting record-breaking marijuana sales, the state Department of Financial and Professional Regulation announced on Monday.

Oral Submucous Fibrosis

- Chronic, irreversible disease associated with the use of betel nut, quid, nass, paan and other substances commonly used in India and other South-Central Asian countries
- Early signs include blanching of the mucosa
- Trismus
- About 7% malignant transformation rate


A 47 year old Asian male reported frequent daily use of betel quid containing slaked lime, areca nut, betel leaf and tobacco for more than 25-years. Approximately, 3-months ago he stopped chewing betel quid.

Sites where leukoplakia are most likely to be associated with pre-cancer/cancer:
tongue, lip vermilion and floor of mouth
(account for 93% of all leukoplakia associated with dysplasia or cancer)

Actinic Cheilitis

- The earliest clinical changes include atrophy of the lower lip with blotchy pale areas.
- There is blurring of the interface between the vermilion and the skin

Actinic Cheilitis

As the lesion progresses, rough, scaly areas develop. Chronic focal ulcers may develop and last for months.
Actinic Cheilitis

Sites of Oral Leukoplakia

Sites where leukoplakia are most likely to be associated with pre-cancer/cancer:
- tongue, lip vermilion and floor of mouth
  (account for 93% of all leukoplakia associated with dysplasia or cancer)

Educate your patients!!
- Sunscreen
  - Sunscreen

Dysplasia
What’s so special about the oral tongue?

Why?

...is the tongue becoming the most frequent site of OSCC?

...is the tongue the overwhelming site of OSCC in young patients?
What’s The Hype About HPV?

- The incidence of oropharyngeal SCC has increased from 1973 to 2020 in the US.
- We are seeing younger patients with OPSCC who have NEVER SMOKED.
- Why? HPV

HPV related Oropharyngeal Squamous Cell Carcinoma

- Tongue
- HPV
- Front of mouth
- Larynx
- Other neck sites
- Oral cavity and oropharynx
- Floor of mouth
- Base of tongue
- Other head and neck sites
- Nasopharynx
- Base of tongue
- Other mouth sites
- Oral cavity and oropharynx
- Other sites


Poison Drummer Rikki Rockett

Eddie van Halen
What is HPV?

- Genital warts
- Laryngeal papillomas
- Papillomas
- Cervical Ca
- Oropharyngeal Ca
- Anogenital cancer

Zebras cannot change stripes. HPV types cannot change strains.

Oropharyngeal Cancer Symptomatology

- Pain
- Dysphagia
- Otalgia
- Neck mass
- Foreign body sensation
- Hemoptysis
- Weight loss
- Voice changes
How Do We Get HPV?

D’Souza’s 2007 case control study found several risk factors for HPV 16 positive OPSCC:

<table>
<thead>
<tr>
<th>Behavior</th>
<th>HPV + OR* (95% CI)</th>
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<tbody>
<tr>
<td>Lifetime vaginal-sex partners &gt;26</td>
<td>4.2 (2-9)</td>
</tr>
<tr>
<td>Lifetime oral-sex partners &gt;6</td>
<td>8.6 (2-34)</td>
</tr>
<tr>
<td>Casual-sex partner</td>
<td>2.4 (1.2-4.7)</td>
</tr>
<tr>
<td>&lt;18 yo at first intercourse</td>
<td>2.1 (1.1-3.6)</td>
</tr>
<tr>
<td>Rare condom use</td>
<td>2.1 (1.1-4)</td>
</tr>
<tr>
<td>Sexual partner with h/o HPV associated cancer</td>
<td>3.9 (0.6-26)</td>
</tr>
</tbody>
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**CDC vaccine guidelines**

- HPV vaccine recommended for preteen girls and boys at age 11 or 12
- October 2016: dosing schedule changed
- Two doses of HPV vaccine if started before 15th birthday, 6 months apart
- Three doses if on or after 15th birthday
- Recommends vaccination through age 26 for females and males

*Only the 9-valent HPV vaccine is now administered*

- Covers HPV 6, 11, 16, 18, 31, 33, 45, 52, 58
- In the US, 64% of all HPV-associated cases are attributable to HPV16 or 18 and 10% attributable to 5 additional types: 31, 33, 45, 52, 58
- HPV 6 and 11 cause 90% of anogenital warts and most cases of recurrent respiratory papillomatosis
When in doubt about the malignant potential of an oral lesion - biopsy!

Adolescents ages 13-17 with HPV Up-To-Date (UTD) Vaccination Series, 2017
2017 US Average = 48.8%

Estimated vaccine coverage for adolescents ages 13-17
- 28.8%-39.0%, 9 states
- 40.0%-48.0%, 15 states
- 48.0%-56.0%, 22 states
- 59.6%-78.0%, 16 states & DC