



Oral Pathology for the Physician

Kristin K. McNamara, DDS, MS
 Division of Oral and Maxillofacial Pathology
 The Ohio State University College of Dentistry
mcnamara.189@osu.edu

MedNet21
 Center for Continuing Medical Education

THE OHIO STATE UNIVERSITY
 COLLEGE OF DENTISTRY

Objectives

- Review the clinical features of oral candidiasis
- Reinforce differentiation of oral candidiasis from coated tongue
- Review the clinical features of common oral ulcers
- Recognize the clinical features of potentially malignant oral lesions.
- Update management strategies

Outline

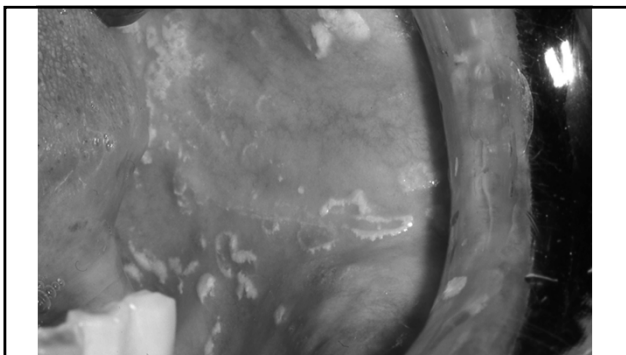
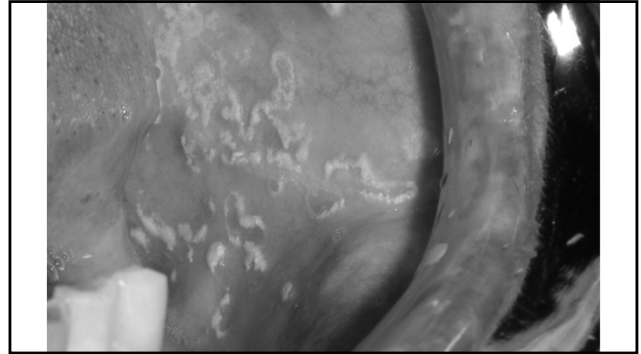
- Candidiasis
 - Pseudomembranous candidiasis
 - Erythematous candidiasis
- Coated tongue
- Oral ulcers
 - Aphthous (canker sores)
 - Traumatic
 - Potentially neoplastic/precancerous

Candida albicans

- Very common oral colonizer, may lead to infection
- Present in 30-50% of asymptomatic adults
- Presence in oral cavity increases with increasing patient age
- Multiple clinical presentations

Pseudomembranous Candidiasis

- Also known as “thrush”
- White, curdled milk or cottage cheese-like plaques; can be wiped-off
- Common sites: buccal mucosa, palate or tongue
- May be asymptomatic, but burning or unpleasant taste occasionally noted



Erythematous Candidiasis

- more common than pseudomembranous candidiasis
- area of redness, variable borders
- dorsal tongue is common site
- may involve palate, oral commissures, perioral skin

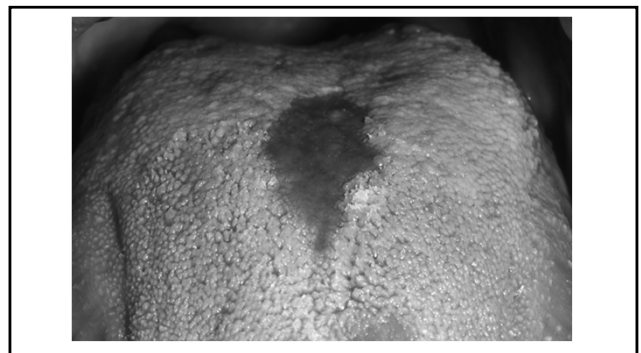
Acute atrophic candidiasis
aka "antibiotic sore mouth"

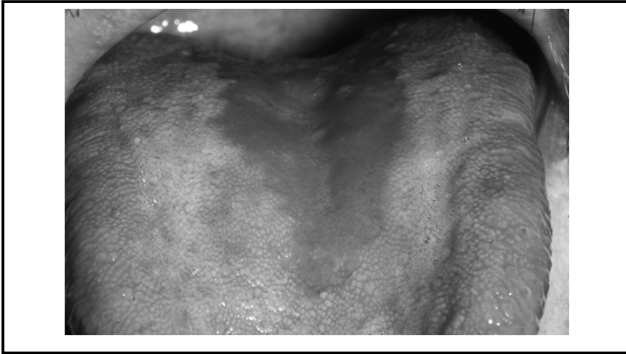
- diffuse atrophy of dorsal tongue papillae, particularly after broad-spectrum antibiotics
- acute onset
- typically associated with "burning" sensation



Central Papillary Atrophy

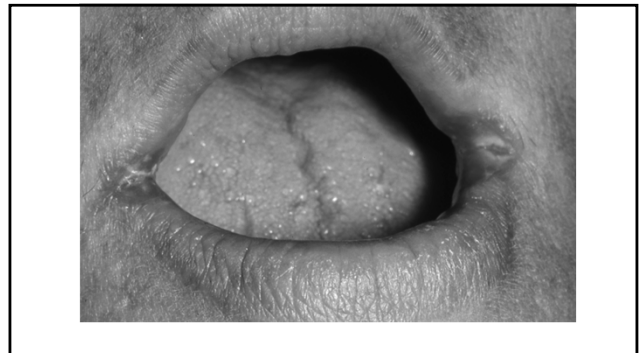
- Probably referred to as "median rhomboid glossitis" in the past
- Most are due to *chronic* candidiasis
- Well-defined area of redness, mid-posterior dorsal tongue
- Usually asymptomatic





Angular Cheilitis

- Usually related to candidiasis, but may have other cutaneous bacterial microflora admixed
- Often seen in patients with loss of posterior teeth; worn dentures or partials
- Redness, cracking of corners of mouth
- Typically responds well to topical antibiotics, but any intraoral infection must also be treated





Perioral Candidiasis

- *Often associated with lip-licking or chronic use of petrolatum-based materials*
- *Usually related to candidiasis, but may have other cutaneous bacterial microflora admixed*
- *Redness, cracking of cutaneous surface*
- *Typically responds well to topical antifungal therapy*



Candidiasis: diagnosis

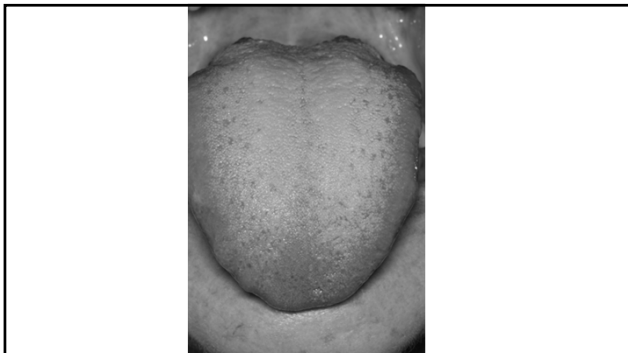
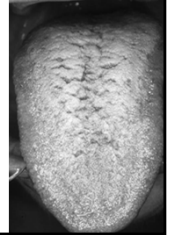
- Clinical signs and symptoms often sufficient
 - culture or exfoliative cytology
 - Biopsy – often unnecessary

Candidiasis: treatment

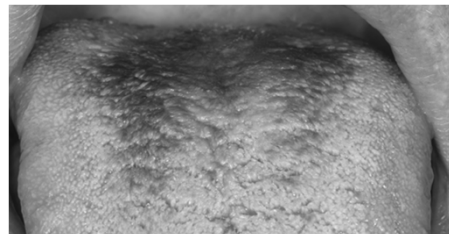
- Topical or systemic antifungal therapy
 - Clotrimazole troches (Mycelex)
 - Fluconazole tabs 100mg (Diflucan)
 - Iodoquinol/Hydrocortisone Cream (Dermazene) (angular cheilitis/perioral candidiasis; treats both fungi & bacteria)
- Removable prostheses (dentures) must also be cleaned and treated

Coated Tongue (Hairy Tongue)

- Elongation of the filiform papillae on the dorsal tongue (accumulation of keratin)
 - Increased production keratin
 - Decreased removal keratin
- Often associated with smoking
- Asymptomatic

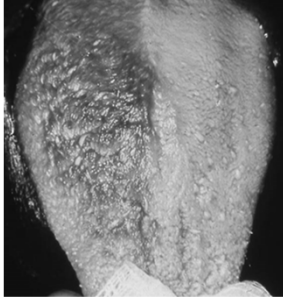


Papillae can become discolored
pigment-producing bacteria vs. extrinsic staining



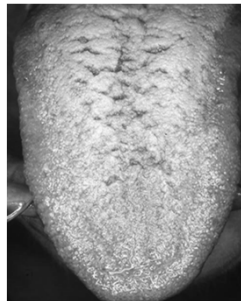
Treatment:

- None
- Tongue scraper



Common pitfall...

- Don't confuse coated tongue for a yeast infection
- Candidiasis of the dorsal tongue generally appears RED (erythematous candidiasis- "*central papillary atrophy*")



Candidiasis

- "Take home" message:
 - While pseudomembranous candidiasis may be the most widely-recognized form of oral candidiasis, it is **not** the most common.
 - Awareness of the various clinical presentations of oral candidiasis improves the likelihood of proper patient management.



Oral Pathology for the Physician

John R. Kalmar, DMD, PhD
 Division of Oral and Maxillofacial Pathology
 The Ohio State University College of Dentistry
 kalmar.7@osu.edu

MedNet21
 Center for Continuing Medical Education

THE OHIO STATE UNIVERSITY
 COLLEGE OF DENTISTRY

Objectives

- Review the clinical features of oral candidiasis
- Reinforce differentiation of oral candidiasis from coated tongue
- Review the clinical features of common oral ulcers
- Recognize the clinical features of potentially malignant oral lesions.
- Update management strategies

Oral Ulcers

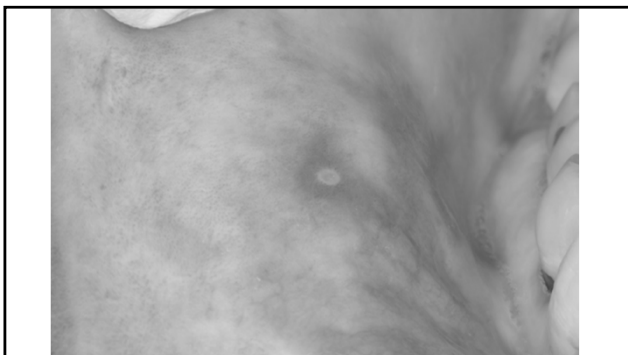
- Immune-mediated (common to rare)
- Traumatic (common)
- Infectious (less common)
- Neoplastic (uncommon)

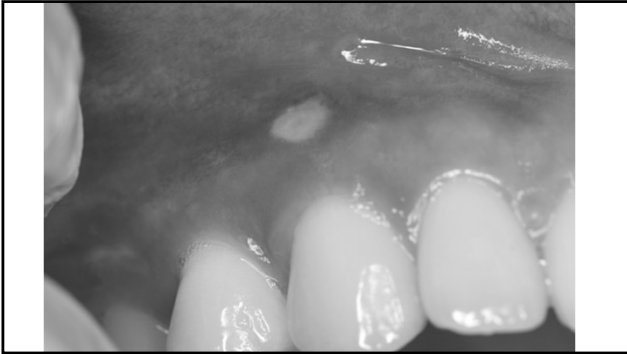
Recurrent Aphthous Ulcerations (canker sores)

- Common (20% overall); familial relationship
- Most frequent in children and young adults
- Immune-mediated process; uncertain pathogenesis

**Recurrent Aphthous Ulcerations
(canker sores)**

- Prodromal dyesthesia/tingling common
- Occur on loose, nonkeratinized mucosa
- Extremely painful, round to oval shallow ulcers
- Early, erythematous halo





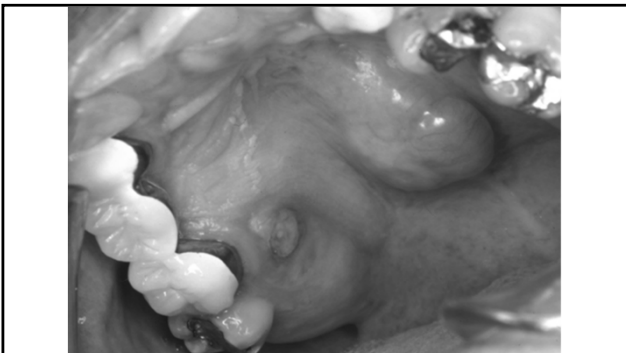
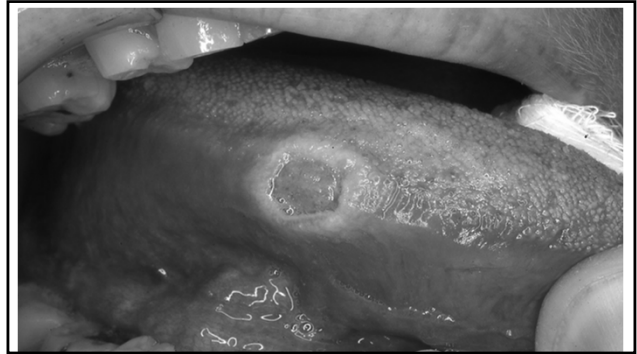
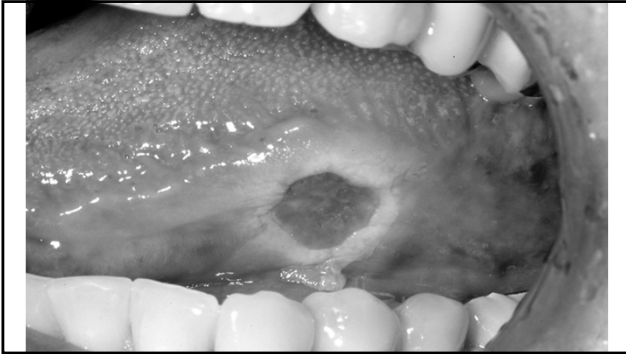
Recurrent Aphthous Ulcerations

Treatment:

- Immune-basis responds well to topical high-potency corticosteroid gels
- Thin film, applied at earliest prodrome; multiple times (4X) per day

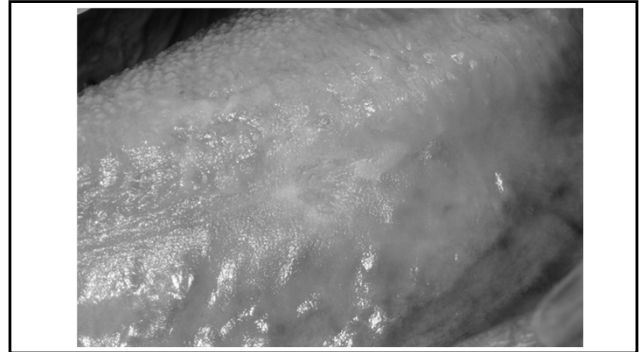
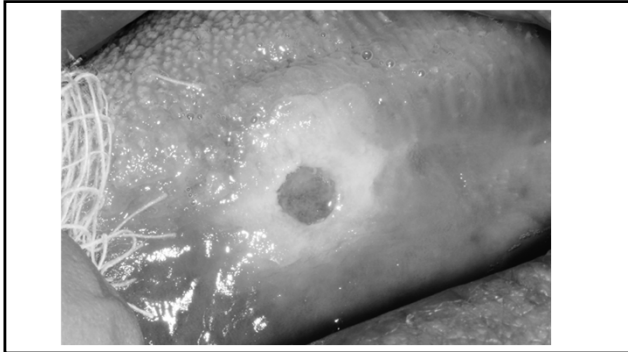
Traumatic Ulcers

- Most common form of oral ulcer
- Occur in areas susceptible to trauma, especially from the teeth, or thermal injury from food or drink
- More common in patients with dry mouths
- Often asymptomatic or only mildly symptomatic



Traumatic Ulcers

- Heal with no treatment (5-10 days) in the absence of additional irritation/trauma
- Topical OTC protective mucoadhesives can provide comfort
- Topical corticosteroids **not** indicated
 - Retard normal healing mechanisms
 - Can promote fungal infection, further slows healing



Traumatic Ulcers

- Xerostomia can contribute to lesion persistence and also promotes candidal infection
- Patient should maintain adequate hydration
- Saliva substitutes or salivary stimulants can be helpful in moderate-severe cases of xerostomia

Traumatic Ulcers

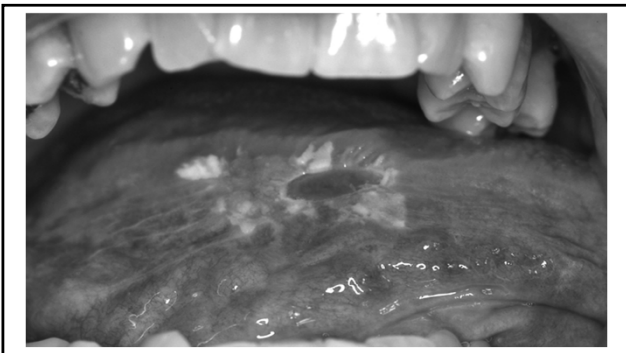
- Follow-up warranted; 2-3 weeks
- If no evidence of healing, +/- conservative treatment measures, biopsy is usually warranted to establish a diagnosis and guide proper therapy

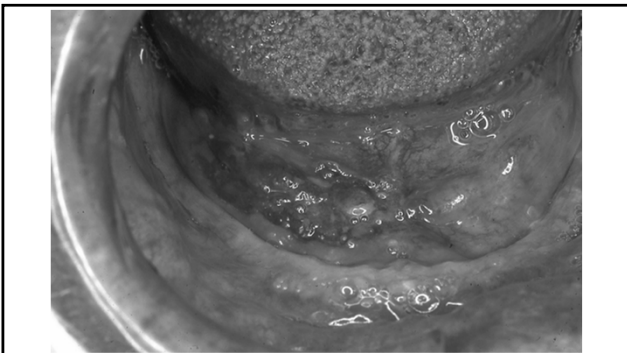
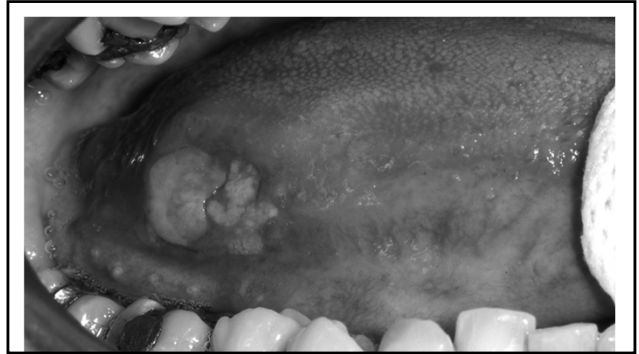
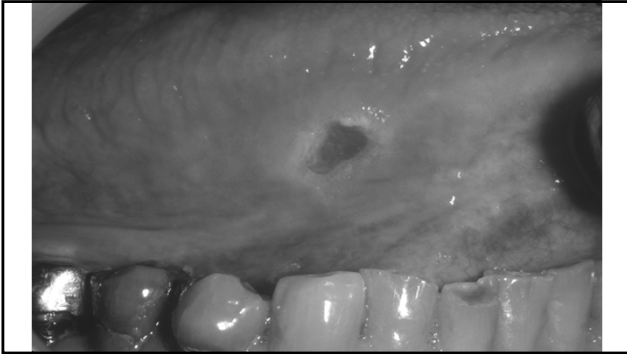
Neoplastic Ulcers

- Much less common than other types of oral ulcers, but more significant
- Majority (>90%) are due to surface precancerous lesions or squamous carcinoma

Neoplastic Ulcers

- High-risk sites for oral squamous cell carcinoma include the ventrolateral tongue, lateral soft palate and floor of the mouth
- Tend to be chronic, often arise within pre-invasive lesions (leukoplakia/erythroplakia)
- Symptoms are variable, often asymptomatic



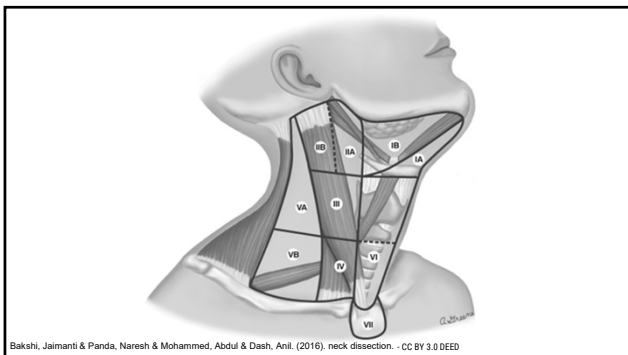
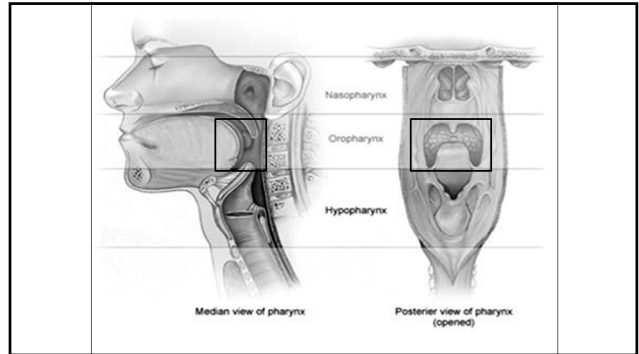


Neoplastic Ulcers

- "Take home" message:
 - If an ulcer persists for more than 2-3 weeks despite therapy/removal of potential irritants, biopsy should be recommended to establish a diagnosis and direct proper treatment

HPV-related Head & Neck Cancer

- ~90% of oropharyngeal/tonsillar carcinoma
- Increasing incidence over the past 20+ years
- Less frequent association with classic risk factors of smoking and alcohol use/abuse
- Most patients do not present with tonsillar mass or surface lesion
- Loco-regional metastases 1st clinical sign in 80-85% of patients, often level II or III



HPV-related Head & Neck Cancer

- Careful tactile examination for cervical or submandibular lymphadenopathy represents current clinical state-of-the-art in early diagnosis of HPV-related tonsillar cancer
- Subsequent FNA, biopsy and serologic testing for HPV ctDNA may be indicated to confirm suspicious adenopathy and direct therapy

- Special thanks for select clinical images to:
 - Carl Allen, Columbus, Ohio
 - Brad Neville, University of South Carolina
 - Doug Damm, Lexington, Kentucky
 - Philip Hawkins, Wauwatosa, Wisconsin