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CE Course Handout

From the Cradle to the Grave: Oral Pathology Through the Life Span

Friday, June 19, 2015
2:30pm-5:30pm

adha American Dental Hygienists' Association

ADHA CLL 2015, Nashville, TN
From the Cradle to the Grave: Oral pathology through the life span

Conditions Exhibited in Infants and Children:

Dental Lamina Cysts
Etiology: Developmental
Clinical appearance: Cystic nodules on alveolar ridges
No tx required-resolve spontaneously

Retrocuspid papilla
Etiology: Developmental
Clinical appearance: 2-4 mm raised area on mandibular lingual inferior to canine
No tx required

Commissural Lip pits
Etiology: developmental
Clinical appearance: Labial commissure area, Opening-1 to 2 mm, depth-2 to 4 mm
No tx required

Gemination/Fusion
Etiology: developmental
Gemination-one tooth bud attempts to split
Fusion-two tooth buds join
Clinical appearance- Large tooth with invagination
No tx required

Odontoma
Etiology: Developmental
Clinical Appearance: radiopacities resembling rudimentary toothlets
Composed of enamel, dentin, pulp, cementum
Two types
- Compound-small, rudimentary toothlets
- Complex-larger than compound-conglomerate mass of enamel and dentin

Tx:Excision

Cysts:
Epithelial lined cavity filled with fluid
Can be intraosseous or in soft tissue
Can be odontogenic or developmental
Can be destructive

Dentigerous Cyst:

Etiology: Developmental-Odontogenic
Clinical Appearance: Surrounds the crown of an unerupted tooth (attached at CEJ) radiographically
Tx -excision

Eruption Cyst
Etiology: Developmental
Soft tissue variant of dentigerous
Clinical Appearance: Bluish gray raised area
No Tx required

Hemangioma
Etiology: Developmental Vascular anomaly
Becomes apparent in childhood
Clinical Appearance: Raised or flat blue lesion variable size
Tx: Excision, may resolve spontaneously

Ectodermal Dysplasia
Etiology: hereditary disease of ectoderm, Group of 150+ genetic disorders hypohidrotic form most common, affects hair, skin, teeth, nails
Clinical Appearance: dry sparse hair, dry skin, missing and developmentally deficient teeth, dystrophic nails
Only fully expressed in males-females are carriers
Tx-Prosthetic therapy

Tricho-dento-osseous Syndrome
Etiology: Hereditary
Rare form of ectodermal dysplasia
Affects hair (tricho), teeth (dento) and bone (osseous)
Tx-manage dental defects
Dental Manifestations
Most common:
- Enamel Hypoplasia
- Taurodontism

Osteogenesis Imperfecta with Opalescent teeth
Etiology: Hereditary bone disease
Fragile bones, fracture easily
If associated with Opalescent teeth:
Clinical Appearance: Bluish/brown discoloration with translucency, attrition, bulbous crowns, obliterated root canals
Tx: Restorative

Hand Foot and Mouth Disease

Etiology: Coxsackievirus
Seen in mini epidemics-children
Clinical Appearance: Flu like symptoms-fever, sore throat, malaise
Red macules with central vesicles-heal without crusting
Intraorally-multiple vesicles that rupture-ulcers, 2-4 mm in diameter
Tx: symptomatic

Herpangina
Etiology: Coxsackievirus (not associated with herpes as name implies)
Clinical Appearance: Symptoms similar to HFM. Oral lesions similar to HFM, but posterior soft palate area-rarely anterior to this.
Tx: symptomatic

Multifocal Epithelial Hyperplasia (Heck's Disease)
Etiology: Human papilloma virus, types 13 and 32
Seen mostly in children and teenagers of ethnic populations
Clinical Appearance: Normal color of surrounding tissue, clustered small soft rounded papules on labial, buccal, lingual mucosa
No tx required

Conditions Exhibited in Adolescents and Young Adults

Adenomatoid Odontogenic Tumor
Etiology: Unknown-Epithelial Odontogenic tumor with gland like structures
Young age group
Clinical Appearance: Anterior jaws, often assoc with impacted tooth radiographically
Tx: Excision

Conditions Manifesting Intraoral Pigmentation
Racial pigmentation
Drug therapy
Metal impregnation
Oral melanotic macule
Smoker's melanosis
Systemmic Diseases
- Peutz-Jegher's Syndrome
- Addison's Disease
- Albright's Syndrome
- Gardner's syndrome
- Kaposi's Sarcoma
- Oral Melanoma

Peutz-Jegher's Syndrome

Etiology: hereditary- Intestinal polyposis
Clinical Appearance: Perioral and intraoral pigmentation, pigmentation on hands and feet
Gastrointestinal Adenocarcinoma or tumors of other organs
Tx: Monitor polyps

Addison's Disease
Etiology: Autoimmune, infections, tumors
Insufficiency of the adrenal cortex
Clinical Appearance: Bronzing of the skin and oral pigmentation
Tx: corticosteroid replacement therapy

Hereditary Hemorrhagic Telangiectasia (HHT)
Etiology: Hereditary disorder – Offspring 50% chance of having the disease
Also called Rendu-Osler-Weber Syndrome
Highly variable – even among family members
Only 10% are diagnosed
Clinical Appearance: Telangiectasias-skin and mucous membranes
Intraoral-telangiectasias on tongue, labial/buccal mucosa, palate, gingiva
Nosebleeds in 90%
arteriovenous malformations (AVMs)-lungs, brain, GI tract (iron deficiency anemia), liver
Tx-Embolization of AVM's, close follow-up, premedicate patients with AVM's

Pyogenic Granuloma
Etiology: exuberant tissue response to local irritation or trauma
Clinical Appearance: Red lesions, most common in interdental papilla region
Granulation tissue-Endothelial cells, very vascular
Tx: Excision

Erosion/Bulemia
Etiology: chemical
Clinical Appearance: "moth eaten" loss of tooth structure from frequent purging
May have enlarged salivary glands
Tx: therapy for eating disorder, restorations

CONDITIONS EXHIBITED IN ADULTS

Oral Cancer
90% are squamous cell carcinomas
Most common area-lateral/ventral tongue, floor of mouth

Risk factors(Etiology???)
- Tobacco (Smoked and smokeless)
- Alcohol (synergistic effect of the two)
- History of infections (**HPV**, EBV, HIV, Candida)

Chronic irritation
Immunosuppression
Actinic Radiation (lip)

Clinical Appearance: Types of lesions
White patch-Leukoplakia
Red patch-erythroplakia
Red and white patch
Ulcer
Nodule
*It can look very innocuous!!!!!!
Snuff dipper's lesion-wrinkled, white lesions
Tx: If no dysplasia, remove cause and lesion will resolve
Carcinoma In Situ: "Cancer in place"
Tx: Excision
Oral cancer Tx-Combination of excision, radiation, chemotherapy

Human Papilloma Virus
More than 100 subtypes, several oral manifestations in epithelial tissue
Papilloma, Verucca Vulgaris, Multifocal Epithelial Hyperplasia
Subtypes noted for Oral Cancer, primarily 16, but also 6,7,33,35,59

Papilloma
Etiology: Human papilloma virus, primarily HPV 6 and 11
Any age – most in 30-50
Clinical Appearance: Exophytic, cauliflower like lesion, may have surface keratinization
Tx-Surgical excision

Verucca Vulgaris
Etiology: Human papilloma virus 2,4,6, & 40
Clinical Appearance: Exophytic, cauliflower like lesion, found most in children (hands), most common on skin, rarely intraoral
Vermillion border, labial mucosa, anterior tongue
Tx-Surgical excision

Multifocal Epithelial Hyperplasia-described earlier

Condyloma Acuminatum
Etiology-HPV, 2,6,11,53,54, sexually transmitted
Clinical Appearance: Exophytic, cauliflower like lesion on oral mucosa or genitalia
TX-surgical excision

HIV/AIDS
Etiology-Human Immunodeficiency virus, targets the CD4+ helper T lymphocyte

Transmitted by sexual contact, parenteral exposure to blood, mother to fetus
Acquired immunodeficiency syndrome-opportunistic infections as a result of immunosuppression
Tx: Extended survival with highly active anti-retroviral therapy (HAART), no cure

HIV Related Oral Lesions (HIV-ROL), 30% reduction of HIV-ROL with HAART
Condyloma acuminatum, Oral candidiasis, Hairy leukoplakia, Kaposi sarcoma
Detection of oral manifestations critical in unaware individual

Oral Candidiasis
Etiology: Candida albicans
Clinical Appearance: erythematous-diffuse redness, acute pseudomembranous-white plaques which can be wiped off leaving a red base
Tx: antifungals

Oral Hairy Leukoplakia
Etiology: Epstein Barr virus (EBV)
Clinical Appearance: white corrugated plaques, lateral border of tongue
Tx: antivirals

Kaposi's sarcoma
Etiology: strongly associated with human herpesvirus type 8
Clinical Appearance: asymptomatic red macule, red/purple plaque, lobulated violet nodules that can ulcerate and cause pain
Tx: radiation, injection of chemotherapeutics or sclerosing agents

Irritation fibroma (focal fibrous hyperplasia)
Etiology: Chronic irritation-the most common hyperplastic lesion of the oral cavity, fibrous connective tissue
Clinical Appearance: Most commonly seen on gingiva, buccal mucosa, tongue. Smooth round sessile nodule
Tx-Surgical excision

Giant cell fibroma-variant of irritation fibroma

Conditions Exhibited in Older Adults

Candidiasis (moniliasis)-several forms, Etiology: candida albicans (fungal infection)
- Atrophic
  - Acute (erythematous) – typically result of antibiotic therapy
  - Chronic (denture stomatitis)-
- Pseudomembranous (thrush)
- Chronic hyperplastic

Angular cheiltiis

Chronic Atrophic Candidiasis
Clinical Appearance: Common beneath dentures, partials, flippers, usually asymptomatic, red area oftentimes in outline of appliance
Tx-antifungal Medications (nystatin, clotrimazole)

Acute Pseudomembranous Candidiasis (thrush)
Clinical Appearance: White areas that can be wiped off with gauze and gentle pressure
Tx-antifungal Medications (nystatin, clotrimazole)

Median Rhomboid Glossitis
Also called central papillary atrophy,Long term candida albicans infection, Usually asymptomatic
Clinical Appearance: red, oval area on dorsum of tongue, anterior to circumvallate papillae
Tx - antifungal

Inflammatory Papillary Hyperplasia
Etiology: Chronic irritation from ill fitting denture/appliance
Clinical Appearance: Red papules in palatal area, asymptomatic, may be secondarily infected with candida albicans
Tx-Refit denture/appliance, antifungal for candida

Epulis Fissuratum
Etiology-chronic trauma to oral mucous membranes
Forms around the flanges of an ill-fitting denture
Inflammatory fibrous hyperplasia, denture induced fibrous hyperplasia
Clinical Appearance: Tumor-like hyperplasia of fibrous connective tissue
Can be firm and fibrous, same color as surrounding tissue or erythematous and ulcerated
Tx: excise redundant tissue, reline or remake denture

Gingival Hyperplasia
Etiology: multiple
Exaggerated response to local factors, hormonal changes, drugs, hereditary, systemic disease: leukemia
Tx: Remove/adjust cause
Comprehensive home care program, gingivoplasty/gingivectomy

Lichen Planus
Etiology: Immune mediated
Relatively common skin disease with oral manifestations, middle aged adults
Several forms – reticular and erosive most common
Clinical Appearance: Characteristic white lesion – Wickham's striae on buccal mucosa (reticular) and erosive areas on gingiva (erosive)
Tx: Corticosteroids

Sjogren (Sicca) Syndrome
Etiology: Autoimmune
Complex multifactorial disease
Two types-primary and secondary
Primary affects the salivary and lacrimal glands
Clinical Appearance: Enlarged Salivary glands, xerostomia
Secondary Sjogren Syndrome
90% of cases women
Rheumatoid arthritis most common assoc disease
Can affect other body tissues-dry skin, nasal and vaginal mucosa
Fatigue, depression, raynaud's phenomenon, is chronic, risk of malignant transformation to lymphoma
TX: Symptomatic
- Artificial tears and saliva
- Immaculate oral hygiene
- Dietary modification
- Fluoride therapy
- Pilocarpine

Anemia/Vitamin Deficiencies
Etiology: lack of iron, vitamins
Clinical Appearance: papillary atrophy on tongue, aphthous like ulcerations
Tx: Determine cause, iron/vitamin therapy
Systemic Conditions manifesting aphthous like ulcerations:
- Gastrointestinal disorders
- Nutritional deficiencies
- Cyclic Neutropenia
- Celiac Disease
- Behcet Syndrome

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