Common Lesions and Conditions of the Oral Cavity

K. Mark Anderson DDS, MS
University of Tennessee College of Dentistry
Everyday Lumps and Bumps
Case #1

• This patient presented with the gingival swelling seen here
Case #1
Case #2

• A 14 year old female presented with this lesion of the gingiva
Case #2
Cases 1 and 2
Differential Diagnosis – “The 3 P’s”

- Pyogenic Granuloma
- Peripheral Ossifying Fibroma
- Peripheral Giant Cell Granuloma
Pyogenic Granuloma (Pregnancy Tumor)

- Common non-neoplastic proliferation of granulation tissue
- Not a true granuloma
- Response to local irritation or trauma
Pyogenic Granuloma – Clinical Features

• F>M, children and young adults

• Common during pregnancy
Pyogenic Granuloma – Clinical Features

• Rapidly growing, smooth or lobulated, ulcerated mass
• Easily bleeds
• Any mucosal surface, with most involving the gingiva
Pyogenic Granuloma – Clinical Features

• Rapidly growing, smooth or lobulated, ulcerated mass

• Easily bleeds

• Any mucosal surface, with most involving the gingiva
Pyogenic Granuloma – Clinical Features
Pyogenic Granuloma – Clinical Features
Pyogenic Granuloma – Treatment and Prognosis

• Conservative surgical excision with removal of any local factors

• Lesions associated with pregnancy may spontaneously regress postpartum

• Recurrences occur due to remaining local factors (calculus)
Peripheral Ossifying Fibroma

• Relatively common reactive lesion, probably arising from periodontal ligament

• This lesion is unrelated to the central ossifying fibroma
Peripheral Ossifying Fibroma – Clinical Features

• F>M, teenagers and young adults
• Maxilla > mandible
• Exclusively on the gingiva
• Frequently ulcerated
Peripheral Ossifying Fibroma – Clinical Features

- F>M, teenagers and young adults
- Maxilla > mandible
- Exclusively on the gingiva
- Frequently ulcerated
Peripheral Ossifying Fibroma – Clinical Features

- F>M, teenagers and young adults
- Maxilla > mandible
- Exclusively on the gingiva
- Frequently ulcerated
Peripheral Ossifying Fibroma – Treatment and Prognosis

- Local excision down to the periosteum
- Elimination of local factors or irritants
- Approximately 16% recurrence rate
Peripheral Giant Cell Granuloma

- Relatively common reactive lesion of the gingiva
- Histologically identical to the central giant cell granuloma
Peripheral Giant Cell Granuloma – Clinical Features

• F>M, 5th and 6th decades

• Bluish-purple lesion, exclusively on the gingiva or alveolar ridge

• Radiographic – May cause “cupping” resorption (saucerization)
Peripheral Giant Cell Granuloma – Clinical Features

- F>M, 5th and 6th decades
- Bluish-purple lesion, exclusively on the gingiva or alveolar ridge
- Radiographic – May cause “cupping” resorption (saucerization)
Peripheral Giant Cell Granuloma – Clinical Features

- F>M, 5th and 6th decades
- Bluish-purple lesion, exclusively on the gingiva or alveolar ridge
- Radiographic – May cause “cupping” resorption (saucerization)
Peripheral Giant Cell Granuloma – Clinical Features

- F>M, 5th and 6th decades
- Bluish-purple lesion, exclusively on the gingiva or alveolar ridge
- Radiographic – May cause “cupping” resorption (saucerization)
Peripheral Giant Cell Granuloma – Treatment and Prognosis

• Local excision down to underlying bone

• Removal of local factors

• Approximately 10% recurrence rate
Additional Considerations
Fibroma (Irritation Fibroma, Traumatic Fibroma)

- The most common tumor of the oral cavity
- Probably not a true neoplasm
- Reactive lesion, secondary to trauma or chronic irritation
Fibroma – Clinical Features

• F>M, 4th-6th decade

• Commonly located along the bite line of the buccal mucosa

• Sessile, smooth-surfaced pink nodule
Fibroma – Clinical Features

- F>M, 4th-6th decade
- Commonly located along the bite line of the buccal mucosa
- Sessile, smooth-surfaced pink nodule
Fibroma – Clinical Features

- F>M, 4th-6th decade
- Commonly located along the bite line of the buccal mucosa
- Sessile, smooth-surfaced pink nodule
Fibroma – Clinical Features

• F>M, 4<sup>th</sup>-6<sup>th</sup> decade

• Commonly located along the bite line of the buccal mucosa

• Sessile, smooth-surfaced pink nodule
Fibroma – Clinical Features

- F>M, 4th-6th decade
- Commonly located along the bite line of the buccal mucosa
- Sessile, smooth-surfaced pink nodule
Fibroma – Treatment

• Conservative surgical excision

• Prognosis – Recurrence is rare
Differential Diagnosis

• Pyogenic Granuloma

• Peripheral Ossifying Fibroma

• Peripheral Giant Cell Granuloma
Diagnosis Case #1 – Pyogenic Granuloma
Diagnosis Case #2 – Peripheral Ossifying Fibroma
Other Soft Tissue Considerations
Lipoma

- Benign tumor of fat
- Although rare in the oral/maxillofacial area, the lipoma is the most common mesenchymal neoplasm
- Unrelated to metabolism/body fat
Lipoma – Clinical Features

• F>M

• Soft nodule, most commonly involving the buccal mucosa

• Normal or yellow in color
Lipoma – Clinical Features

- **F>M**
- Soft nodule, most commonly involving the buccal mucosa
- Normal or yellow in color
Lipoma – Clinical Features

- F>M
- Soft nodule, most commonly involving the buccal mucosa
- Normal or yellow in color
Lipoma – Clinical Features

- F>M
- Soft nodule, most commonly involving the buccal mucosa
- Normal or yellow in color
Lipoma – Clinical Features

- F>M
- Soft nodule, most commonly involving the buccal mucosa
- Normal or yellow in color
Lipoma – Treatment and Prognosis

- Conservative surgical excision
- Recurrence is rare
Granular Cell Tumor

- Uncommon tumor that appears to be of Schwann cell origin
- Significant predilection for the oral cavity
Granular Cell Tumor – Clinical Features

- F>M, 4\textsuperscript{th} to 6\textsuperscript{th} decade
- Solitary lesion, primarily involving the dorsal tongue
- Asymptomatic sessile nodule
Granular Cell Tumor – Clinical Features

- **F>M, 4th to 6th decade**
- **Solitary lesion, primarily involving the dorsal tongue**
- **Asymptomatic sessile nodule**
Granular Cell Tumor – Clinical Features

- F>M, 4\textsuperscript{th} to 6\textsuperscript{th} decade
- Solitary lesion, primarily involving the dorsal tongue
- Asymptomatic sessile nodule
Granular Cell Tumor – Treatment and Prognosis

- Conservative surgical excision

- Recurrence is rare, even with incomplete removal
Traumatic Neuroma

• Reactive proliferation of neural tissue

• Not necessarily a true neoplasm

• Secondary to disruption of Schwann cell tube
Traumatic Neuroma – Clinical Features

• F>M, middle-aged adults

• Smooth surfaced, submucosal nodule

• Commonly involve the mental foramen area

• May be symptomatic
Traumatic Neuroma – Clinical Features

- F>M, middle-aged adults
- Smooth surfaced, submucosal nodule
- Commonly involve the mental foramen area
- May be symptomatic
Traumatic Neuroma – Clinical Features

- F>M, middle-aged adults
- Smooth surfaced, submucosal nodule
- Commonly involve the mental foramen area
- May be symptomatic
Traumatic Neuroma – Clinical Features

- F>M, middle-aged adults
- Smooth surfaced, submucosal nodule
- Commonly involve the mental foramen area
- May be symptomatic
Traumatic Neuroma – Treatment and Prognosis

• Surgical excision, including a portion of the involved nerve bundle

• Recurrence is not expected
Schwannoma (Neurilemoma)

• Benign neural tumor of Schwann cell origin

• Uncommon, but often involve the head and neck
Schwannoma – Clinical Features

- Young and middle-aged adults
- Slow growing
- Variable symptoms
Schwannoma – Clinical Features

- Young and middle-aged adults
- Slow growing
- Variable symptoms
Schwannoma – Clinical Features

- Young and middle-aged adults
- Slow growing
- Variable symptoms
Schwannoma – Clinical Features

- Oral tumors most commonly involve the tongue
- May arise within bone, causing an expansile, unilocular radiolucency
Schwannoma – Clinical Features
Schwannoma – Treatment and Prognosis

- Surgical excision

- Recurrence is not expected

- Malignant transformation is rare
  - Malignant peripheral nerve sheath tumor, malignant schwannoma, neurofibrosarcoma
Neurofibroma

- The most common peripheral nerve neoplasm
- Tumor cells are a mixture of Schwann cells and fibroblasts
Neurofibromoma – Clinical Features

• Typically solitary, involving the tongue or buccal mucosa

• May occur in bone

• Multiple lesions associated with neurofibromatosis
Neurofibroma – Clinical Features

- Typically solitary, involving the tongue or buccal mucosa
- May occur in bone
- Multiple lesions associated with neurofibromatosis
Neurofibroma – Clinical Features

• Typically solitary, involving the tongue or buccal mucosa

• May occur in bone

• Multiple lesions associated with neurofibromatosis
Neurofibromma – Clinical Features

- Typically solitary, involving the tongue or buccal mucosa
- May occur in bone
- Multiple lesions associated with neurofibromatosis
Neurofibroma – Clinical Features

- Typically solitary, involving the tongue or buccal mucosa
- May occur in bone
- Multiple lesions associated with neurofibromatosis
Neurofibroma – Clinical Features

• Typically solitary, involving the tongue or buccal mucosa

• May occur in bone

• Multiple lesions associated with neurofibromatosis
Neurofibroma – Treatment and Prognosis

- Solitary lesions – Surgical excision
- Multiple (neurofibromatosis) – Removal of symptomatic lesions
- Malignant transformation is possible, much more so in patients with neurofibromatosis
Epulis Fissuratum (Inflammatory Fibrous Hyperplasia, “Denture Epulis”)

- Reactive lesion that occurs secondary to irritation from an ill-fitting denture

- Epulis – Any tumor of the gingiva or alveolar mucosa
Epulis Fissuratum – Clinical Features

• F>M, middle aged and older

• Single or multiple folds of firm, fibrous tissue located in the alveolar vestibule (usually anterior)
Epulis Fissuratum – Clinical Features

• F>M, middle aged and older

• Single or multiple folds of firm, fibrous tissue located in the alveolar vestibule (usually anterior)
Epulis Fissuratum – Clinical Features

• Lesions can achieve large size

• May be ulcerated

• Fibroepithelial polyp – Pedunculated lesion of palate beneath maxillary denture
Epulis Fissuratum – Clinical Features

• Lesions can achieve large size

• May be ulcerated

• Fibroepithelial polyp – Pedunculated lesion of palate beneath maxillary denture
Epulis Fissuratum – Clinical Features

- Lesions can achieve large size
- May be ulcerated
- Fibroepithelial polyp – Pedunculated lesion of palate beneath maxillary denture
Epulis Fissuratum – Clinical Features
Epulis Fissuratum – Clinical Features
Epulis Fissuratum – Treatment and Prognosis

• Surgical removal

• Refabrication of the associated denture or relign
Erythematous Candidiasis - Denture Stomatitis

- Often referred to as “chronic atrophic candidiasis”

- Denture is often contaminated with candidal organisms, but no invasion of mucosa is seen

- Erythema of palatal denture-bearing area- typically asymptomatic
Denture Stomatitis
Denture Stomatitis
Inflammatory Papillary Hyperplasia

• Reactive process of the palate underneath a maxillary denture

• Variable involvement of the hard palate

• Asymptomatic, erythematous lesion with a pebbly surface

• Has been seen on edentulous mandibular ridge or on epulis
Inflammatory Papillary Hyperplasia – Clinical Features
Inflammatory Papillary Hyperplasia – Clinical Features
Oral Squamous Papilloma

• Probably caused by human papillomavirus (HPV)
  – Over 100 HPV types identified

  – Types 6 and 11 are most commonly associated with oral papillomas
Squamous Papilloma – Clinical Features

- Any site, with the tongue and soft palate most frequently involved
- Typically solitary
- Usually pedunculated
- Variable color
Squamous Papilloma – Clinical Features

• Any site, with the tongue and soft palate most frequently involved

• Typically solitary

• Usually pedunculated

• Variable color
Squamous Papilloma – Clinical Features

- Any site, with the tongue and soft palate most frequently involved
- Typically solitary
- Usually pedunculated
- Variable color
Squamous Papilloma – Clinical Features

• Any site, with the tongue and soft palate most frequently involved

• Typically solitary

• Usually pedunculated

• Variable color
Squamous Papilloma – Clinical Features

- Any site, with the tongue and soft palate most frequently involved
- Typically solitary
- Usually pedunculated
- Variable color
Squamous Papilloma – Clinical Features

- Any site, with the tongue and soft palate most frequently involved
- Typically solitary
- Usually pedunculated
- Variable color
Squamous Papilloma - Treatment

• Surgical excision

• Recurrence is not expected, although lesions of the larynx may behave differently
  – Laryngeal papillomatosis
Verruca Vulgaris (Common Wart)

- Typically a benign skin lesion induced by HPV types 2, 4, 6, and 40
- Relatively contagious, with potential for autoinoculation
Verruca Vulgaris – Clinical Features

- Most commonly in children
- Skin of hands
- More commonly sessile
- Variable color
Verruca Vulgaris – Clinical Features

- Most commonly in children
- Skin of hands
- More commonly sessile
- Variable color
Verruca Vulgaris – Clinical Features

- Oral lesions uncommon
- Often indistinguishable from squamous papilloma
- Oral lesions typically appear white
Verruca Vulgaris - Treatment

• Surgical excision or curettage

• Liquid nitrogen, cryotherapy, or keratinolytic agents

• May spontaneously resolve

• Small rate of recurrence
Condyloma Acuminatum

• Also known as “venereal warts”

• Caused by several strains of HPV, including types 2, 6, 11, 16, 18
Condyloma Acuminatum – Clinical Features

- Typically a genital lesion

- Oral lesions
  - Multiple, sessile, cauliflower surface
Condyloma Acuminatum – Clinical Features

- Typically a genital lesion

- Oral lesions
  - Multiple, sessile, cauliflower surface
Condyloma Acuminatum – Clinical Features

• Typically a genital lesion

• Oral lesions
  – Multiple, sessile, cauliflower surface
Condyloma Acuminatum – Clinical Features

- Typically a genital lesion
- Oral lesions
  - Multiple, sessile, cauliflower surface
Condyloma Acuminatum

- Excision, cryotherapy, laser excision
- Recurrence is common - 30% of patients have recurrent lesions after each treatment episode
- Associated with squamous cell carcinoma of the uterine cervix
Ulcerative Conditions of the Oral Regions
Case #3

• A 47 year old female presented with a history of these painful lesions
Case #3

• Clinical Diagnosis – “Desquamative Gingivitis”

• Differential Diagnosis
  – Lichen Planus
  – Cicatricial Pemphigoid
  – Pemphigus Vulgaris
Lichen Planus

• Common chronic mucocutaneous disease

• Probably immune-mediated

• May have only skin, only oral, or both
Lichen Planus – Clinical Features

• F>M, Adults

• Skin lesions-purple, polygonal, pruritic papules
Lichen Planus – Clinical Features

- F>M, Adults
- Skin lesions-purple, polygonal, pruritic papules
Lichen Planus – Clinical Features

- Oral lesions-reticular or erosive
- Reticular-interlacing white lines, buccal mucosa
- Erosive-ulcers with erythema and white streaks
Lichen Planus – Clinical Features

- Oral lesions-reticular or erosive
- Reticular-interlacing white lines, buccal mucosa
- Erosive-ulcers with erythema and white streaks
Lichen Planus – Clinical Features

- Oral lesions-reticular or erosive
- Reticular-interlacing white lines, buccal mucosa
- Erosive-ulcers with erythema and white streaks
Lichen Planus – Clinical Features

- Desquamative gingivitis may be seen
- Any oral mucosal site susceptible
Lichen Planus – Clinical Features

• Desquamative gingivitis may be seen

• Any oral mucosal site susceptible
Lichen Planus - Treatment

• 25% have superimposed candidiasis, so anti-fungal Tx may be necessary

• No treatment for reticular

• Topical corticosteroids for erosive
  – Betemethasone Gel or Temovate (clobetasol) Gel
Lichen Planus - Prognosis

- Skin lesions may resolve spontaneously
- Oral lesions persist
- Malignant potential is controversial
- If premalignant, risk of transformation is probably small
Cicatricial Pemphigoid (Mucous Membrane Pemphigoid)

- Group of autoimmune disease characterized by antibodies directed against one or more components of the basement membrane

- Clinically resembles pemphigus due to blister formation

- About 2x more common than pemphigus
Cicatricial Pemphigoid – Clinical Features

- F>M, Avg. age 60
- Desquamative gingivitis
- May see intact blisters intraorally
Cicatricial Pemphigoid – Clinical Features

• F>M, Avg. age 60

• Desquamative gingivitis

• May see intact blisters intraorally
Cicatricial Pemphigoid – Clinical Features

• F>M, Avg. age 60

• Desquamative gingivitis

• May see intact blisters intraorally
Cicatricial Pemphigoid – Clinical Features

- Affects any mucosal surface; occasionally skin

- Scarring usually refers to conjunctival mucosa *(symblepharon)*

- Entropian, trichiasis
Cicatricial Pemphigoid – Clinical Features

• Affects any mucosal surface; occasionally skin

• Scarring usually refers to conjunctival mucosa (symblepharon)

• Entropian, trichiasis
Cicatricial Pemphigoid – Clinical Features
Cicatricial Pemphigoid – Clinical Features
Pemphigoid-Treatment

- Depends on extent of involvement

- Oral only-topical corticosteroids or dapsone

- Ocular lesions require systemic immunosuppressive therapy or human immunoglobulin therapy
Cicatricial Pemphigoid – Treatment
Cicatricial Pemphigoid – Treatment
Pemphigoid-Prognosis

- Rarely fatal
- Blindness results with untreated ocular disease
- Condition can usually be controlled
- Rarely undergoes spontaneous resolution
Pemphigus (Pemphigus Vulgaris)

• Autoimmune disorder characterized by antibodies directed against components of the epithelial desmosome complex

• Oral signs are often the first manifestations of the disease and the most difficult to resolve
Pemphigus-Clinical Features

- >50% present with oral lesions
- Ragged erosions and ulcerations
- Any oral mucosal surface
- Flaccid bullae on skin; oral blisters rarely seen
- Nikolsky’s sign
Pemphigus-Clinical Features

- >50% present with oral lesions
- Ragged erosions and ulcerations
- Any oral mucosal surface
- Flaccid bullae on skin; oral blisters rarely seen
- Nikolsky’s sign
Pemphigus-Clinical Features

- >50% present with oral lesions
- Ragged erosions and ulcerations
- Any oral mucosal surface
- Flaccid bullae on skin; oral blisters rarely seen
- Nikolsky’s sign
Pemphigus - Clinical Features

- >50% present with oral lesions
- Ragged erosions and ulcerations
- Any oral mucosal surface
- Flaccid bullae on skin; oral blisters rarely seen
- Nikolsky’s sign
Pemphigus - Treatment and Prognosis

- Systemic corticosteroids, often with azathioprine
- Prior to corticosteroid therapy, 60-80% mortality
- Today, 5-10% mortality
Case #3

• Clinical Diagnosis – “Desquamative Gingivitis”

• Differential Diagnosis
  – Lichen Planus
  – Cicatricial Pemphigoid
  – Pemphigus Vulgaris
Diagnosis Case #3 – Pemphigus Vulgaris
Case #4

• A 42 year old male presented with the lesions seen here as well as genital lesions
Case #4
Case #4
Case #4
Case #4 – Differential Diagnosis

• Erythema Multiforme

• Paraneoplastic Pemphigus
Erythema Multiforme (EM)

- Acute, self-limiting ulcerative disorder
- Probably immune-mediated
- 50%-unknown; 25%-drugs (particularly antibiotics or analgesics); 25%-infection (herpes/Mycoplasma)
EM - Spectrum of Clinical Disease

• **Erythema multiforme minor** - skin and/or mucosa only

• **Erythema multiforme major** (Stevens-Johnson syndrome)
  – At least two mucosal sites plus skin involvement

• **Toxic epidermal necrolysis** (Lyell’s disease)
EM-Clinical Features

- $M > F$
- Young adults
- May experience prodrome
EM-Clinical Features

- M>F
- Young adults
- May experience prodrome
EM-Clinical Features

• Hemorrhagic crusting of lips

• Widespread oral ulcers with ragged margins

• Labial, buccal mucosa and tongue

• “Target” lesions of skin
EM-Clinical Features

- Outbreak typically clears in 2-6 weeks
- Often recurs in spring and fall
EM-Treatment

- Supportive or topical corticosteroids for mild cases
- Systemic corticosteroids for EM major
- TEN managed in burn unit, possibly with pooled immunoglobulin
EM Prognosis

• Good for mild to moderate cases

• EM major-2-10% mortality

• TEN-34% mortality
Paraneoplastic Pemphigus

• Serious vesiculobullous disorder affecting patients with neoplastic disease, typically a lymphoreticular malignancy (CLL and lymphoma)

• Antibodies in response to the tumor probably cross react with components of the epithelial layer

• Cytotoxic T lymphocytes may also play a role in cutaneous and mucosal damage
Paraneoplastic Pemphigus – Clinical Features

• Clinically resembles a number of conditions
  – Erythema multiforme
  – Pemphigus
  – Lichen planus
  – Pemphigoid
Paraneoplastic Pemphigus – Clinical Features

• Clinically resembles a number of conditions
  – Erythema multiforme
  – Pemphigus
  – Lichen planus
  – Pemphigoid
Paraneoplastic Pemphigus – Clinical Features

• Oral lesions
  – Hemorrhagic crusting of lips
  – Diffuse ulcerations
Paraneoplastic Pemphigus – Clinical Features

• Oral lesions
  – Hemorrhagic crusting of lips
  – Diffuse ulcerations
Paraneoplastic Pemphigus – Clinical Features

• Oral lesions
  – Hemorrhagic crusting of lips
  – Diffuse ulcerations
Paraneoplastic Pemphigus – Clinical Features

• Oral lesions
  – Hemorrhagic crusting of lips
  – Diffuse ulcerations
Paraneoplastic Pemphigus – Treatment and Prognosis

• Systemic corticosteroids plus azathioprine

• Topical corticosteroids

• Generally poor prognosis, high mortality due to sepsis or malignant progression
Case #4 – Differential Diagnosis

• Erythema Multiforme

• Paraneoplastic Pemphigus
Diagnosis Case #4 – Erythema Multiforme
Case #5

• An adult male presents with ulcerations distributed as seen
Case #5
Case #7 – Differential Diagnosis

- Herpes Simplex Type 1
- Recurrent Aphthous Stomatitis
- Erythema multiforme
Herpes Simplex Virus (HSV)

- DNA virus in the herpesvirus family
  - HHV-1 – oral herpes
  - HHV-2 – genital herpes
  - HHV-3 – chicken pox and shingles (Varicella-Zoster virus)
  - HHV-4 – mononucleosis (Epstein-Barr virus)
  - HHV-5 – cytomegalovirus (CMV)
  - HHV-8 – Kaposi’s sarcoma-associated
Herpes Simplex Virus

• Two clinical patterns
  – Primary herpetic infection
  – Secondary or recurrent HSV
Primary Herpetic Gingivostomatitis – Clinical Features

- Children, sometimes adults
- Diffuse painful shallow ulcers
- Fever, malaise
- Lymphadenopathy
- One episode-10 to 14 days
- Virus remains dormant in sensory or autonomic ganglia
Primary Herpetic Gingivostomatitis
Primary Herpetic Gingivostomatitis
Primary Herpetic Gingivostomatitis
Primary Herpetic Gingivostomatitis
Primary Herpetic Gingivostomatitis
Primary Herpetic Gingivostomatitis
Recurrent Intraoral Herpes

- Relatively uncommon
- Usually few symptoms
- Cluster of shallow ulcers
  - intact vesicles rare
- Mucosa bound to periosteum
  - Hard palate and attached gingiva
- Heal within one week
Recurrent Intraoral Herpes
Recurrent Intraoral Herpes
Primary Herpes-Treatment

• Restrict contact with lesions

• Topical anesthetics
  – Dyclonine HCL or viscous lidocaine

• Ibuprofen or other NSAID’s

• Soft diet with fluids

• Antiviral medications of recognized early (1st 72 hours)
Recurrent Aphthous Stomatitis

• Very common condition of unknown etiology and pathogenesis

• Likely an immunologically mediated condition

• Numerous potential contributing factors
  – HLA types
  – Trauma
  – Foods
  – Stress
  – HIV
Recurrent Aphthous Stomatitis – Clinical Features

• Three major forms
  – Minor
  – Major
  – Herpetiform
Recurrent Aphthous Stomatitis – Clinical Features

• Minor aphthae
  – 3-mm ulcer with yellow-white membrane and erythematous halo
  – Unattached mucosa
Recurrent Aphthous Stomatitis – Clinical Features

- **Minor aphthae**
  - 3-mm ulcer with yellow-white membrane and erythematous halo
  
  - Unattached mucosa
Recurrent Aphthous Stomatitis – Clinical Features

• Minor aphthae
  – 3-mm ulcer with yellow-white membrane and erythematous halo
  – Unattached mucosa
Recurrent Aphthous Stomatitis – Clinical Features

• Major aphthae
  – Larger (up to 3cm) and longer duration (2-6 weeks)
  – May heal with scar

  – HIV
Recurrent Aphthous Stomatitis – Clinical Features

• Major aphthae
  – Larger (up to 3cm) and longer duration (2-6 weeks)
  – May heal with scar
  – HIV
Recurrent Aphthous Stomatitis – Clinical Features

• Major aphthae
  – Larger (up to 3cm) and longer duration (2-6 weeks)
  – May heal with scar
  – HIV
Recurrent Aphthous Stomatitis – Clinical Features

• Major aphthae
  – Larger (up to 3cm) and longer duration (2-6 weeks)
  – May heal with scar
  – HIV
Recurrent Aphthous Stomatitis - Treatment

• **Topical corticosteroids**
  – Betamethasone 0.05%
  – Clobetasol propionate 0.05% (Temovate gel)

• Elixirs or syrup preparations for numerous and/or ulcerations in inaccessible areas

• If unresponsive, investigate possible underlying cause
Case #7 — Differential Diagnosis

• Herpes Simplex Type 1

• Recurrent Aphthous Stomatitis

• Erythema multiforme
Diagnosis Case #5 – Primary Herpetic Gingivostomatitis
White, Red and Malignant Lesions
Smokeless Tobacco Use/Tobacco Pouch Keratosis

- Mucosal lesion secondary to the presence of chronic irritation from smokeless tobacco

- These products are currently used by approximately 4.5% of US males

- Also associated with gingival/periodontal destruction and tooth decay
Tobacco Pouch Keratosis – Clinical Features

• Gray or gray-white plaque in the area of placement

• Diffuse borders

• Corrugated surface texture
Tobacco Pouch Keratosis – Clinical Features

- Gray or gray-white plaque in the area of placement
- Diffuse borders
- Corrugated surface texture
Tobacco Pouch Keratosis – Clinical Features

• Gray or gray-white plaque in the area of placement

• Diffuse borders

• Corrugated surface texture
Tobacco Pouch Keratosis – Clinical Features

- Gray or gray-white plaque in the area of placement
- Diffuse borders
- Corrugated surface texture
Tobacco Pouch Keratosis – Treatment and Prognosis

• Have patient stop or move the tobacco to another location to observe for resolution (2-4 weeks)

• If the lesion persists (after 6 weeks), biopsy for histologic diagnosis

• Controversy over true carcinogenicity of smokeless tobacco
Nicotine Stomatitis

- **Benign** hyperkeratotic change to the palatal mucosa secondary to tobacco smoking

- Most common in pipe and cigar smokers

- Similar changes may be induced by drinking hot beverages
Nicotine Stomatitis – Clinical Features

- M>F,
- >45 years
- Grey-white mucosa, multiple papules with erythematous center
Nicotine Stomatitis – Clinical Features

- M>F
- >45 years
- Grey-white mucosa, multiple papules with erythematous center
Nicotine Stomatitis – Clinical Features

- M>F
- >45 years
- Grey-white mucosa, multiple papules with erythematous center
Nicotine Stomatitis – Clinical Features

- M>F
- >45 years
- Grey-white mucosa, multiple papules with erythematous center
Nicotine Stomatitis – Clinical Features

- M>F
- >45 years
- Grey-white mucosa, multiple papules with erythematous center
Nicotine Stomatitis – Treatment

• None

• If patient quits, changes will normally resolve within 1-2 weeks

• Persistent changes should be biopsied
Leukoplakia

• Definition (WHO)- A white patch or plaque which cannot be characterized clinically or pathologically as any other disease

• Considered premalignant
  – Most common precancerous oral lesion
Leukoplakia

• Etiology—Technically unknown
  – Tobacco smoking
  – Alcohol is not necessarily associated with leukoplakia

• Lesions that are not leukoplakia
  – Nicotine stomatitis
  – Frictional keratosis
  – Lichen planus
  – Amalgam reactions
(NOT) Leukoplakia
(NOT) Leukoplakia
(NOT) Leukoplakia
(NOT) Leukoplakia
Leukoplakia – Clinical Features

- Worrisome sites - Tongue, floor of mouth, soft palate

- Homogenous, speckled

- Proliferative verrucous leukoplakia
Leukoplakia – Clinical Features

• Worrisome sites - Tongue, floor of mouth, soft palate

• Homogenous, speckled

• Proliferative verrucous leukoplakia
Leukoplakia – Clinical Features

- Worrisome sites:
  - Tongue, floor of mouth, soft palate

- Homogenous, speckled

- Proliferative verrucous leukoplakia
Leukoplakia – Clinical Features

• Worrisome sites- Tongue, floor of mouth, soft palate

• Homogenous, speckled

• Proliferative verrucous leukoplakia
Leukoplakia – Clinical Features

- Worrisome sites: Tongue, floor of mouth, soft palate
- Homogenous, speckled
- Proliferative verrucous leukoplakia
Leukoplakia – Clinical Features

• Worrisome sites-
  Tongue, floor of mouth, soft palate

• Homogenous, speckled

• Proliferative verrucous leukoplakia
Leukoplakia – Clinical Features

• Worrisome sites - Tongue, floor of mouth, soft palate

• Homogenous, speckled

• Proliferative verrucous leukoplakia
Leukoplakia – Clinical Features

• Worrisome sites—Tongue, floor of mouth, soft palate

• Homogenous, speckled

• Proliferative verrucous leukoplakia
Leukoplakia – Clinical Features

• Worrisome sites-
  Tongue, floor of mouth, soft palate

• Homogenous, speckled

• Proliferative verrucous leukoplakia
Leukoplakia – Clinical Features

- Worrisome sites: Tongue, floor of mouth, soft palate
- Homogenous, speckled
- Proliferative verrucous leukoplakia
Leukoplakia – Clinical Features

• Worrisome sites - Tongue, floor of mouth, soft palate

• Homogenous, speckled

• Proliferative verrucous leukoplakia
Leukoplakia – Clinical Features

- Worrisome sites - Tongue, floor of mouth, soft palate
- Homogenous, speckled
- Proliferative verrucous leukoplakia
Leukoplakia – Clinical Features

• Worrisome sites: Tongue, floor of mouth, soft palate

• Homogenous, speckled

• Proliferative verrucous leukoplakia
Leukoplakia – Clinical Features

- Worrisome sites: Tongue, floor of mouth, soft palate
- Homogenous, speckled
- Proliferative verrucous leukoplakia
Leukoplakia – Treatment and Prognosis

- Biopsy is mandatory

- Treatment will then depend upon the histologic findings

- 4% risk of transformation to SCC

- With or without removal, follow-up is essential

- Recurrences are common (about 1/3)
Erythroplakia

- Red patch that cannot be clinically or pathologically diagnosed as any other condition
- Greater presence of dysplasia than leukoplakia
- Same etiology as SCC (tobacco, alcohol)
Erythroplakia – Clinical Features

- Older males
- Floor of mouth, tongue, soft palate
- Well-demarcated velvety, red plaque
- May be adjacent to areas of leukoplakia
Erythroplakia – Clinical Features

- Older males
- Floor of mouth, tongue, soft palate
- Well-demarcated velvety, red plaque
- May be adjacent to areas of leukoplakia
Erythroplakia – Clinical Features

• Older males
• Floor of mouth, tongue, soft palate
• Well-demarcated velvety, red plaque
• May be adjacent to areas of leukoplakia
Erythroplakia – Clinical Features

- Older males
- Floor of mouth, tongue, soft palate
- Well-demarcated velvety, red plaque
- May be adjacent to areas of leukoplakia
Erythroplakia – Clinical Features

- Older males
- Floor of mouth, tongue, soft palate
- Well-demarcated velvety, red plaque
- May be adjacent to areas of leukoplakia
Erythroplakia – Clinical Features

- Older males
- Floor of mouth, tongue, soft palate
- Well-demarcated velvety, red plaque
- May be adjacent to areas of leukoplakia
Erythroplakia - Histology

- 90% will show severe dysplasia or CIS
- Epithelial atrophy with lack of keratin production
- Chronic inflammation
Erythroplakia – Treatment and Prognosis

• Biopsy is mandatory, with treatment dependant upon the degree of dysplasia

• Close follow-up is necessary, since recurrence and the development of separate lesions are common
Oral Squamous Cell Carcinoma

- 22,000 cases per year, with about 1 in four dying of the disease
- Males-8th most common cancer (Females-15th)
- M>F
- Blacks>Whites
- Carcinoma of the lip should be considered in a different context
Oral Squamous Cell Carcinoma - Etiology

- **Tobacco** (especially combustible)
- **Alcohol** (works synergistically with tobacco)
- Radiation
- **Plummer-Vinson syndrome** (iron deficiency anemia, glossitis, dysphagia)
- **Viruses** (HPV)
- **Immunosuppression**
Oral Squamous Cell Carcinoma – Clinical Features

• Varied
  – Exophytic
  – Endophytic
  – Ulcerated
  – Erythroplakik
  – Leukoplakik
Oral Squamous Cell Carcinoma – Clinical Features

• Varied
  – Exophytic
  – Endophytic
  – Ulcerated
  – Erythroplakic
  – Leukoplakic
Oral Squamous Cell Carcinoma – Clinical Features

- Tongue (ventral and lateral), floor of mouth, soft palate are the most common sites
- Usually minimal pain
- Underlying bone may be altered
Oral Squamous Cell Carcinoma – Clinical Features

- Tongue (ventral and lateral), floor of mouth, soft palate are the most common sites
- Usually minimal pain
- Underlying bone may be altered
Oral Squamous Cell Carcinoma – Clinical Features

• Tongue (ventral and lateral), floor of mouth, soft palate are the most common sites

• Usually minimal pain

• Underlying bone may be altered
Oral Squamous Cell Carcinoma – Clinical Features

• Tongue (ventral and lateral), floor of mouth, soft palate are the most common sites

• Usually minimal pain

• Underlying bone may be altered
Oral Squamous Cell Carcinoma – Clinical Features

- Tongue (ventral and lateral), floor of mouth, soft palate are the most common sites
- Usually minimal pain
- Underlying bone may be altered
Oral Squamous Cell Carcinoma – Clinical Features

- Tongue (ventral and lateral), floor of mouth, soft palate are the most common sites
- Usually minimal pain
- Underlying bone may be altered
Oral Squamous Cell Carcinoma – Clinical Features

- Tongue (ventral and lateral), floor of mouth, soft palate are the most common sites
- Usually minimal pain
- Underlying bone may be altered
Oral Squamous Cell Carcinoma – Clinical Features

• Tongue (ventral and lateral), floor of mouth, soft palate are the most common sites

• Usually minimal pain

• Underlying bone may be altered
Oral Squamous Cell Carcinoma – Clinical Features

- Tongue (ventral and lateral), floor of mouth, soft palate are the most common sites
- Usually minimal pain
- Underlying bone may be altered
Oral Squamous Cell Carcinoma – Clinical Features

• Tongue (ventral and lateral), floor of mouth, soft palate are the most common sites

• Usually minimal pain

• Underlying bone may be altered
Oral Squamous Cell Carcinoma – Clinical Features

• Tongue (ventral and lateral), floor of mouth, soft palate are the most common sites

• Usually minimal pain

• Underlying bone may be altered
Oral Squamous Cell Carcinoma – Clinical Features

- Tongue (ventral and lateral), floor of mouth, soft palate are the most common sites
- Usually minimal pain
- Underlying bone may be altered
Oral Squamous Cell Carcinoma – Clinical Features

- Tongue (ventral and lateral), floor of mouth, soft palate are the most common sites
- Usually minimal pain
- Underlying bone may be altered
Squamous Cell Carcinoma of the Lip – Clinical Features

- Etiology-Chronic sun exposure
- Males, typically with outdoor occupations
- Slowly growing indurated ulceration
Squamous Cell Carcinoma - Metastasis

• Spread through lymphatics
• Firm nodes
• Movable or fixed

• Distant spread to lungs, liver, bones
• TNM staging
  – Stage at diagnosis is the most important prognostic indicator
Squamous Cell Carcinoma - Metastasis

- TNM staging system
  - T-Tumor size
  - N-Local node involvement
  - M-Distant metastasis
Squamous Cell Carcinoma - Metastasis
Squamous Cell Carcinoma – Treatment and Prognosis

- Surgical excision/resection
- Radiation
- Chemotherapy – Squamous cell carcinoma rarely responds well

- Stage I – 85% 5 year survival
- Stage II – 66%
- Stage III – 41%
- Stage IV – 9%
Squamous Cell Carcinoma – Treatment and Prognosis

• National Comprehensive Cancer Network

Squamous Cell Carcinoma – Treatment and Prognosis

• Carcinoma of the lip carries a much better prognosis

• Prognosis is better for Whites than Blacks

• “Field cancerization” – Persons with one carcinoma are at increased risk of developing a second mucosal tumor
Odds and Ends
Case #6

• This patient presented with recent onset of the pigmentation seen here
Case #6
Case #5 – Differential Diagnosis

- Normal Physiologic Pigmentation
- Smoker’s Melanosis
- Medication-Associated
- Addison’s Disease
Smoker’s Melanosis

• Rather common melanocytic response found in heavy smokers

• Probably a protective response to the harmful aspects (polycyclic aromatic hydrocarbons) of tobacco smoke
Smoker’s Melanosis – Clinical Features

• F>M

• Frequently on anterior facial gingiva

• “Reverse smokers” show involvement of the palate
Smoker’s Melanosis – Clinical Features

- F>M

- Frequently on anterior facial gingiva

- “Reverse smokers” show involvement of the palate
Smoker’s Melanosis – Clinical Features

- F>M

- Frequently on anterior facial gingiva

- “Reverse smokers” show involvement of the palate
Smoker’s Melanosis – Diagnosis and Treatment

• Clinical, tobacco, and medical history

• May need to rule out systemic cause

• Cessation of smoking will result in gradual resolution
Drug-Related Discolorations of the Oral Mucosa

• Discoloration secondary to melanocytic stimulation or direct deposition into tissue

• Antimalarial meds, minocycline, estrogen, chemotherapeutic agents, AIDS medications
Clinical Features

• F>M

• Diffuse discoloration of skin and mucosa

• Minocycline- Discoloration of underlying bone
Clinical Features

- F>M
- Diffuse discoloration of skin and mucosa
- Minocycline- Discoloration of underlying bone
Clinical Features

- F>M
- Diffuse discoloration of skin and mucosa
- Minocycline- Discoloration of underlying bone
Clinical Features

- F>M
- Diffuse discoloration of skin and mucosa
- Minocycline-Discoloration of underlying bone
Clinical Features
Clinical Features
Treatment

- Gradual resolution upon discontinuation of medication
- Strictly and esthetic issue
- No long term complications
Addison’s Disease (Hypoadrenocorticism)

- Insufficient production of adrenal corticosteroid hormones
  - Primary – Secondary to adrenal destruction
  - Secondary – Due to malfunctioning pituitary gland
Addison’s Disease – Clinical Features

- Fatigue, irritability, depression, weakness, and hypotension

- Hyperpigmentation (may be seen intraorally)

- GI symptoms, salt-craving
Addison’s Disease – Lab Findings

• Primary – High plasma ACTH

• Secondary – Low plasma ACTH
Addison’s Disease - Treatment

• Corticosteroid replacement therapy

• Preplan dental and oral surgical procedures

• Good prognosis, with patients typically living a normal life span
Additional Consideration – Intentional Tattooing
Case #6 – Differential Diagnosis

- Normal Physiologic Pigmentation
- Smoker’s Melanosis
- Medication-Associated
- Addison’s Disease
Diagnosis Case #6 – Addison’s Disease
Diagnosis Case #6 – Addison’s Disease

• Further questioning revealed a one month history of nausea, vomiting and intermittent weakness
Case #7

- This patient presents with the abnormality seen
Case #7
Case #7
Case #7 – Differential Diagnosis

• Angioedema

• Cheilitis Granulomatosis (Orofacial Granulomatosis)
Angioedema (Quincke’s Disease)

- Diffuse, often intermittent swelling of the soft tissue

- Three primary mechanisms:
  - Hypersensitivity reaction due to IgE mediated mast cell degranulation
  - Associated with ACE inhibitor antihypertensives, secondary to increased bradykinin levels
  - Lack of or inactive C1 esterase inhibitor (inherited or acquired)
Angioedema – Clinical Features

- Enlargement of relatively rapid onset
- Pruritis, erythema
- Respiratory involvement may be life threatening
Angioedema – Diagnosis

- Allergic - Clinical presentation in association with suspected antigen
- Inciting cause often not determined
- Evaluate functional C1-INH
Angioedema - Treatment

- Antihistamines for allergic form
- IM epinephrine
- ACE inhibitor-related and C1-INH deficient do not respond to antihistamines
  - C1-INH concentrate administration or esterase inhibiting drugs
Cheilitis Granulomatosis (Orofacial Granulomatosis)

- Granulomatous inflammation of unknown etiology or the orofacial presentation of Crohn’s, sarcoidosis, TB, or any other granulomatous process
Orofacial Granulomatosis – Clinical Features

- Highly variable presentation
- Involvement of lips-cheilitis granulomatosa
Orofacial Granulomatosi­s – Clinical Features

• Highly variable presentation

• Involvement of lips-cheilitis granulomatosa
Orofacial Granulomatosis – Clinical Features

• Highly variable presentation

• Involvement of lips-cheilitis granulomatosa
Treatment and Prognosis

• Intralesional corticosteroids

• Multiple treatments

• Good prognosis; requires thorough work-up

• Primarily a cosmetic problem
Case #7 – Differential Diagnosis

• Angioedema

• Cheilitis Granulomatosis (Orofacial Granulomatosis)
Diagnosis Case #7 – Cheilitis Granulomatosis