2019 Oregon Dental Conference®
Course Handout

Nadia Ghanee, DMD

Course 3107: “Oral Pathology: Diagnosis and Management”
Thursday, April 4
8 - 10 am
Oral Pathology Case Presentation

Nadia Ghanee DMD
Pacific Northwest Kaiser Dental
PDA

nadia_ghanee@yahoo.com

Linkedin
Palatal Submucosal Mass
Differential Diagnosis

• Developmental cysts, other cysts
• Inflammatory/infectious process
• Salivary gland neoplasm
• Fibroma, fibrosarcoma
• Neuroma, neurogenic sarcoma
• Adenomatoid hyperplasia
• Other tumors of mesenchymal origin
• Lymphoma
• Metastatic neoplasm
Lymphoma

- Hodgkin Lymphoma, arises within the lymph nodes, prognosis is good
- Non-Hodgkin Lymphoma: arises within the lymph nodes: B-Cell type about 85% of lymphoid neoplasms, T-Cell form is less common
- Extra-nodal T-Cell Lymphoma, nasal type, rare
- Primary CNS lymphoma is a rare type of Non-Hodgkin lymphoma, more common in men, mostly reported in immunocompromised individuals
- Primary lymphoma of the palate is rare
- Ocular lymphoma, 80% of the cases are localized metastasis of brain lymphoma, 20% primary ocular lymphoma
- Chemotherapy, radiation
Malignant Neoplasm of Minor Salivary Glands

- Mucoepidermoid carcinoma: 23% of minor glad tumors, the most common type
- Acinic cell carcinoma
- Carcinoma x-pleomorphic adenoma
- Adenoid cystic carcinoma
- Polymorphous low grade adenocarcinoma
- Adenocarcinoma
- Survival rate of adenocarcinomas: is better for tumors of the minor glands compare to the tumors of the major glands
- 10 year survival rate: 76% compare to 26% to 50%
Focal Actinomycosis

- Actinomycetes, normal flora
- May discharge yellowish fluid
- The organism enters the tissue through an area of trauma
- It extends to the surface, sinus tract
- Pain often is minimal
- Surgical removal of the infected tissue is recommended
- Amoxicillin, tetracycline
Soft Tissue Cysts of the Oral Cavity

- Dermoid cyst
- Epidermoid cyst
- Gingival cyst of the adult
- Mucous duct cyst
- Incisive papilla cyst
- Lymphoepithelial cyst
- Epstein pearls in newborns
- Nasolabial cyst
- Cyst of undetermined origin
- Mucocele and ranula are not true cysts
Nicotine Stomatitis

- It develops in response to heat rather than the chemicals
- It can occur by the long term use of hot beverages
- Dried mud appearance
- Hyperkeratosis and squamous metaplasia of the excretory ducts
- It is reversible after smoking cessation
Inflammatory Papillary Hyperplasia

• Reactive tissue growth
• Usually grows beneath a denture
• Related to an ill fitting denture, or wearing the denture 24 hours a day
• Candida can be suggested as a cause
• Surgical excision, other surgical approach
Secondary Herpetic Infection

- Often occurs on the keratinized area of the oral mucosa, palate and gingiva
- Same features as herpes labialis
- Always with pain
- Often recurs in the same spot
- Lesions heal in 7 to 10 days
- Dental work, rubber dam...could cause it
Blue Nevus

• Cutaneous or mucosal
• Oral presentation: almost always on the palate
• Malignant transformation to melanoma is rare but has been reported
• Clinically it can mimic an early melanoma, a biopsy is recommended
• Conservative surgical excision
Generalized Discoloration of the Oral Mucosa

• Addison/ Addison’s disease, hypoadrenocorticism due to infection or autoimmune, excess melanin production
• Smoker melanosis
• Racial pigmentation
• Medication related discoloration, deposition of drug metabolites, minocycline, antimalarial medications, estrogen, chemotherapeutic agents...
Malignant Neoplasms of the Oral Mucosa

• Squamous cell carcinoma
• Verrucous carcinoma
• Malignant salivary gland neoplasms
• Lymphoma
• Metastatic carcinoma
• Sarcomas
• melanoma
Squamous Cell Carcinoma

• Accounts for more than 90% of oral malignancies
• Etiology: tobacco smoking, smokeless tobacco, betel quid, alcohol, environmental exposure, radiation, vitamin deficiencies
• Bacteria: may interact with alcohol or tobacco
• Candida: hyperplastic candidiasis
• Viruses, HPV, HIV
• Immunosuppression, HIV
• Tumor suppressor genes
Oral Squamous Cell Carcinoma
clinical presentation

- Exophytic mass
- Endophytic mass, ulceration, erosion, usually invading the lamina propria
- Leukoplakia
- Erythroplakia
- Erythro-leukoplakic
- Changes in a long lasting leukoplakic lesion
- Multiple ulcerations
Verrucous Carcinoma

• A low grade variant of SCC
• Tobacco chewer cancer
• It often corresponds to the site of tobacco placement
• May develop from PVL
• Can occur on the gingiva, tongue and hard palate
• Concurrent SCC
Hairy Leukoplakia

- In HIV infected patients
- In transplant recipients
- Absence of a known cause of immunosuppression, mandates a thorough physical evaluation to rule out immunocompromised conditions
- Usually no treatment is needed
Proliferative Verrucous Leukoplakia

• Rough surface projections
• High risk form of leukoplakia
• High recurrence rate
• The gingiva is frequently involved
• Exhibits persistent growth
• It has a strong female predilection
• Minimal association with tobacco use
• PVL may become malignant with no change in its clinical appearance
Oral Lichen Planus (LP)
Oral Lichenoid Reaction (LR)

**LP**
- More occurring on buccal mucosa and tongue
- Chronic immunological disorder
- Usually has a symmetrical pattern
- Microscopically: civatte bodies
- Deeper infiltration of mixed inflammatory cells
- Direct immunofluorescence: deposition of fibrinogen
- Malignant transformation 0.5 to 3.5%

**LR**
- More occurring on gingiva, palate
- Can be caused by medications, other exogenous factors
- Usually shows asymmetrical pattern
- Does not show civatte bodies
- Lymphocytic infiltration close to the epithelium
- Fluorescence is less intense in LR
- Most reports show malignant transformation of LR to be slightly higher than LP
Oral Lichen Planus
Oral Lichenoid Reaction

• Both chronic OLP and OLR can show superimposed candidiasis
• An initial cytology / oral smear to check for superimposed candidiasis is recommended
• 50% of patients presenting with moderate to severe OLP or OLR show positive cytology for candida before topical steroid treatment is given
• Some cases can develop candidiasis later due to topical steroid use
• Some patients need close monitoring and repeated cytology for candida
Verruciform Xanthoma

- Subepithelial accumulation of lipid laden histiocytes
- Probably immune response to local trauma
- In association with SCC, GVHD, LP
- The most common site is gingiva
- Conservative surgical excision
- Recurrence is rare
42 year old male, done with aggressive treatment for esophageal cancer which took a year, pet scan showed he was free of disease
Erythematous area on the buccal of #13 area was noticed by his dentist, #13 was removed a year ago
Differential Diagnosis

• Non healing extraction site due to low immune system
• Nonspecific ulcer
• Ulcer with candida species
• Actinomycosis
• Major aphthous ulcer
• Primary squamous cell carcinoma of the gingiva
• Metastatic cancer
Submucosal Mass, Multiple Lesions

- Multiple fibromas
- Neurofibromatosis
- Multiple endocrine neoplasia
- Multiple hamartoma syndrome
- Granulomatous disease, sarcoidosis
- Multiple monomorphic adenomas
Lipoma

• The most common mesenchymal neoplasm
• Mostly occur on the trunk and extremities
• Less common in the oral and maxillofacial region
• The metabolism of lipoma is independent of the normal body fat
Mucocele, Mucous Duct Cyst

- Often the result of local trauma
- Some mucoceles rupture and heal by themselves
- Adjacent salivary glands should be removed to prevent recurrence
- Upper lip mucoceles are formed deeply in the tissue and have higher recurrence rate
Fordyce Granules

- Ectopic sebaceous glands
- Sebaceous glands are dermal adnexal structures
- They secrete oily matter, sebum, into the hair follicles
- Intraoral and lip Fordyce granules are inactive
- Choristoma
Actinic Keratosis

• Premalignant alteration of the lip
• Results from chronic UV light exposure
• Middle aged to elderly, fair complexioned men
• Atrophy, dryness, leukoplakic lesions, if patient peels off the scale, it reforms in a few days
• Chronic ulceration, progression to SCC
Pyogenic Granuloma  
Peripheral Giant Cell Granuloma

- Reactive lesions
- Tissue response to local irritation, trauma, poor OH...
- PGCG occurs exclusively on the gingiva
- PG occurs on the gingiva, lip, tongue, buccal mucosa
- Surgical removal
- Adjacent teeth should be scaled to minimize the risk of recurrence
- Epulis granulomatosa: resembles PG sometimes arises in healing extraction sites
Squamous Papilloma

- HPV induced epithelial proliferation
- HPV type 6 and 11
- It can arise at any age
- Conservative surgical excision is recommended
- No reported malignant transformation
- No dissemination to the other parts of the oral cavity
Spontaneous / Traumatic Sequestration

• Mucosal ulceration with exposed bone of the posterior lingual surface of the mandible
• Bilateral involvement may occur
• The intensity of pain is variable
• Spontaneous loss of the dead bone can occur
• Surgical removal
Graft-Versus-Host Disease GVHD

• Due to bone marrow transplantation to treat leukemia, lymphoma, MM...
• 80% of patients with chronic GVHD, have oral lesions
• Small increased risk for the development of SCC
• Cytology to check for superimposed candidiasis
Desquamative Gingivitis

• Erythema, desquamation, ulceration
• Can be part of LP, MMP, pemphigus
• Generalized or localized
• Can be part of lichenoid reaction to medications, OH products, food, dental material
• With stress can get worse
Treatment of Desquamative Gingivitis

- Medical history review, list of medications, new medications?
- Diet analysis, OH products review
- OH instructions
- Biopsy
- Cytology, superimposed candidiasis
- Antifungal treatment if cytology result is positive
- Lidex gel 0.05% with medication trays, BID, for 30 minutes
- Doxycycline 100 mg per day
Cytology / Oral Smear
PAS or GMS stain for Candida
Oral Candidiasis / Candidosis

• The yeast form is relatively innocuous but the hyphal form is usually associated with the invasion of the tissue
• 50% of people carry it in their mouth as normal oral flora
• Pseudo-membranous, erythematous, hyperplastic, atrophic/erythematous, mucocutaneous (immunologic dysfunction), denture stomatitis
• Angular cheilitis
• Median Rhomboid Glossitis
Angular Cheilitis

treatment

• Can occur alone or as a component of chronic candidiasis
• With reduced vertical dimension, folds at the corners of the mouth
• 20% of the cases: caused by candida
• 60% of the cases: caused by candida and staph aureus
• 20% of the cases: caused by staph aureus
• Nystatin rinse, or clotrimazole if associated with chronic candidiasis
• Nystatin triamcinolone cream
• Bactroban (mupirocin) ointment
Denture Stomatitis

• Chronic atrophic candidiasis or erythematous candidiasis
• Accompanied by petechial hemorrhage
• Usually asymptomatic
• Allergy to the denture base?
• Improper design, unusual pressure on the mucosa?
• Cytology/oral smear seldom shows candidal hyphae in the epithelium
• The denture shows more colonization of the yeast
• Patient should be advised to leave the denture out at night, treatment of the denture is recommended
Medications Associated with Gingival Hyperplasia

Anticonvulsants
Calcium channel blockers
Cyclosporine
Erythromycin
Oral contraceptives
Lymphoepithelial Cyst

- Small submucosal mass, yellow or white
- Develops in the sites of normal or accessory oral lymphoid tissue
- Surgical excision
- A biopsy may not always be necessary if the lesion is distinctive enough to make the diagnosis on a clinical basis
Hyperplastic gingivitis with pyogenic granuloma