Oral Manifestations of Systemic Disease

Oral manifestations as a consequence of specific drug use

Drug Related Gingival Hyperplasia
- Abnormal growth of the gingival tissues
- Secondary to use of systemic medication
- Increased amount of collagen
- Strong association with cyclosporine, phenytoin and nifedipine
- Other drugs implicated also in the category of anticonvulsants, calcium channel blockers etc
- Prevalence with phenytoin is 50%, whereas with nifedipine and cyclosporine changes affect 25% of the patients
- Severity of gingival enlargement is dependent on the patients susceptibility and level of oral hygiene
Drug induced gingival hyperplasia

- Anticonvulsants
  - Carbamazepine
  - Ethosuximide
  - Ethinyl
  - Felbamate
  - Mephenytoin
  - Methsuximide
  - Phenytoin
  - Phenacemide
  - Phenylbutazone
  - Sodium valproate
  - Vigabatrin
- Calcium channel blockers
  - Amlodipine
  - Nifedipine
  - Nitrendipine
  - Nifedipine
  - Nimodipine
  - Verapamil
- Cyclosporine
- Erythromycin
- Oral contraceptives
**Drug Related Gingival Hyperplasia**

- Discontinuation of the offending medication results in cessation or regression
- Medication substitution (response is not immediate)
- Professional prophylaxis, frequent re-evaluations and home plaque control
- Systemic or topical folic acid?
- Removal of excess gingival tissue
- Recurrence is high

**Xerostomia**

- Dry mouth or diminished salivary flow
- Impairs quality of life
- Approximately 30 percent of the population 65 years and older are affected
- “Age” is not causative
- Causes:
  - Systemic disease and their treatment
  - Stress and Anxiety
  - Drug induced dry mouth
  - Head and neck radiation
  - Chemotherapy
  - The ‘Unknown’

**CATEGORIES OF DRUGS ASSOCIATED WITH XEROSTOMIA.**

- Analgesics (centrally acting)
- Angiotensin-converting enzyme inhibitors
- Antiretrovirals
- Antacids
- Antiseptics
- Antimicrobials
- Antihistamines
- Antihypertensives
- Anticonvulsants
- Antidepressants
- Antiinflammatory agents
- Antiparkinsonism agents
- Antipsychotics
- Bronchodilators
- Calcium channel blockers
- Diuretics
- Muscle relaxants
- Narcotic analgesics
- Nonsteroidal anti-inflammatory drugs
- Sedatives
- Smoking cessation agents

**Caries**

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Stomatitis Medicamentosa

- Allergic reaction of the oral mucosa to the systemic administration of a medication
  - Intraoral fixed drug eruptions
  - Lichenoid drug reactions
  - Lupus erythematosus–like eruptions
  - Pemphigus-like drug reactions
  - Nonspecific vesiculoerusive or aphthouslike lesion
  - Erythema Multiforme

Medications associated with Lichenoid reactions

- Allopurinol
- Amiphenazol
- Amphotericin
- Arsenicals
- Bismuth
- Captopril
- Carbamazepine
- Chloroquine
- Chlorothiazide
- Chlorpropanide
- Cimetidine
- Cyanamide
- Dapsone
- Fenicolnac
- Furosemide
- Gold salts
- Hydroxychloroquine
- Ketoconazole
- Levamisole
- Lithium
- Lorazepam
- Mercury
- Methyldopa
- Metopromazine
- Oxyprenolol
- Palladium
- Paraaminosalicylic acid
- Penicillamine
- Phenothiazines
- Phenybutazone
- Pracetol
- Propranolol
- Pyrimethamine
- Pynitol
- Quinacrine
- Quinidine
- Spirinolactone
- Streptomycin
- Sulfonamides
- Tetracycline
- Tolbutamide
- Tripolidine

Oral Manifestations of Dermatologic Conditions

- Vesiculo-erusive disease
  - Lichen planus
  - Pemphigus Vulgaris
  - Benign mucous membrane pemphigoid
Lichen Planus

- Very common
- Skin and mucous membrane disease
- Etiology unknown
- Three classic subdivisions
  - Reticular LP
  - Erosive LP
  - Plaque-like LP

- Appears as white striae/lace-like mucosal lesions (Wickham’s striae)
- Generally asymptomatic unless erosive
Skin Lesions of Lichen Planus

Lichen Planus

• Reports of Oral lichen Planus (OLP) transforming to Squamous Cell Carcinoma
• The transformation rate is 1-3% of cases
• Transitional phase = “lichenoid dysplasia”
Treatment

- Topical steroid therapy
- Sometimes systemic steroids are necessary
- OLP is not life-threatening, but can be debilitating

Pemphigus Vulgaris

- One to five cases per million every year
- Fatal condition if untreated
- Oral lesions are usually the 'first to show and last to go'
- Autoantibodies against cell surface glycoproteins
- Adults, 50 yrs
- No gender predilection
- More common in persons of Mediterranean, South Asian, or Jewish heritage
- Oral soreness
- Superficial erosions and ulcerations distributed haphazardly on any oral mucosal location
- Remissions and exacerbations are common
- Positive Nikolsky sign

Diagnosis and Treatment

- Biopsy and Immunofluorescence assay
- Cannot clinically distinguish from benign mucous membrane pemphigoid
- High dose prednisone therapy
- Life-threatening disease (10%)
- Secondary infections are common
Benign Mucous Membrane Pemphigoid

- Patchy hemorrhagic areas
- Antibodies directed towards the basement membrane
- Gingiva particularly affected
- Average age 50-60 yrs
- Women > Men
- Can affect any mucosal surface
- Lesions may affect the eye

Neville, 3rd edition
Benign Mucous Membrane Pemphigoid
Treatment & Prognosis

- Systemic or topical steroids
- May be prolonged with pain and loss of life quality
- Referral to an ophthalmologist

Oral Manifestations of Hematologic Disorders
Iron Deficiency anemia

- Most common cause of anemia in the US
- 20% of women of childbearing age
- 2% of men
- Cause: Excess blood loss, increased demand for RBC’s, Decreased intake of iron, Decreased absorption of iron

Clinical Findings

- General: Fatigue, easy tiring, palpitations, lightheadedness, and lack of energy
- Oral finding:
  - Angular cheilitis
  - Atrophic Glossitis
  - Generalized oral mucosal atrophy
Tongue alteration with Vit B12 deficiency

Other manifestations of Anemia

Vit B12 Deficiency
After Vit B12 therapy

Oral Manifestations of Infectious disease

Herpes

- Herpetoviridae: HSV1, HSV2, VZV, EBV, CMV, HHV-6, HHV-7, HHV8
- Herpes Simplex Virus (HSV) infections are common in the oral cavity
- Initial Exposure: Primary infection
  Virus resides in Trigeminal ganglion
- Secondary, recurrent infection: Reactivation of the virus

Recurrent Herpes Simplex Infection

- Can occur either at the site of primary inoculation or in adjacent areas of surface epithelium supplied by involved ganglion
- Herpes Labialis: Vermillion of lip and adjacent skin (Cold Sore or fever blister)
- 15-45% of US population has herpes labialis
- Prodromal symptoms: Pain, Burning, Itching, tingling
- Provoking factors: multiple
- Intraoral recurrent herpes: Keratinized mucosa
Herpes Labialis

Recurrent Intraoral Herpes
**Recurrent Herpes Simplex Infection**

- Clinical History gives diagnosis usually
- Culture or biopsy
- Self-limiting disease
- Treatment:
  - Acyclovir ointment, suspension or tablets
  - Penciclovir Cream
  - Systemic Valacyclovir and famciclovir
  - Chlorhexidine rinse

  If immunocompromised: Tx is more complex

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**Herpes Zoster**

- Initial Infection with VZV
- Herpes Zoster occurs after re-activation of the virus.
- 10-20% of individuals, prevalence increases with age
- Intense pain precedes the rash in 90% cases
- Pain develops in area of epithelium innervated by dermatome
- Oral cavity: Movable and non-movable mucosa
- Post Herpetic neuralgia
- Vaccines available
Condyloma Acuminatum

- Virus induced proliferation of epithelium of the genitalia, perianal region, mouth and larynx
- Sexually transmitted disease
- Site of sexual contact or trauma
- HPV 2, 6, 11, 16, 18, 33, 52, 58
- Oral: labial mucosa, soft palate, lingual frenum
- Tx: Conservative surgical excision

Contagious

Associated with possibly increased risk of malignant transformation
Thank You!!

Namaste!