ANGINA. STOMATITIS

DEFINITION

- **Tonsillitis:**
  - inflammation of the palatine tonsils.
- **Angina:** the process is extended:
  - besides the two palatine tonsils with their poles
  - the rest of the pharyngeal lymphatic ring
  - part of the soft palate with the uvula
  - the oro-pharynx, with the respectiv lymphatic tissue (including the pharyngeal tonsil).

VIRAL ANGINA

- **Etiology:**

- rinoviruses,
- coronaviruses,
- enterovirusues,
- adenoviruses,
- herpes simplex virus,
- E-B virus, CMV,
- mixoviruses,
- paramixoviruses,
- HIV

VIRAL ANGINA

- **Classification:**

❖ primary angina

❖ ’symptomatic’ angina:

- in other viral diseases (flu, colds, mononucleosis), hematological disease

- they may be the result of physical injuries (burns) , chemical (corrosive)

- allergic manifestations to drugs

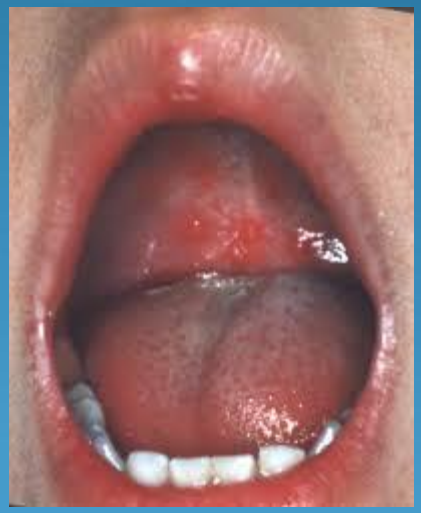
VIRAL ANGINA – CLINICAL MANIFESTATIONS

- ***Adenoviruses (type 1-10):***

- causes adeno-pharyngo-conjunctival fever
- duration 5-10 days
- local throat deposits
- bilateral follicular conjunctivitis
- +/- chills, myalgias

VIRAL ANGINA – CLINICAL MANIFESTATIONS

- **Herpes viruses** *:*
  - angina with blistering and painful superficial palatine, labial, oral ulcerations
  - duration 7 days
  - +/- fever, lymphadenopathy



VIRAL ANGINA – CLINICAL MANIFESTATIONS

- **Coxsackie virus**:

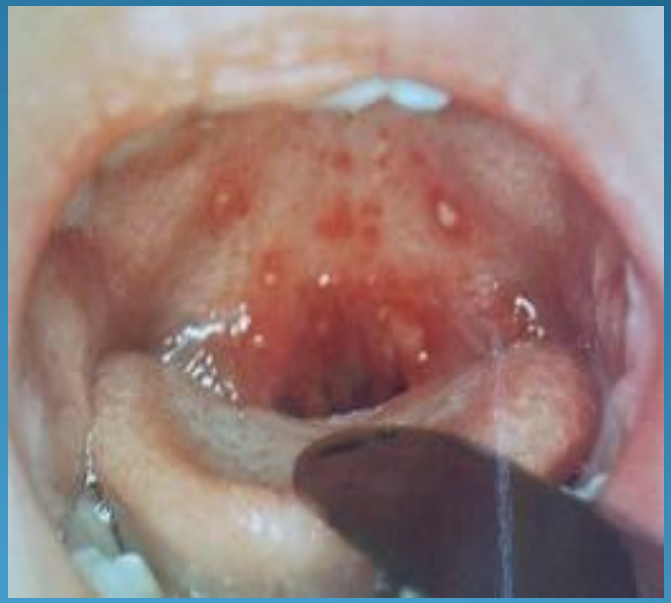
❖ Herpangina

❖ small vesicles (2 mm)

❖ ulcerations of the oral mucosa, tonsil lodges

❖ causes dysphagia, anorexia, lymphadenopathy, local pain

❖ frequently: maculo/papular rashes of the face and trunk.



VIRAL ANGINA – CLINICAL MANIFESTATIONS

- **Epstein - Barr virus**:
  - angina with creamy white false membranes, confluent after 24-36 hours
  - fever
  - swallowing pains
  - generalized lymphadenopathy
  - splenomegaly

VIRAL ANGINA – CLINICAL MANIFESTATIONS

- **HIV infection**:
  - local: intense congestion
  - fever,
  - myoarthralgia,
  - maculo-papular rash.

VIRAL ANGINA – DIAGNOSIS

- anamnesis, epidemiological data (seasonal occurrence, infectious contacts)
- Laboratory findings:
- immunofluorescence: highlight the viral antigens
- virus isolation on culture (monkey kidney cells, human lung fibroblasts): pharyngeal secretions, CSF, feces
- serological reactions: in IM, HIV; otherwise, they have a reduced value
- enteroviruses: have cytoplasmatic effects → patterns with neutralizing antisera

VIRAL ANGINA - DIFFERENTIAL DIAGNOSIS

- between etiological viral types
- bacterial symptomatic anginas, noninfectious (SLE , pemphigus, bullous pemphigoid)
- toxic septic syndrome

VIRAL ANGINA – COMPLICATIONS

- **other viral locations**:
  - pulmonary,
  - ENT (Otorhinolaryngology)
  - meningocerebrale

- **bacterial infections:** staphylococci, anaerobes

VIRAL ANGINA – TREATMENT

- symptomatic : gargle, analgesics, fluid intake
- bacterial infections: antibiotics

BACTERIAL ANGINA

- **Classification:**

❖ **primary** :

- exogenous infections (air, rarely digestive)

- self-infection with saprophytic bacteria (favored by general and local defense deficits)

❖ **secondary**:

- symptomatic: infectious diseases (scarlet fever, typhoid fever, diphtheria), blood diseases (agranulocytosis, leukemias) , chemical irritations (accidental ingestion of caustic substances, heavy metal poisoning, local embrocations)

BACTERIAL ANGINA

- Etiology: polymorphous:
  - gram-positive bacteria (streptococcus pyogenes, staphylococcus aureus, streptococcus pneumoniae, corynebacterium diphtheriae, bacillus anthracis)
  - gram-negative bacteria (HI, neisseria meningitidis)
  - anaerobes (bacteroides)
  - rarely: mycoplasma, chlamydia, yersinia enterocolitica, treponema pallidum

BACTERIAL ANGINA

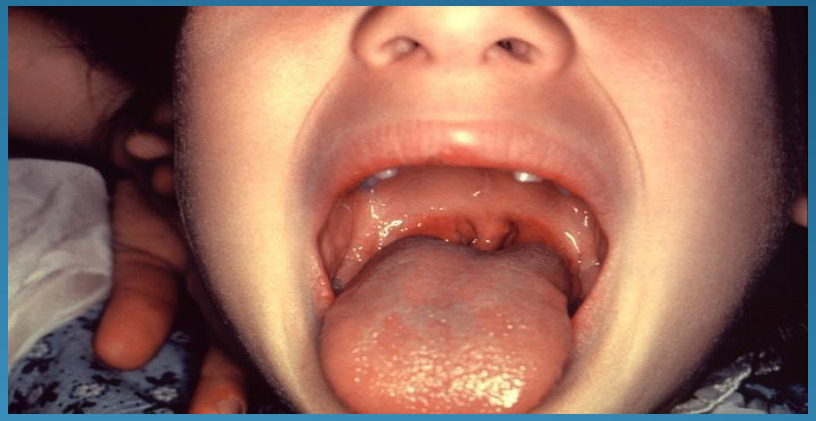
- **Onset: sudden fever, chills, headache, curvature, dysphagia +/- inability to eat, nazal voice, dyspnea, trismus (lockjaw) (in phlegmonous evolutions)**
- **Clinical manifestations:**
- Painful regional lymphadenopathy
- Diphtheric angina: "bull neck" appearance
- Anaerobic angina: in immunocompromised patients, those with improper dental hygiene: fetid halitosis

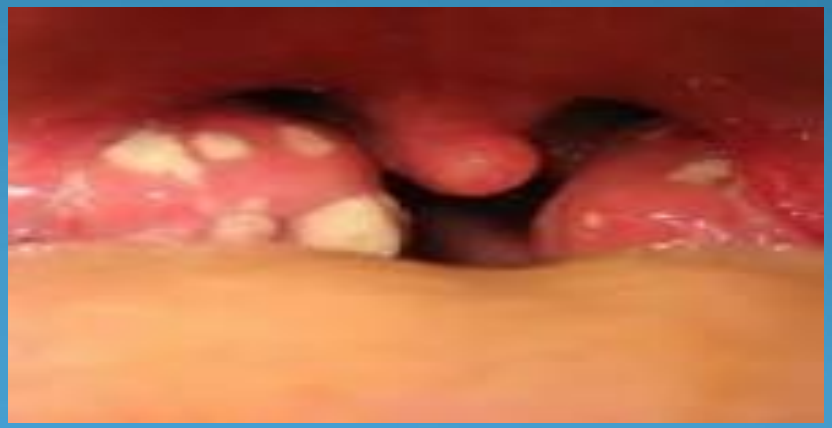
BACTERIAL ANGINA – CLINICAL MANIFESTATIONS

Erythematous angina :
suggests a streptococcal infection

Exudative tonsillitis:

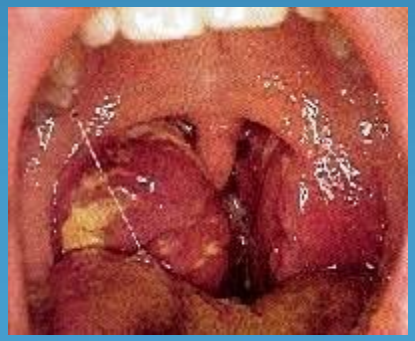
whitish pus deposits, with follicular or cryptic deposit, on the posterior pharynx, tonsils; swollen uvula





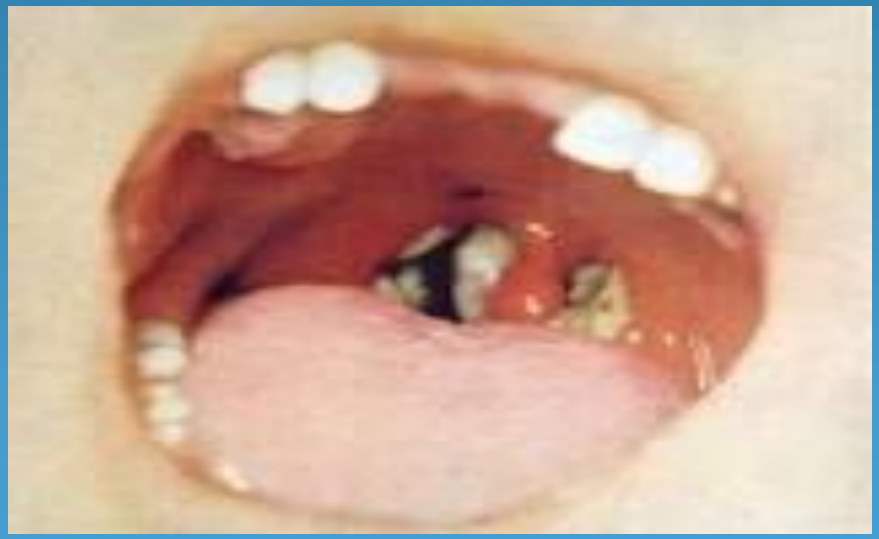
BACTERIAL ANGINA – CLINICAL MANIFESTATIONS

- **Phlegmonous angina/peritonsillar phlegmon**: unilateral; with curved center; trismus, severe clinical symptoms; nasal voice, fetid halitosis. There is a risk of spontaneous opening; suffocation hazard in children. It occures after chronic tonsillitis. It occurs in patients with chronic orodental infections (granuloma, fistulising dental abscess, dental cavities, alveolar pyorrhea). The resolution is surgical.



BACTERIAL ANGINA – CLINICAL MANIFESTATIONS

- **Pseudomembranous angina**: characteristic for diphtheria; false adherent membranes, hard to remove, bloody; with rapid regeneration, extensive; exceeding the tonsils; they do not dissolve in water like other suppurative deposit



BACTERIAL ANGINA – CLINICAL MANIFESTATIONS

- **Necrotic ulcerative anginas:** beta hemolytic streptococcus associated with anaerobs, rarely bacillus carbonaceous, treponema pallidum, TB, tonsillar cancer; severe prognosis; tissue damage covered by false membranes; penetrating ulcers; fetid halitosis; pronounced lymphadenopaites. Ulcero-necrotic symptomatic anginas: in severe scarlet fever (Henoch angina), typhoid fever (Duguet angina with oval, gray, painless ulcerations)

BACTERIAL ANGINA – CLINICAL MANIFESTATIONS

- **Fusospirillary angina (Vincent):** caused by gram-positive spirilli and gram-negative fusiform bacilli: unilateral ulcerations; painful dysphagia, sialorrhoea, fetid halitosis, fever, impaired general condition, trismus, speaking disorders. Benign prognosis.
- **Ludwig's angina:** bacterial associations staphylococcus aureus, streptococcus viridans, "oral" anaerobs: similar to floor of the mouth phlegmon; rapid onset, with stridor , trismus, difficulty in swallowing; clinical: marked swelling of the sublingual region and neck.
- **Gangrenous angina**: anaerobic bacteria; severe prognosis, high mortality.

BACTERIAL ANGINA– COMPLICATIONS

- **Local:** Early: ENT (ear infections, sinusitis, mastoiditis), peritonsillar phlegmon, laterofaringial, local thrombophlebitis, suppurative lymphadenitis
- **Late**: poststreptococic syndrome: allergic ethiology (ARF, AGN)

BACTERIAL ANGINA

- **Diagnosis**:
- epidemiological data
- clinical data
- laboratory data: nasopharyngeal exudate smear (crystal violet coloring of the smear: fusobacteria and spirochetes in Vincent's angina), culture from nasopharyngeal secretions
- serological diagnosis: ASLO
- **Differential diagnosis:**
- IM, viral non-infectious angina, (pemphigus, bullous pemphigoid, SLE, leukemia)

BACTERIAL ANGINA - TREATMENT

- **local:** classic methods: gargle with chamomile tea; throat disinfectants;
- **Symptomatic:** antipyretics, analgesics; local embrocations with gentian violet or methylene blue is contraindicated, due to chemical injuries that promote the dissemination of the infection
- **etiologic**: penicillin G; in case of allergy: 1-2 g erythromycin for adults, 30mg/kg/day for children; roxithromycin or clarithromycin (active on mycoplasma): 10 days; aminoglycosides, 3rd generation cephalosporins for angina with yersinia; Ludwig angina: HHC, penicillin G, macrolides, metronidazole – active on anaerobes.

MYCOTIC ANGINA

- **Etiology:** candida, aspergillus, Cryptococcus, sporotrichum, streptomyces

- **Clinical manifestations:**
- ***in acute forms***:
- fever, discomfort in swallowing, impaired general condition +/- regional lymphadenopathy;
- local: erythematosus or pustulent aspect of the tonsils , coarse gray-white or white-yellow deposits, pseudomembranous or ulceronecrotic
- ***in chronic forms***:
- yellow deposits on the tonsils, uvula, pillars, posterior pharyngeal wall;
- Streptomycosic angina: hypertrophic tonsils, pale mucosa; in the crypts: white, hard concretions cretaceous, called „nail heads"

MYCOTIC ANGINA

- **Complications:**
  - extensive ulceration and bacterial superinfection
  - respiratory complications (laryngitis, tracheitis, bronchitis, pneumonia, bronchopneumonia)
  - digestive complications (esophagitis, gastritis, enterocolopathy)
  - septicemia
- **Differential diagnosis :**

❖ IM, viral angina, bacterial, non-infectious (pemfigus, pemfigoid bulos, SLE, leukemia), virus diseases enanthema, syphilides

- **Treatment:**

❖ Gargle with alkaline solutions

❖ Etiologic: fluconazole 50-100mg/day, 7-14 days; nistatin 3-5 MU/day in adult şi 1-3 MU in children, 7-10 days

STOMATITIS

- **Definition**: inflammatory processes of the oral mucosa, which determines:
- **local manifestations of the oral mucosa:** congestive/catarrhal lesions through ulcerations, +/- pseudomembranous exudate; associated: regional lymphadenopathy.
- The patient has:
  - spontaneous burning or pain of the injured mucosal
  - speak, chewing and swallowing difficulties
  - salivation disorders (hypersalivation - ptialism, asialie with xerostomia)
  - taste disorders
  - fetid halitosis
- **general manifestations**: various, expression of infection or poisoning that led to stomatitis

STOMATITIS

- **Favoring local conditions :**
- dental eruption,
- dental malformations,
- vices of implantation
- tooth cavities
- root remains
- faulty prostheses,
- decrease of saliva secretions,
- lack of oral hygiene,
- neighbouring infections (rhinitis, sinusitis)
- **Favorable general conditions** :
- nutrition disorders
- eating disorders, diabetes
- hypovitaminosis
- chronic poisoning

NONSPECIFIC INFECTIOUS STOMATITIS

- **Erythematous and cataral stomatitis:**

❖ diffuse swelling of the lining of the mouth, with inflamed gums

❖ oral burning sensation, discomfort in chewing, hypersalivation

❖ caused by the normal microbial flora of the mouth (streptococcus, staphylococcus, pneumococcus)

❖ favored by the abuse of broad-spectrum antibiotics or in general infectious diseases (measles, typhoid)

❖ short, benign prognosis

NONSPECIFIC INFECTIOUS STOMATITIS

- **Ulcerative or ulcero-membranous stomatitis:**
  - characterized by the appearance of ulcerative lesions on the oral mucosa, covered or not by exudate
  - predisposed to bleeding
  - the patient has fetid halitosis, hypersalivation, painful chewing, swallowing and speech difficulties
  - submaxillary lymphadenopathy
  - frequently accompanied by impaired general condition, fever, digestive disorders
  - etiology: associated fuso-spirillary infection (+/- Plaut -Vincent angina)
  - they may be symptomatic in vitamin deficiencies, hematological malignancies, measles
  - prolonged prognosis

NONSPECIFIC INFECTIOUS STOMATITIS

- **Gangrenous stomatitis: noma:**
  - initial lesion of the genian mucosa, as a hard, red - violet infiltrate, which rapidly developes blisters that exulcerates, confluates
  - sfacelate portions are eliminated
  - gangrene invade all the tissues of the cheek → mutilating destruction
  - impaired general condition, high fever, stupor
  - 80% lethality
  - healing with mutilating sequelae
  - etiology: polymicrobial infection with anaerobes
  - now extremely rare

SPECIFIC INFECTIOUS STOMATITIS

- **Diphtheric stomatitis:**
- secondary to extensive pharyngeal diphtheria
- false membranes on the gentian mucosa, in the vicinity of the anterior poles and at the base of the tongue
- in toxic forms: mucosal edema
- **Herpetic stomatitis:**
  - it may occur during bacterial infections: pneumonia, bronchopneumonia, meningococcal infection, protozoa; simultanious with labial herpes
  - it may be primitive: herpetic primo-infection: sudden onset, with high fever, vomiting, diarrhea, headache, impaired general condition,
  - it is a ulcero-membranous gingivo-stomatitis, with:
    - intense oral mucosal congestion
    - swelling and ulceration of the gingival mucosa
    - gingival bleeding
    - pyorrhea
    - mucousal pain and sensitive
    - discomfort in chewing, swallowing, speech
    - sialorrhoea, fetid halitosis
  - It evolves with fever that usually lasts 10 days, the fever decreases in lysis
  - benign prognosis

SPECIFIC INFECTIOUS STOMATITIS

- **Mycotic stomatitis: Muguet:**
- candida albicans
- only the oral mucosa +/- spreading to the pharynx, esophagus, stomach, tracheobronchial tree +/- generalized septicemic infection
- frequent in infants
- in older children, adults: in the course of serious infectious diseases (measles, TB)
- broad-spectrum antibiotics favors the development of pathogenic fungi
- frequently on the lingual and gentian mucosa
- initialy the congestion of the oral mucosa (like erythematous stomatitis), then proeminant white spots are formed (like clots of milk, milk crumbs), adhering to the subjacent mucosa; their detachement highlights flaky mucosal epithelium
- after detachemnt, the spots recover quickly
- antifungal therapy
- **Aphthous stomatitis:**
  - superficial ulceration, covered with an adderent pseudo-membranous exudate
  - Localization: lingual, gentian, gingival mucosa
  - it is accompanied by hypersalivation, pain in chewing, swallowing, speech

STOMATITIS-TREATMENT

- local hygiene measures: gargles, mouth washes with emollients (chamomile tea), alkaline solutions (sodium bicarbonate), antiseptic solutions ;
- preferably liquid or semiliquid food
- acidic foods and liquids are avoided, which cause burning and severe pain
- in ulcerous, ulceromembranoase , gangrenous , erythematous stomatitis, accompanied by regional lymphadenopathy: broad-spectrum antibiotics
- in fungal stomatitis: antifungals
- in aphthous stomatitis: ultraviolet irradiation
- in stomatitis accompanying the infectious diseases: etiotrop therapy of the underlying disease (diphtheria serum, gamma globulins, antibiotics).