Viral Infections:

1. Herpes Simplex Virus:

- SS DNA
- Lytic to epith Cs & latent in neural tissue
- Breaks in skin; intact mms ⇒ droplet spread or lesion contact
- **Primary infection**: most subclinical/mild pharyngitis
- Thru mms to infect peripheral nerves → ganglion
- Reactivation: stress, trauma, Cold, sunlight, fever, menstruation, gastric upset, immune ↓

- Migration → surface epithelial cells→ recurrent infection (1/3)

- **Primary herpetic gingivostomatitis:**
  - Young children
  - Incubation period:≈ 5 days
  - Prodromal symptoms: fever & malaise
  - Numerous, 2-3 m vesicles on K & nonk m
  - + Widespread gingivitis
  - Ulcers
• Fever, LN ↑ & tenderness, maygia & dysphagia
• Circumoral crusting
• 7-10 days
• Eyes, chin

• **Herpetic whitlow:** vesicles, pain, ↑ fever, LN ↑ (axilla, arm)

• **Hist:**
  - Intraepithelial vesicles
  - Ballooning degeneration
  - Giant Cs
  - Variable ICI in LP

• **Recurrent herpetic infection:**
  Δ: Local symptoms
  Δ: **Herpes labialis:**
    - Prodromal phase
    - Cluster of vesicles
  Δ: **Recurrent intraoral herpes:**
    - Dental treatment
    - Hard palate, maxillary gingiva, LBT
2. Varicella-Zoster Virus (VZV):

- Varicella or “chicken pox”
  
  i. Childhood
  
  ii. Inhalation of droplets
  
  iii. IP for 2 wks ⇒ fever, malaise & characteristic rash
  
  iv. Oral vesicles
  
  v. ⇒ Latent

- Herpes Zoster or “Shingles”
  
  i. Rare
  
  ii. Predisposing factors
  
  iii. Age
  
  iv. Prodromal symptoms ⇒ Unilateral vesicular rash
  
  v. Trigeminal nerve
  
  vi. Complications:
    
    a. Scarring
    
    b. Post-herpetic Neuralgia
    
    c. Ramsay-Hunt Syndrome

4. Herpangina:

- Coxsakie Virus (Picornavirus, RNA)
  
- Coxsakie A (1-23) & B (1-6)
  
- A (1-6, 8, 10, 12, 16, 22), B (1-5)
  
- Inhalation
  
- Outbreaks
  
- Clinically:
    
    i. Sore throat, dysphagia, mild fever & malaise
ii. Small vesicles (oropharynx)

iii. ≈ 7 days

5. **Hand, foot & mouth disease:**
   - Coxsakie A16 & 9, and others
   - Outbreaks
   - Clinically:
     - Malaise, mild fever, nausea
     - Small vesicles with erythematous base/palms & feet
     - Then, oral vesicles for up to 2 wks

5. **Infectious mononucleosis:**
   - EBV
   - Children: Subclinical
   - Adolescents & young children
   - IP: 30-50
   - Fever, malaise, anorexia, sore throat
   - Faucial edema & creamy tonsillar exudate
   - Petechia & ulcers, pericoronitis
   - Generalized tender LN ↑ ± ↑ Liver & spleen
   - **Dx:** serology, Monospot slide test, Paul-Bunnell test
   - Hairy Leukoplakia, Burkitt’s lymphoma, Nasopharyngeal Ca, Lymphoma

6. **Measles:**
   - Contagious
   - RS ⇒ skin bld vessels ⇒ skin rash ± pneumonia & encephalitis
   - Fever, cough & headache
• Koplike spots
• Gangrenous stomatitis (Cancrum Oris, Noma)

7. Cytomegalovirus:
• Secretion
• Blood, intimate contact & organ transplant
• Infection in early childhood
• Latent in epithelial cells of Kn or oropharynx
• Immunocompetent ⇒ mild disease (pharyngitis, LN↑, malaise, fever)
• Immunocompromised: IMN, hepatitis, pneumonia, encephalitis, thrombocytopenia
• Oral manifestations: non-specific ulceration, SGs, Cyclosporine-induced GH

❖ Bacterial infection:

❖ Acute necrotizing ulcerative gingivitis (ANUG)
• Uncommon
• Young adult males
• Clinically:
  ➢ Sudden onset
  ➢ Crater-shaped ulcers
  ➢ at tips of interdental papillae
  ➢ Margin
  ➢ Slough
  ➢ Marginal gingiva
  ➢ Soreness, bleeding, halitosis, metallic taste, ↑ salivation
  ➢ Fever, malaise, LN↑
• Hist:
➢ No surface epith
➢ Slough: fibrin, necrotic Cs, bacteria, RBCs
➢ LP: Marked AICI
➢ G-stain: Anaerobic spirochetes & fusibacterium
➢ E.M: tissue invasion
➢ Endogenous

• **Predisposing factors:**
  ➢ Poor OH ➢ Gingivitis ➢ Smoking ➢ Stress
  ➢ Fatigue ➢ Trauma ➢ Immunity

• Recurrence

• **Noma (Cancrum Oris)**

■ **Actinomycosis:**

  ➢ Actinomyces israelii, viscosus & naeslund
  ➢ Injury, surgery, extraction, periapical infection, pericoronitis
  ➢ Soft tissue swellings, multiple sinuses, trismus, mild pain
  ➢ Scarring
  ➢ **Hist:** sulphar granules

■ **Syphilis:**

  ➢ Trepanoma pallidum
  ➢ **Three stages:**
  ■ **Primary syphilis:**

  ➢ IP 3 wks ⇒ firm nodule (≈ 6mm) ⇒ rounded, shallow, painless ulcer w clean base & raised, indurated edges (Chancre) + regional LN†
- Genitals & oral cavity (A few wks)
- **Hist**: Ulcerated GT w a dense CICI

**Secondary syphilis:**
- 2-6 m of infection
- Mild fever, malaise, headache, sore throat & generalized LN↑
- Followed by rash (Coppery macules) & stomatitis
- Orally: “Snail’s track ulcers” & “mucous patches” (tonsils, LBT & Lips)
- Discharge: spirochetes
- 2-3 wks

**Tertiary syphilis:**
- ≥ 3 years of infection
- ≈ Every organ

- (1) **Gumma**:
  - Palate, T, tonsils
  - Swelling ⇒ necrosis ⇒ painless, deep round ulcer
  - Severe scarring or perforation

  - **Hist**:

- (2) **Atrophic glossitis**
- (3) **Syphilitic leukoplakia**
- **Congenital syphilis:**
  - Transplacental
  - Severity varies
  - Hutchinson triad: blindness, deafness & dental anomalies

- **Tuberculosis:**
  - Mycobacterium tuberculosis
  - Aerosols ⇒ terminal alveoli ⇒ MΦ ⇒ adjacent tissues & regional LNs
  - AIDS & resistance
  - **Oral lesions:**
    - 3.5%
    - Immuno-compromised
    - Angular ulcer
    - Tuberculous lymphadenitis
    - Chronic osteomyelitis
  - **Hist:** caseating granulomas

- **Leprosy:**
  - Mycobacterium leprae
  - Southeast Asia, South America & India
  - **2 types:**
    1. **Tuberculoid leprosy:** limited, CMI ↑; HI ↓
    2. **Lepromatous leprosy:** generalized, CMI ↓; HI ↑,
  - **Oral lesions:**
    - 50% of those w type 2
    - Nodules → ulcers → fibrosis
    - H & SP, AMxG & T
    - Facial deformity