

Fungal infection

✿ Genus Candida

- **Species:** Parapsilosis, Tropicalis, Pseudotropicalis, Glabrata, Krusei, Guilliermondi, **Albicans**

- Commensal organisms
- **Carriage rate:**
- Yeast, long branching septate **hyphae**
- **Predisposing factors:**

. **Local factors:** trauma, denture, smoking, CHO

Age:

. Drugs

. Xerostomia

. **Systemic disease:** anaemia, DM, HIV, blood dyscrasia, Endocrine, Immuno ↓

- Specific & nonspecific immunity
- Pathogenicity
- **Classification:**

♠ **Group 1: Primary-Confined to the oral mucosa**

- * **Acute:** Pseudomembranous (thrush) & Erythematous (atrophic)
- * **Chronic:** Pseudomembranous & Erythematous; Hyperplastic (candidal leukoplakia).
- * **Candida-associated lesions:** Denture stomatitis; Angular cheilitis & Median rhomboid glossitis

♠ **Group 2: Secondary-Oral manifestation of generalized candidiasis**

- * Chronic mucocutaneous candidosis



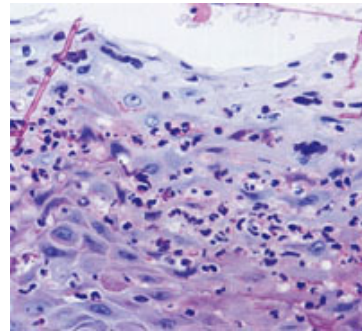
❖ **Pseudomembranous candidosis:**

- Acute & Chronic
- Predisposing factors
- Infants & elderly



- **Clinically:**

- Soft, friable, creamy-colored plaques
- Wiped off → erythematous base
- Isolated small flecks or widespread plaques
- Any mucosal surface of mouth



- **Hist:**

- Hyperplasia
- Parakeratosis + Candidal hyphae & AICI (pseudomembrane)
- A & CICI in LP

- ❖ **Erythematous candidosis:**

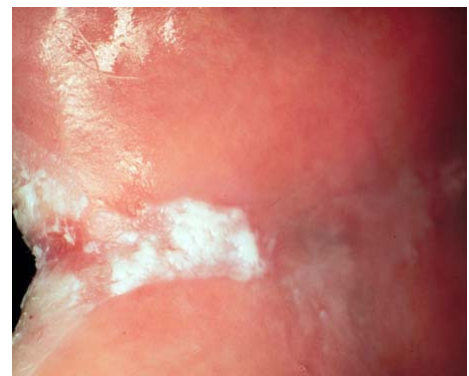
- Acute and Chronic
- Mostly DSTong
- AB & steroids (AB sore tongue)
- **Clinically:** red oral mucosa, painful, generalized!
- **Hist:** thin epith, ≈ candidal hyphae, ICI



- ❖ **Chronic hyperplastic candidosis (candidal leukoplakia):**

- **Clinically:**

- ◇ Dense, white patches of irregular thickness w rough surface
- ◇ ± Erythematous areas → speckled leukoplakia
- ◇ BM → ∩ in shape
- ◇ DLT
- ◇ Often Bilateral
- ◇ Males of middle age, smoking



- **Hist:**

⇓ Parakeratosis with AICI & Candidal H

⇓ Marked hyperplasia; atrophy

⇓ A & CICI in prickle cell layer

⇓ Dysplasia

- Premalignant

❖ **Candida-associated denture stomatitis**

- Chronic atrophic candidosis:

- Aetiology

- Up to 50%

- **Clinically:** asymptomatic erythema of palate

Newton's classification → Pinpoint areas

→ Diffuse area

→ W granularity

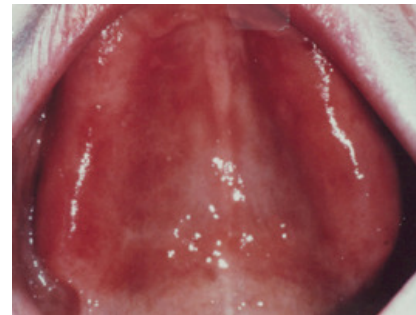
- **Hist:**

→ Hyperplasia &/or atrophy

→ Para/nonk

→ CICI & prominent bldv in LP

→ Candidal hyphae



❖ **Candida associated and other forms of Angular cheilitis:**

- Bilateral soreness, erythema & fissuring at corner of mouth
- 30 of patients w DS
- Candida infected saliva
- Staph/B-h Strepto/mixed
- Nutritional deficiencies



❖ **Chronic mucocutaneous candidosis:**

- Persistent & refractory
- MMs, skin & nails
- Oral lesions: \approx candidal leukoplakia
- **5 types:**

- 1. Familial limited type:**

- AR
- Infancy
- Mild

- 2. Diffuse type (Candida granuloma):**

- Sporadic or AR
- Most severe
- < 5 years
- Extensive oral involvement
- Multiple disfiguring overgrowths on the skin

- 3. Candidosis endocrinopathy syndrome:**

- AR/S
- 2nd decade
- CMC + multiple glandular deficiencies
- CMC can precede endocrine ↓
- Hypoparathyroidism, Addison's disease, hypothyroidism, DM
- E hypoplasia

- 4. Late-onset type (Thymoma syndrome):**

- Sporadic
- Mild Oral & skin lesions
- Thymoma

- 5. CMC associated with primary immuno ↓:**

- Early onset, sporadic/hereditary, variable severity

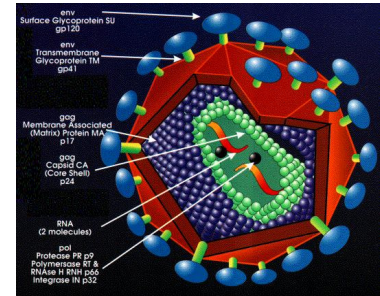
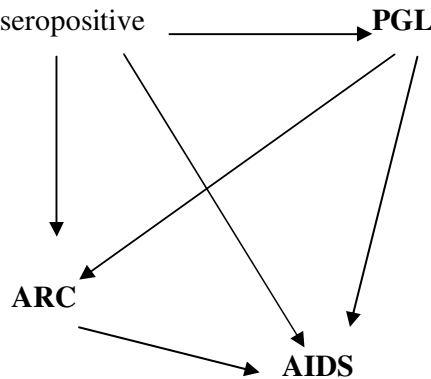
• Deep mycosis:

- Rare
- Immunocompromised & endemic areas
- Cryptococcosis, Blastomycosis, Histoplasmosis, Aspergillosis
- Nodular granulomatous lesions or ulcerated mass + lesions in RS
- Granulomas



• HIV infection & AIDS

- RNA virus → lymphocytes, mΦ & certain nerve Cs
- T-Helper
- Exposure → Infection → HIV seropositive



- Normal CD4/mm³ : 800-1200, T4: T8 = 2:1
- AIDS: <200 & 1:2
- Oral manifestations:

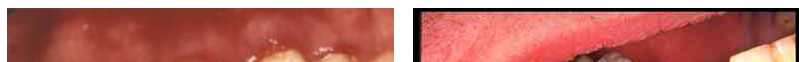
□ Lesions strongly associated w HIV:

1. Candidosis:

- Most frequent oral lesion: 90% of AIDS & 25% of HIV+
- Persistent & refractory
- Upper GIT & RT
- Forms
- Other species



2. HIV-associated periodontal disease:



- HIV-gingivitis
- HIV-NUG
- HIV-periodontitis
- Necrotizing stomatitis



3. Hairy leukoplakia:

- **Clinically:**

- Linear, folded w raised corrugated surface (↓smooth)
- LBT bilaterally (↓BM)
- Precursor of AIDS
- Affected patients



- **Hist:**

- Hyperparak & acanthosis
- Koilocyte-like Cs
- Candida
- ☒ Inflammatory CS

- **Pathogenesis:**

4. Kaposi's sarcoma:

- Endemic form

- **HIV:**

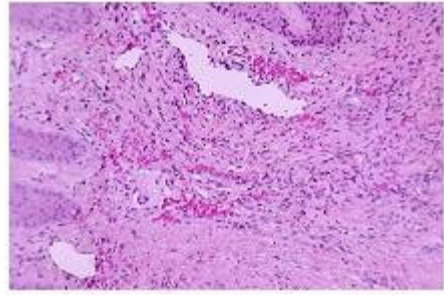
- Most common tumour: 25%
- M: F= 20:1
- Whites & homosexuals
- HIV-8



- Skin or MMS, single or multiple, painless
- Colour & form
- Oral: site, changes

- **Hist:**

- Early lesions:
- Mature lesion:



5. Non-H lymphoma:

- Site:
- Clinically:
- Type
- Pathogenesis:



❑ Lesions less commonly associated with HIV infection:

1. Atypical ulceration:

- ≈ Major RAS, oropharynx
- HHV, CMV, Mycobacteria

2. Idiopathic thrombocytopenic purpura:

3. Salivary gland disorders:

- Chronic parotitis:
- Sjogren's like syndrome
- Parotid swelling
- Lymphoepithelial cysts



4. **Viral infections:**

- Severe HS & HZ
- CMV
- HPV:



❑ **Lesions possibly associated with HIV infection:**

1. **Bacterial infections**
2. **Fungal infection**
3. **Melanotic hyperpigmentation**
4. **Neurological disturbances:**