

Diseases of the oral mucous membrane in children

Survey of the most common diseases

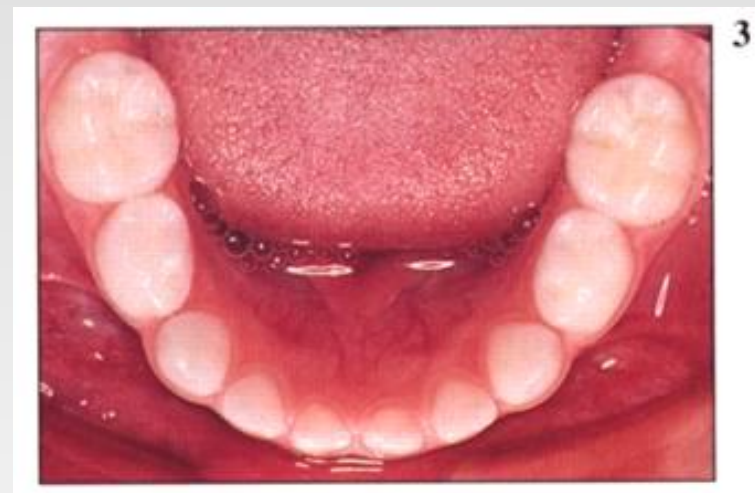
Lecture
prof. Kukletová

Oral mucosa:

- The mucosa of the cheeks
- The mucosa of the lips
- The alveolar mucosa
- The hard palate mucosa
- The soft palate mucosa
- The mucosa of the floor of the mouth
- The tongue mucosa

The surface lining:

- Stratified squamous epithelium
- orthokeratinized
 - hard palate
 - alveolar ridges
 - attached gingiva
- parakeratinized
 - vestibular mucosa
 - mucosa of the cheeks
 - soft palate mucosa
 - mucosa of the sublingual region



1-3 The primary dentition. Primary teeth are whiter, smaller and more bulbous than permanent teeth. Except in severely crowded mouths there is normally some spacing between primary anterior teeth.

12



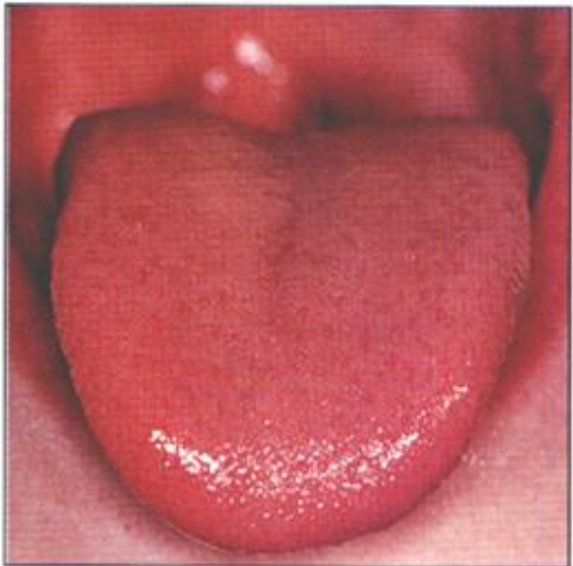
12 Normal palate (see also 2, 5 and 8).

13



13 Normal vestibular and gingival mucosa.

14



14 Normal tongue.

15



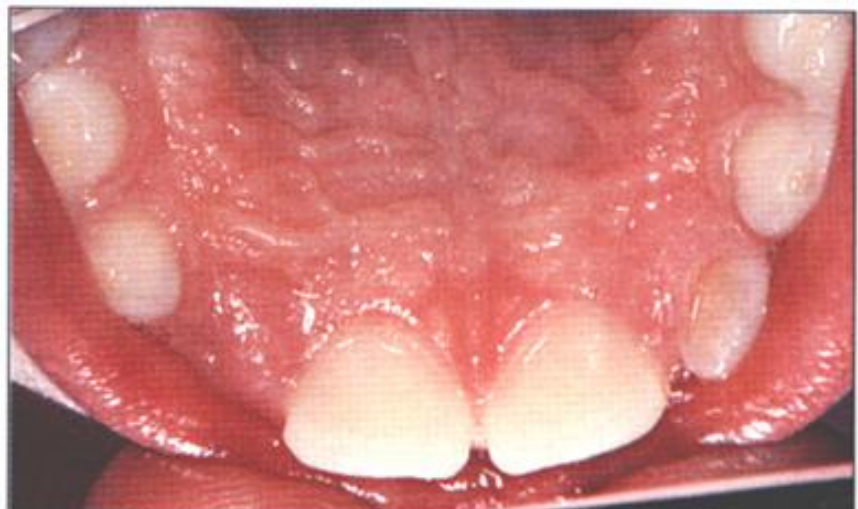
15 Normal mandibular labial gingivae.

16



16 Normal maxillary labial gingivae.

17



17 Normal palatal gingivae.

Causes of the disease

1. External causes

- physical
 - (mechanical, thermal, irradiation, electrogalvanic)
- chemical
- allergic
- infectious

1. Internal causes

- age –many diseases affect certain age groups
- metabolic disorders and disorders of glands with inner secretion
- immunity disorders
 - allergy, autoimmune disorders and , immunodeficiencies

Congenital anomalies

- **Fordyce granules** – white-yellow spots

heterotopic sebaceous glands

No therapy necessary

- **Bohn´s nodules** (Epstein´s pearls)

small white-yellow nodules (cysts) localized most frequently in the alveolar ridge mucosa or hard palate mucosa (along the raphe mediana)

size – 1-3 mm, white color

origin: odontogenic epithelium

No therapy necessary – spontaneous

disappearance

Congenital anomalies

- **Lingua geographica** – common benign condition

erythema migrans –change in appearance, different extent
small children (3-5 years)

pink, reddish areas demarcated by white wall
tongue surface -burning,itching

Diff. diagnosis: pathologically accumulated plaque accompanying allergic states, viral diseases, glossitis atrophica, glossitis superficialis



82 Erythema migrans (geographic tongue, benign migratory stomatitis).

22



23 Tongue tie showing the lingual frenal attachment extending to the tip of the tongue preventing significant tongue protrusion.

Diseases affecting lips

- **Cheilitis** – in children very frequently

Causes: mechanical, thermic, sunlight exposure, chemical

cheilitis exfoliativa (lip-licking)

frequently infection:

cocci, phlegmon, impetigo, erysipel

viral – herpes labialis

mycosis – anguli infectiosi

allergy

oral manifestation of systemic diseases (
erythema multiforme, pemphigus, Melkersson-
Rosental syndrome)



95



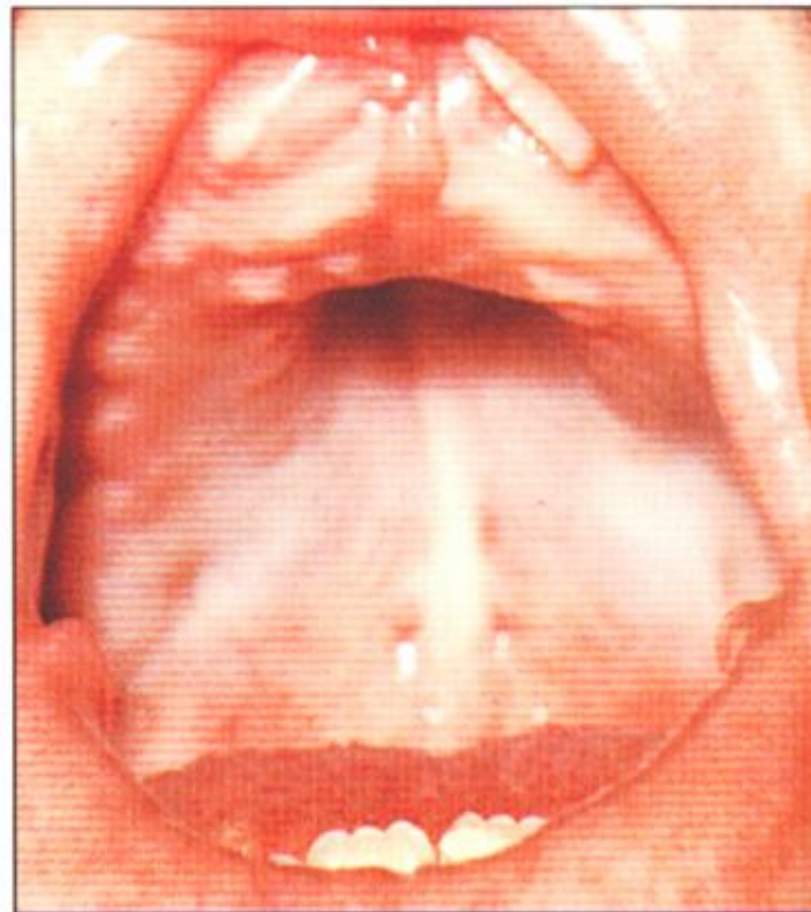
95 Haemangioma in the lower lip.

111



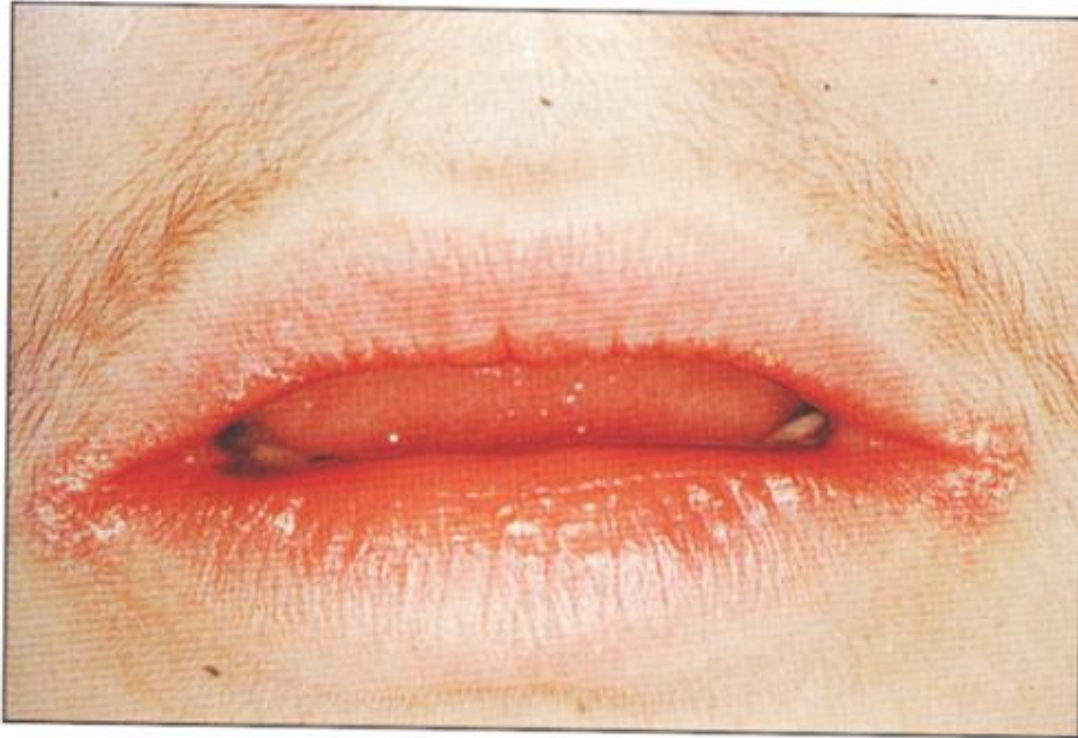
111 Facial oedema, involving the lips especially, in Melkersson–Rosenthal syndrome.

112



112 Plication and swelling of the midline palatal mucosa in Melkersson–Rosenthal syndrome.

274



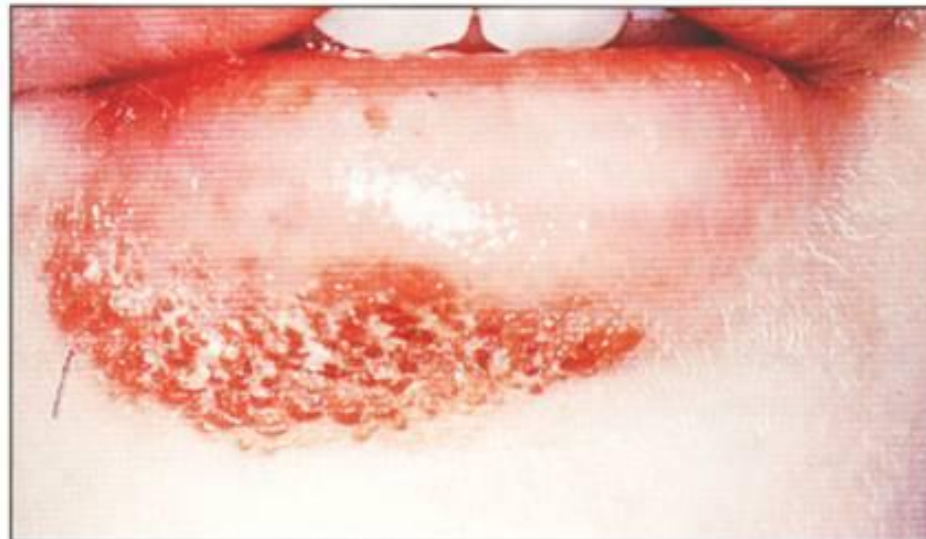
274 Angular stomatitis in a diabetic patient.

395



395 Actinic cheilitis after excessive exposure to tropical sun.

396



396 Lip-licking cheilitis affecting the lower lip.

397



397 Lip-licking cheilitis affecting the upper lip.

398



398 Lip fissure.

399



399 Acute exacerbation of cheilitis granulomatosa with diffuse swelling of the lips, scaling and vesicles/pustules on the vermilion border. Pain is not generally a feature of this condition.

400



400 The appearance of the lips in patient in 399 in a relatively quiescent phase of cheilitis granulomatosa. This is a chronic condition of unknown aetiology which may persist for many years.

Diseases affecting lips

- **Anguli infectiosi**

Infection of minute injuries, erythematous painful areas, fissures

Diseases affecting lips

- **Impetigo contagiosa streptogenes**
(streptococcus beta haemolytic)

Honey-yellow encrustations, enlarged lymph nodes, spreading into the surroundings, very infectious diseases

Therapy: ATB ointment, cream, anti-microbial solutions

Diseases affecting lips

- **Impetigo contagiosa staphylogenes**

blisters, pus formation, greenish crustings

Therapy: ATB ointment, cream, anti-microbial solutions

- **Angular candidiasis**

in elderly children, fissures, erythematous areas, white rim

Therapy: locally antimycotics, ATB

Dif. diagn.: herpes labialis



Fig. 14.1 Bacterial infection on the lip of an immunocompromised child. (By kind permission of *Dental Update*.)



Fig. 14.2 Oral candidiasis in an immunocompromised child undergoing chemotherapy for acute lymphoblastic leukaemia. (By kind permission of *Dental Update*.)



Fig. 14.3 Ulceration of the lower lip produced by biting while still anaesthetized from an inferior dental block.





Diseases of the tongue

Glossitis – in children not very frequently

Diseases of the tongue

■ Glossitis superficialis

separately

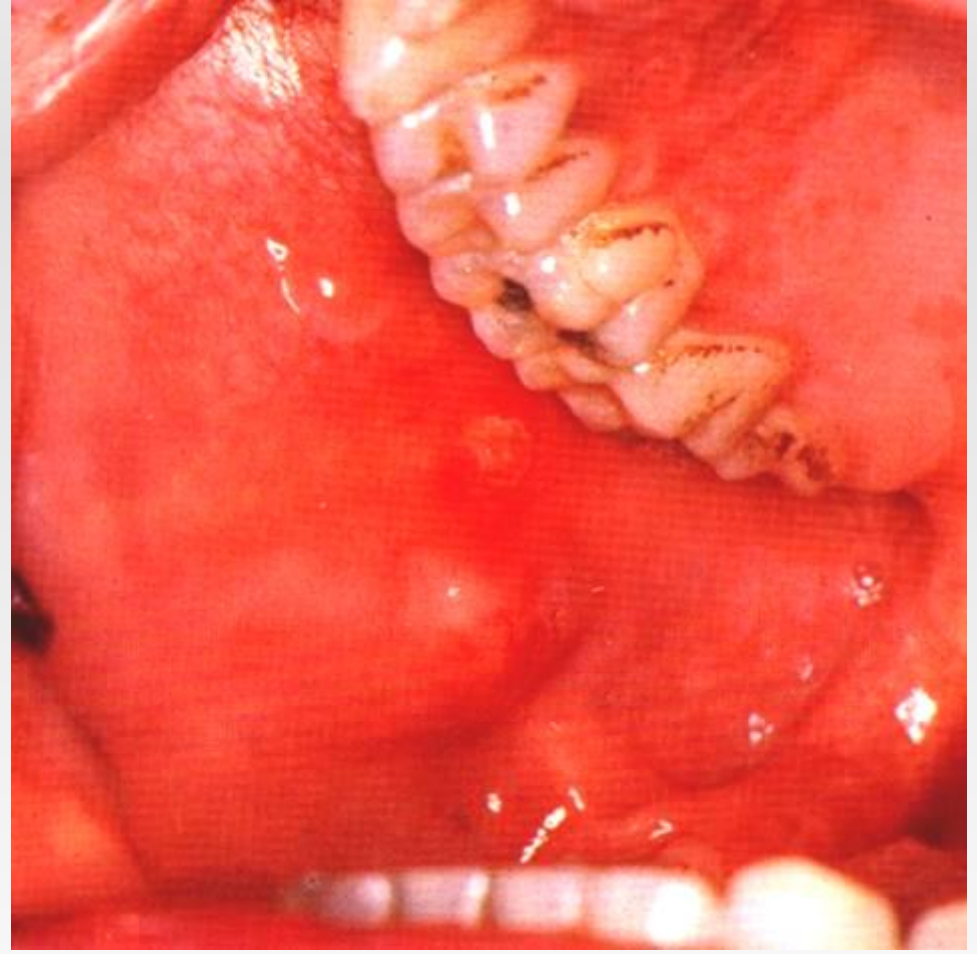
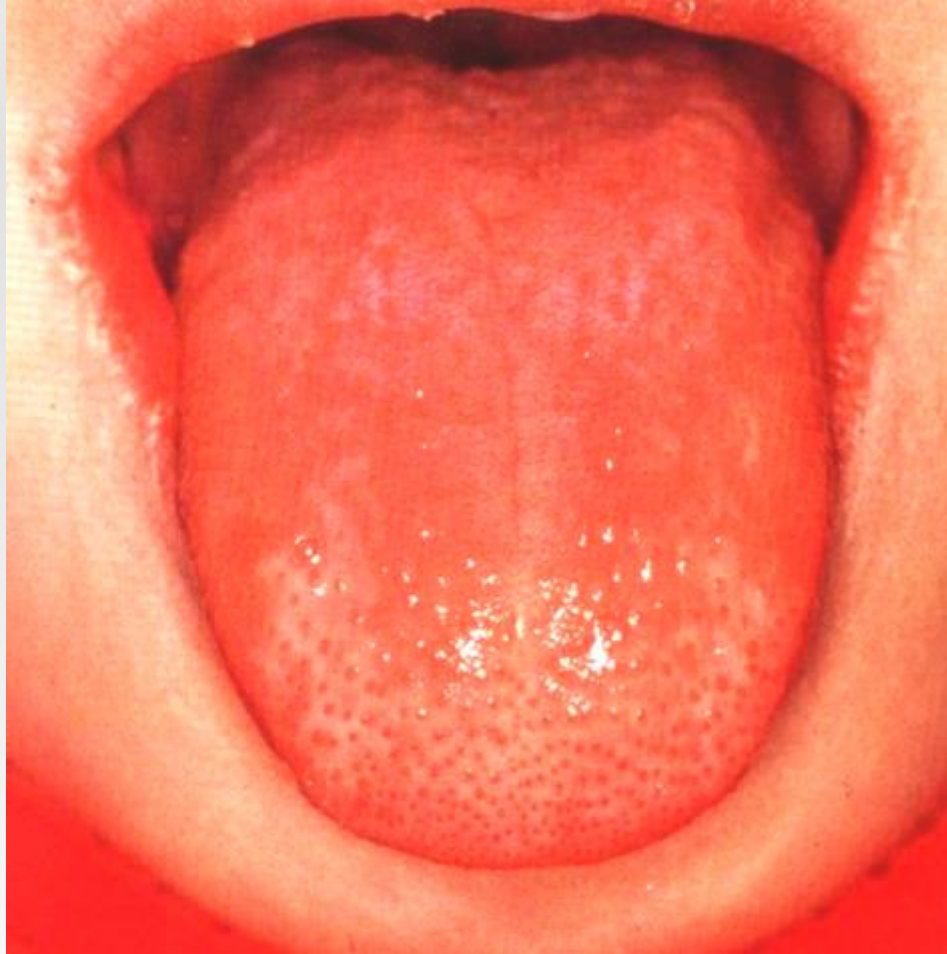
component of a stomatitis

*Tongue coating pathologically reduced or increased,
frequently together with stomatitis*

Causes: *traumatic, thermic, chemical, allergic, microbial (viruses,
bacteria, mycoses)*

Clinical appearance: *tongue mucosa erythematous, partly,
totally
pain -burning, food refusal*

*Therapy: removal of causative factors, rinses with chamomile, non irritative
food, in more severe states – topical application of borax-glycerínovým
solution.*



96



96 Haemangioma infiltrating the whole tongue.

97



97 Haemangioma involving lip and skin.

108



108 Lymphangioma involving the tongue.

110



110 Same patient as in 109 showing lymphangioma under the tongue.

Diseases of the tongue

■ **Profound glossitis**

In children more frequently than in adults

Causes: traumatic,

bacterial – secondary infection accompanying traumas

Clinical appearance: wound after the trauma, bleeding, sensitivity, inflammation –elevated wound margins, swelling, abscess, elevated temperature, alteration of general condition, submental and submandibular nodes enlarged

Dif. diagn.: differentiate from allergic states, insect sting

Therapy: adstringens locally, (3% H₂O₂), camomila rinses and things like that, in severe cases ATB, abscess – incision, non irritative soft food

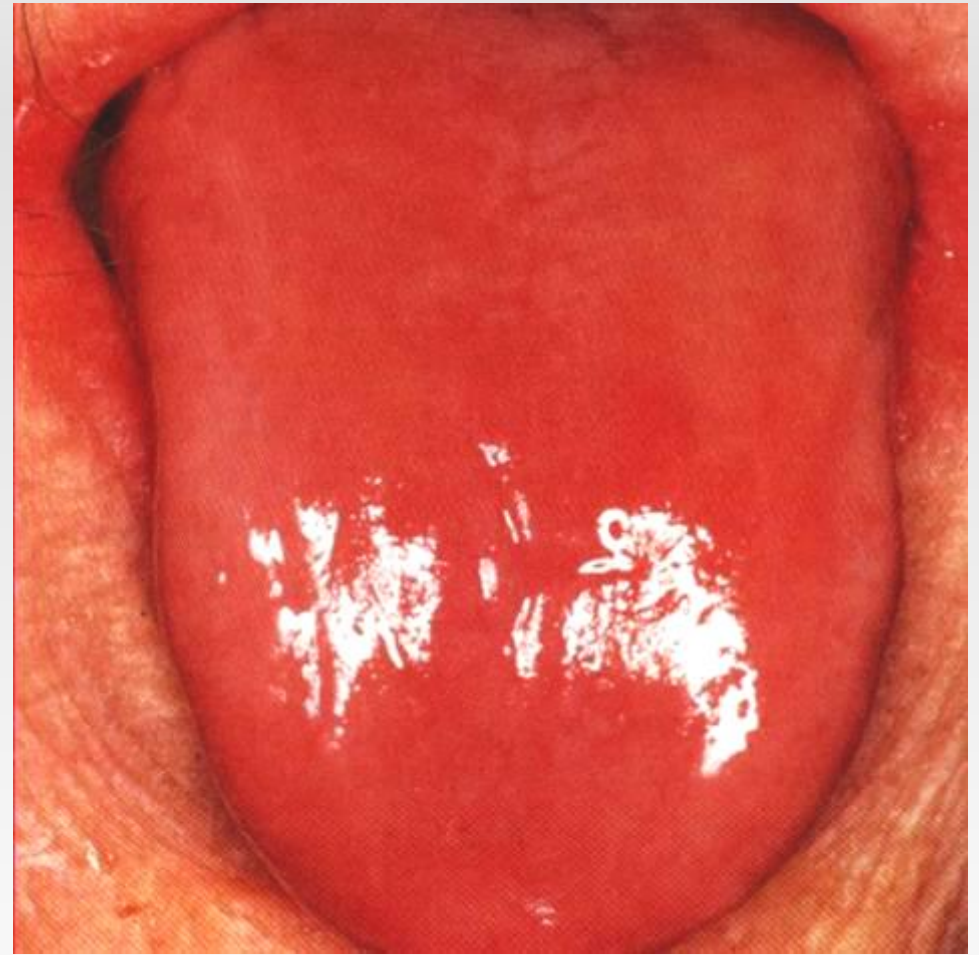
Inflammations accompanied by hypertrophy of filiform papillae

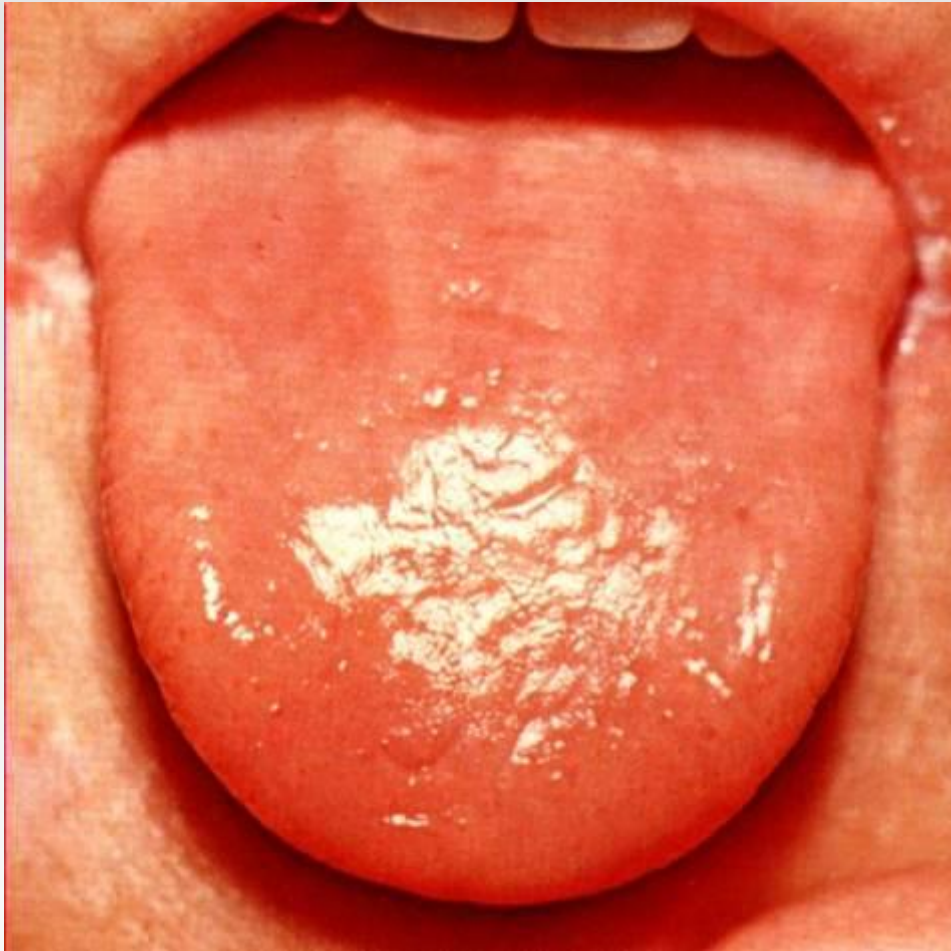
- **Enlarged tongue coating (furred tongue)**
Common symptom of majority of infectious diseases of the children age, diseases of GIT, and in stomatitis

Inflammations accompanied by atrophy of filiform papillae

- **Glossitis atrophica**

*Deficiency states – in children rarely
Iron- deficiency (pernicious anaemia, Hunter´s
glossitis), vitamin B-complex deficiency*





Gingivitis

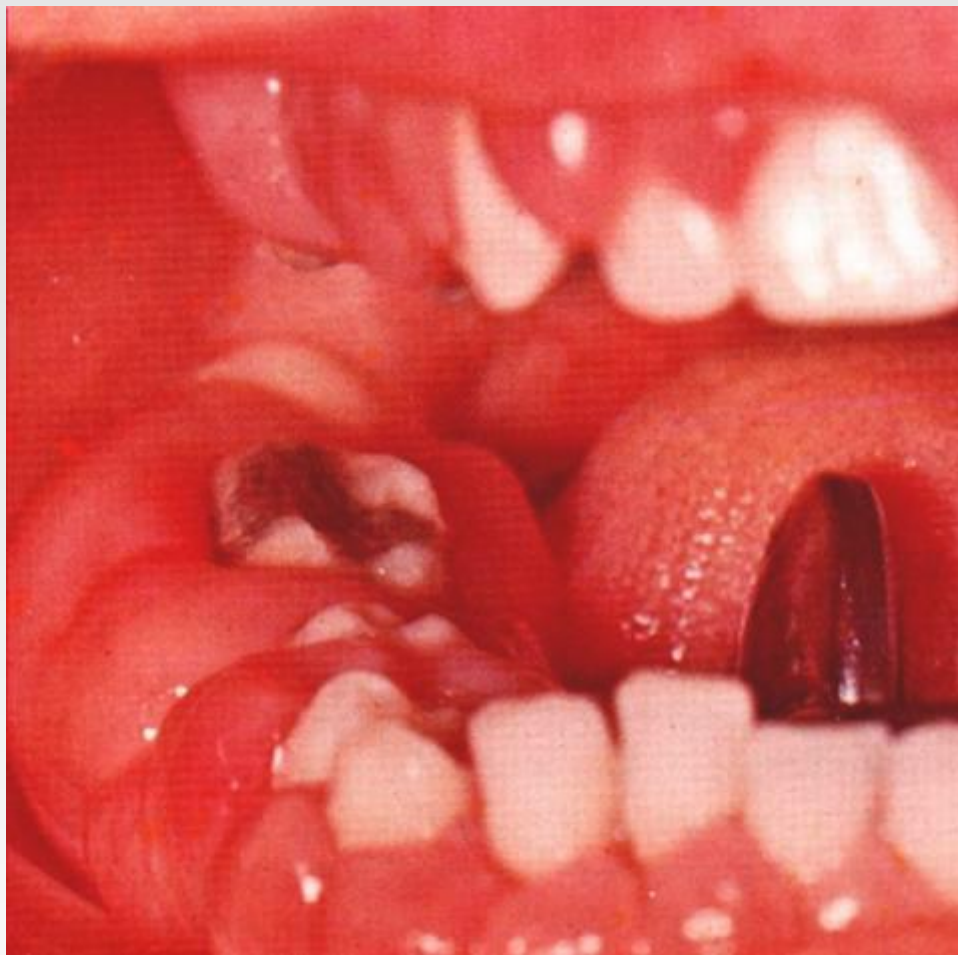
- **Gingivitis**

Survey is given in the chapter on Periodontal diseases

Here

Hyperplastic gingivitis

Fibromatosis gingivae





86 A mild form of hereditary gingival fibromatosis.



87 Pronounced gingival fibrous hyperplasia in Laband syndrome.



249, 250 Phenytoin-induced gingival hyperplasia.

251 Cyclosporin-induced gingival hyperplasia in a 9-year-old child. The drug had been taken regularly for 2 years following a heart transplant.



258 Gingivitis artefacta produced by the fingernails in a 6-year-old child. The maxillary anterior gingivae are the most severely affected. There is recession of the gingival margins and the root surfaces are visible.



259 Gingival damage produced by a fingernail.



260, 261 Gingival damage as a consequence of a class II division 2 malocclusion (260), and with a deep overbite (261).









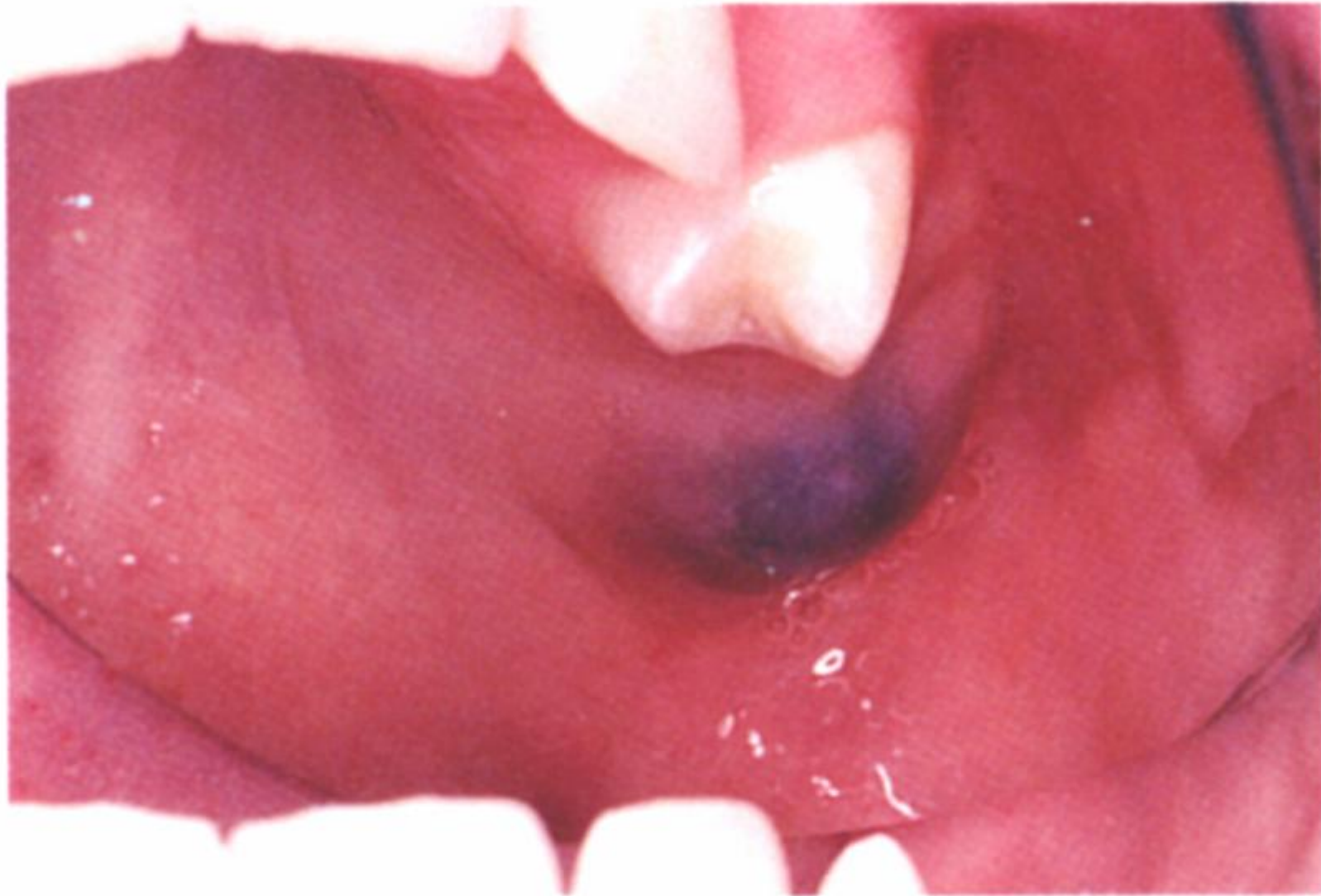


Fig. 14.15 Eruption cyst prior to appearance of upper permanent first molar.



Lesions of oral mucous membrane

1. Pigmentations – in children very rarely

White patches – Candidiasis

White spongy naevus (autosomal hereditary disease)

Darier´s disease (autosomal hereditary disease)

Lesions of oral mucous membrane

- **Candidiasis – Candida albicans**
(a saprophyte of the oral cavity)

Oral mucosa – pharynx – oesophagus

- GIT

- respiratory tract

locally

Lowered resistance of the organism

generally

Candidiasis

- **Many clinical forms**
 - **acute pseudomembraneous (thrush)** – most frequently – white patches (candida) can be readily removed (wiped off) later erythematous or bleeding base in newborns and young children
 - Diff. diagn.: easy
 - *Therapy: disinfectants for rinsing, borax-glycerin, bicarbonate, antimycotics*







Candidiasis

- **Many clinical forms**
 - **chronic forms**
 - oral candidiasis in the oral cavity is a typical symptom of AIDS



262 Oral candidosis in HIV disease, showing typical lesions of thrush (pseudomembraneous candidosis).



263 Oral candidosis (thrush) in HIV disease.



264 Oral erythematous candidosis and neglect, with extensive caries in HIV disease.





45 Chronic oral candidosis in chronic mucocutaneous candidosis.

Lesions of oral mucous membrane

1. Erosion of oral mucosa

a) Viral diseases

b) aphthae

c) toxico-allergic exanthems

d) bullous diseases

Lesions of oral mucous membrane

- **Virus herpes simplex**
 - Herpetic gingivostomatitis**
 - Herpetic stomatitis**
 - herpes simplex (labialis)**



Lesions of oral mucous membrane

a) Herpetic gingivostomatitis

primary infection between the 1. – 5. year

droplet infection or direct contact

febrile illness – influenza

headaches, malaise, oral pain, lymphadenopathy,

severe marginal gingivitis

within 2-3 days eruption of vesicles:

gingiva

tongue

hard palate

behind upper incisors

primary dentition – behind molars

hypersalivation

Lesions of oral mucous membrane

Difficulties: intake of food, swallowing, pronunciation, lymph nodes enlarged, painful –submandibulary, neck

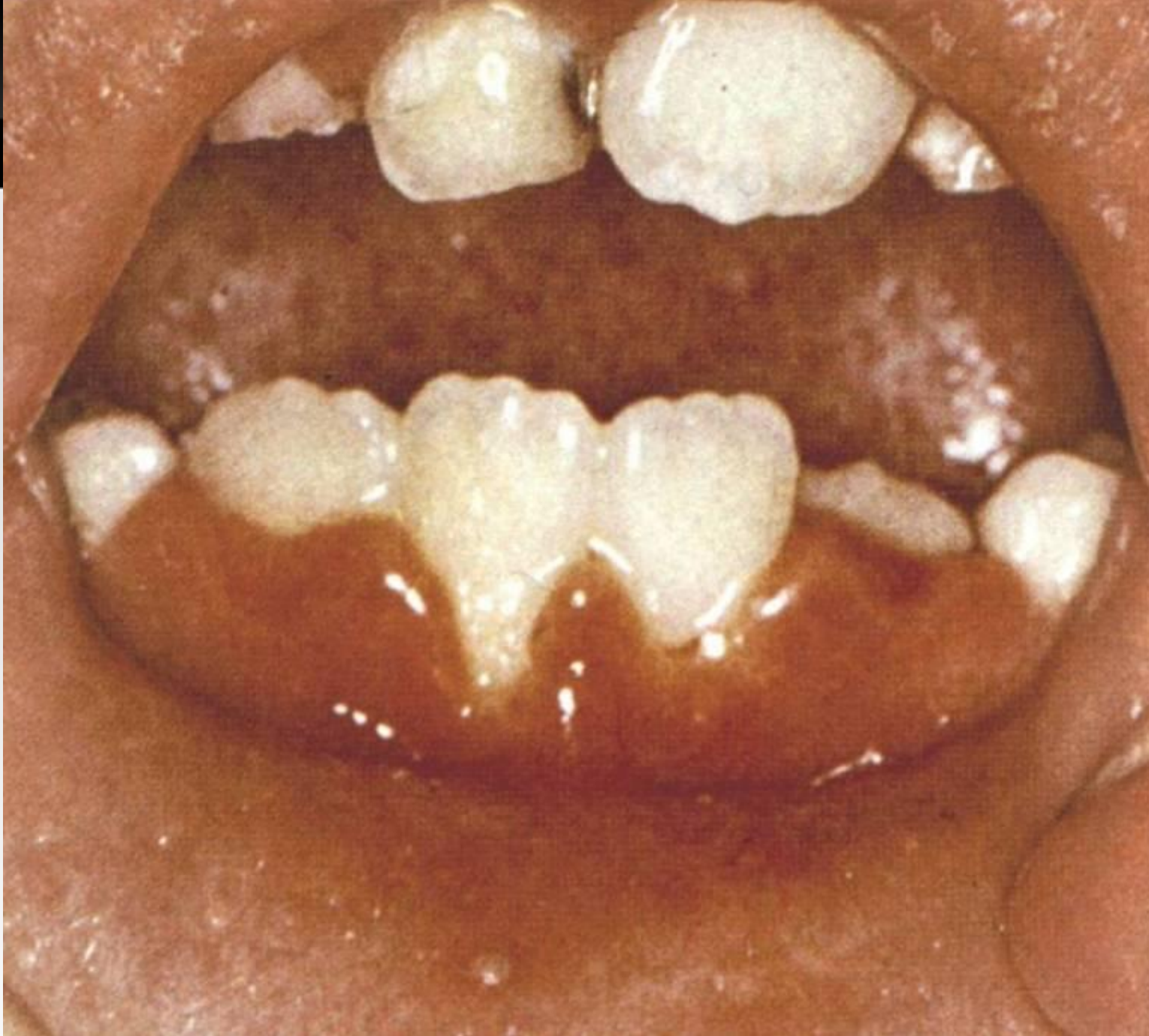
Diff. diagn.: acute necrotizing ulcerative gingivitis

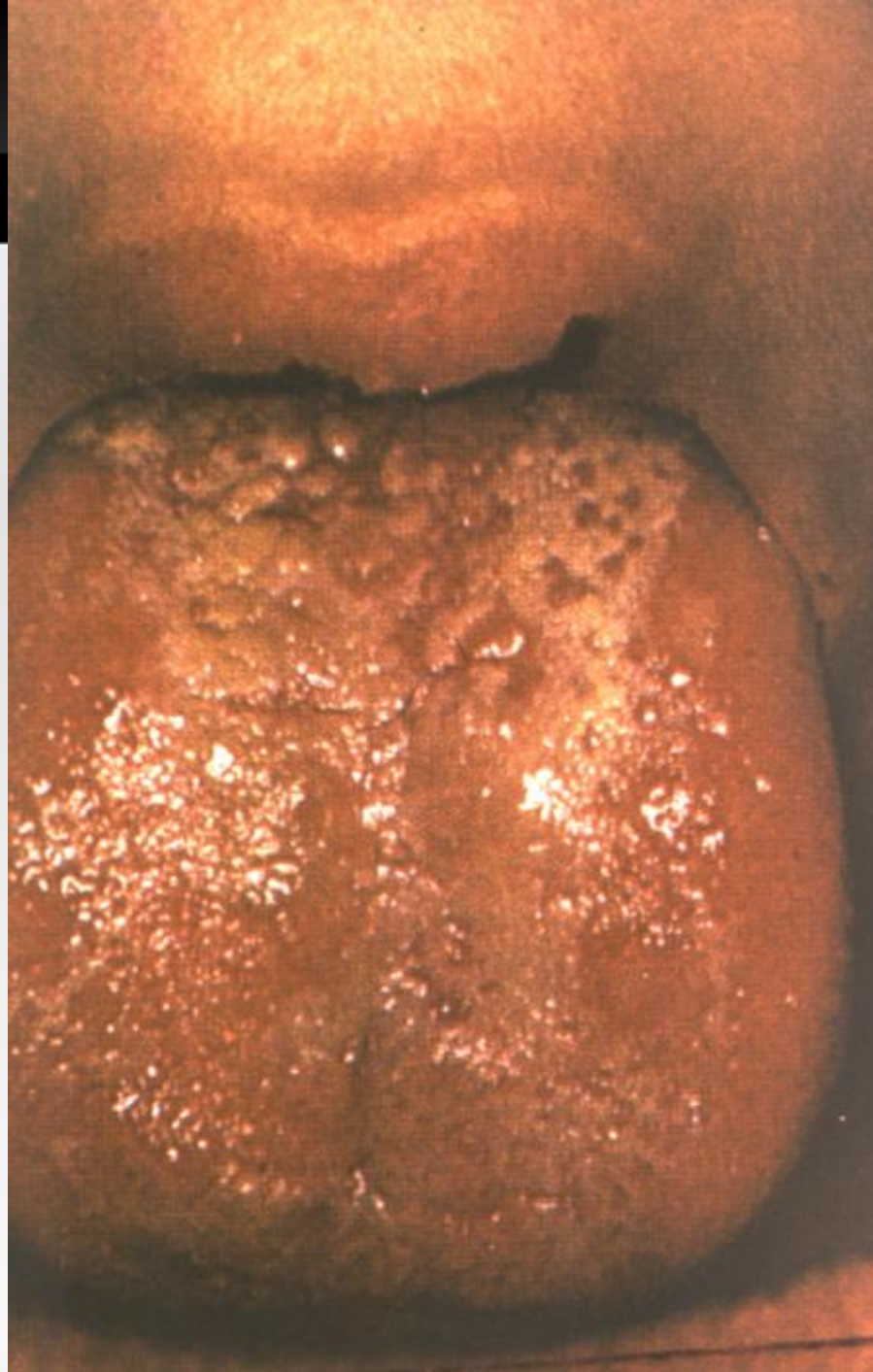
stomatitis epidemica - vesicles around nails (finger, toe), between fingers

hand-foot-mouth disease – vesicles localized palmary and plantary

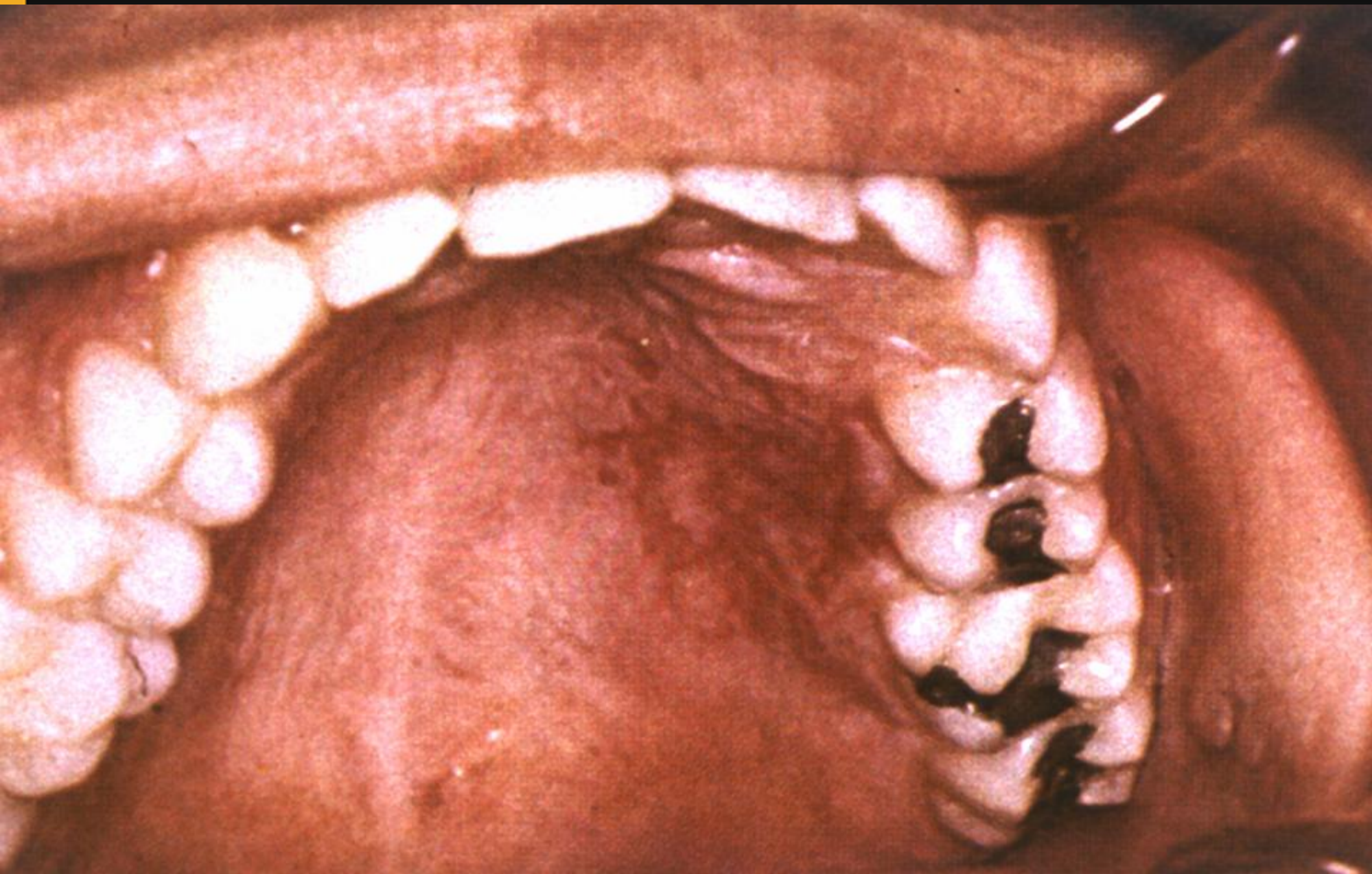
Therapy: symptomatic











Slizniční léze dutiny ústní

a) Stomatitis herpetica

reactivation – latent HSV infection

gingiva, hard palate, dorsum lingue, lip-
vermilion border

regional lymph nodes – affected not
frequently

Diff. diag.: no prodromal stadium, no
alteration of the general state

Therapy: symptomatic

Slizniční léze dutiny ústní

a) Herpes simplex labialis

The most frequent form

lips – cheilitis (paresthesia, eruption of vesicles, fissures, mainly in the lip corner), healing - crustation

no alteration of the general state

Danger of bacterial infection – impetigination

worsening – also as a result of the dental treatment (penetration of infection)

NEVER THE TREATMENT

Only the first aid if necessary

29.4.2014

Onemocnění sliznic dutiny ústní u dětí - přehled nejčastějších chorob

68

Diff. diagn.: easy x folliculitis, furuncle

322



322 Herpes labialis at a typical site.

323



323 Herpes labialis at the right angle of the mouth. The vesicular lesions have burst to leave a scab that will heal without scarring.

296



297



296, 297 Herpes simplex virus infection in children undergoing cancer chemotherapy.









Lesions of oral mucous membrane

a) Varicella

In children often

cause: virus, droplet infection, direct contact

fever, eruption of vesicles, polymorphous picture

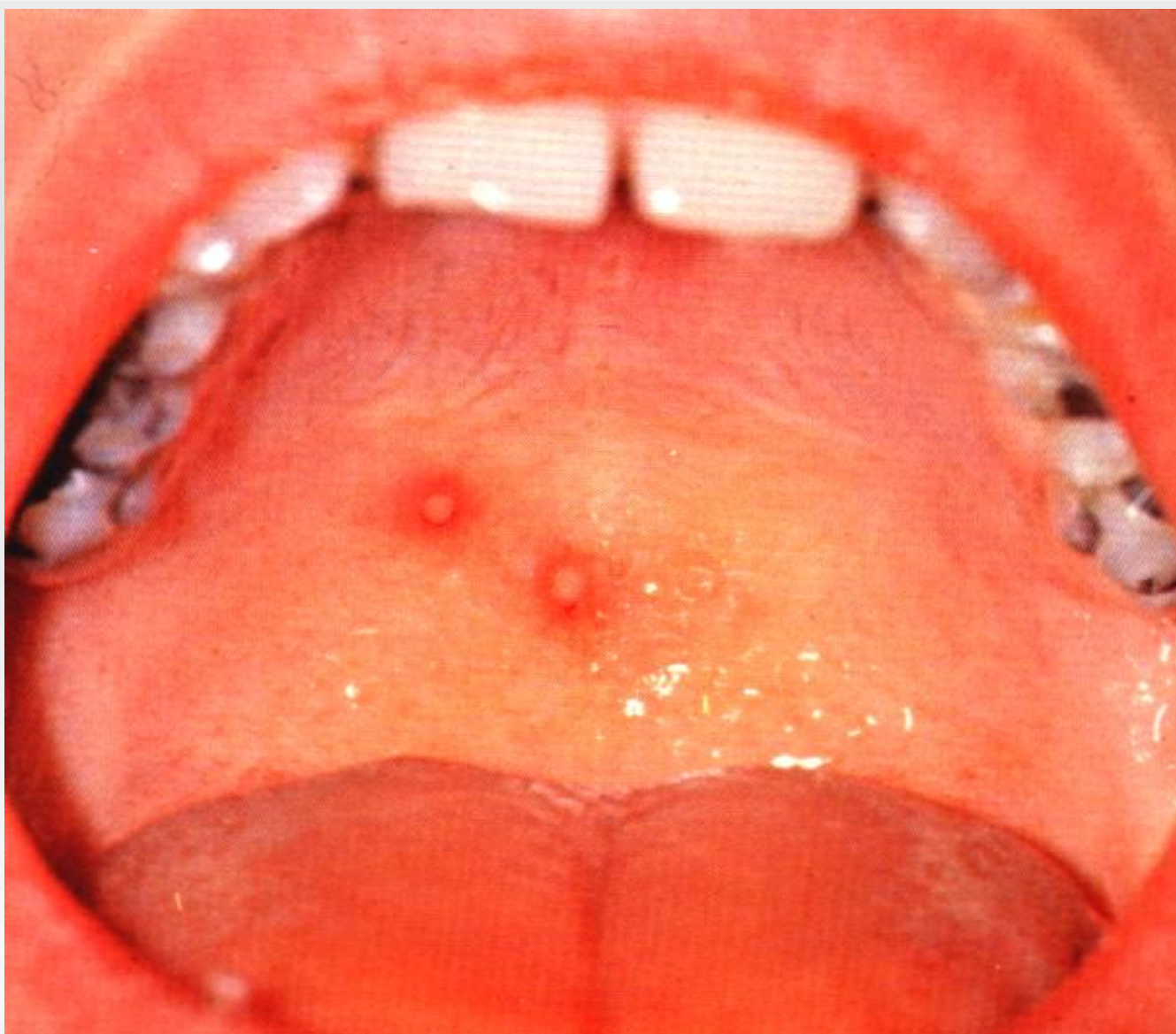
Always in the hair

Earlier on the oral mucosa than on the skin

Sublingual area, hard-soft palate, lips, gingiva

Diff. diagn. – blisters in the hair, epidemiological situation

Therapie symptomatic



Lesions of oral mucous membrane

a) Herpangina

virus Coxackie A, B, or ECHO virus

affects children

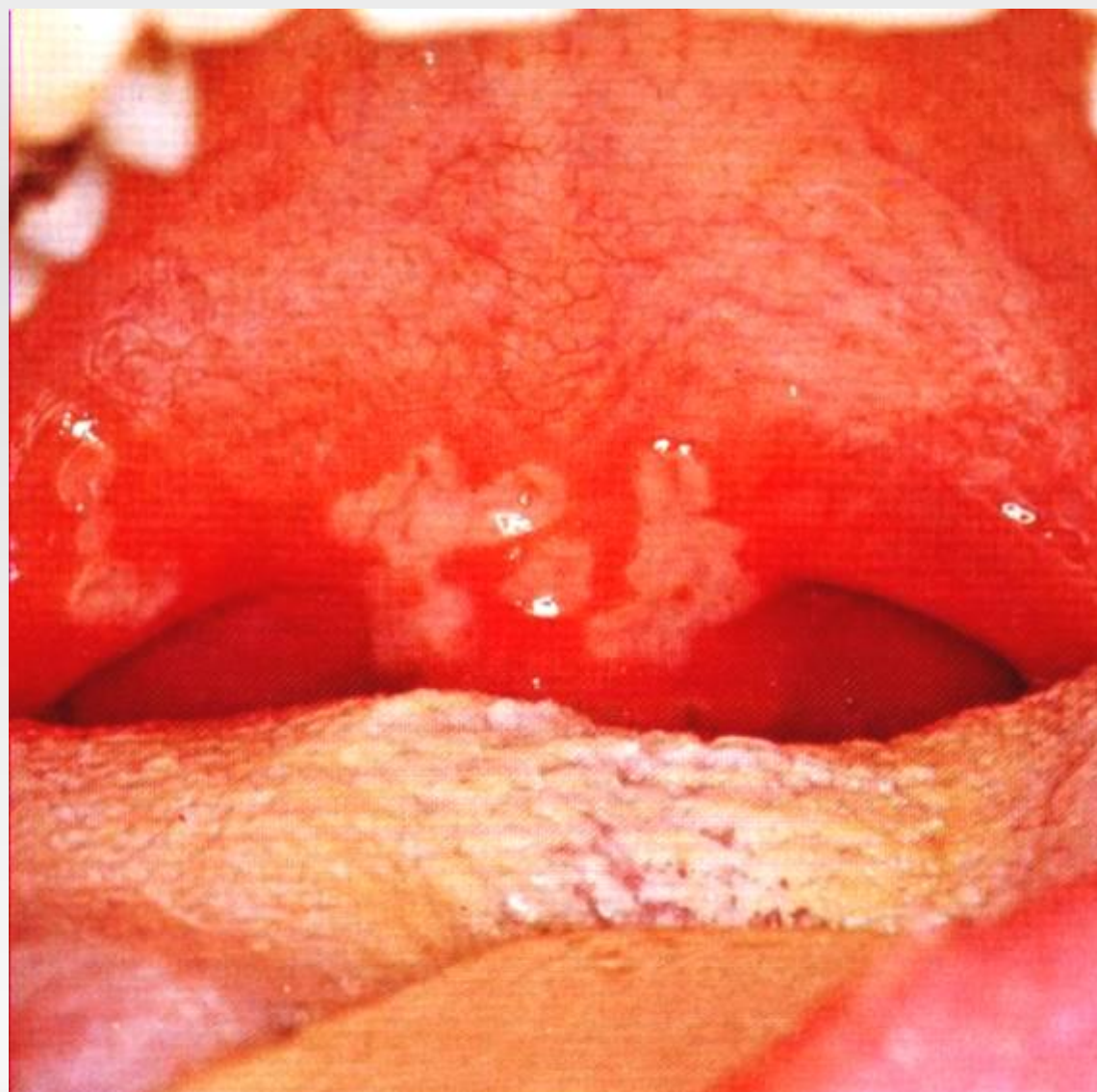
direct contact, droplet infection

acute stomatitis, vesicles on the soft palate mucosa, palatal arches

problems on swallowing

Diff. diagn.: H-F-M disease- manifestation on skin as well as stomatitis epidemica, herpetic gingivostomatitis - prodroms and more severe course, gingiva, palate, tongue –affected too

Therapy: symptomatic, vitamins, if necessary ATB – broad spectral, antipyretics





Lesions of oral mucous membrane

a) Stomatitis epidemica

virus, incubation 3-5 days

ague, shaking, high fever

vesicles – lip mucosa, buccal mucosa, hard palate, tongue, rapid maceration – erosion

vesicles also around nails

lymph nodes enlargement

duration –approximately one week

Diff. diagn.: herpetic gingivostomatitis , hand-foot-mouth disease (exanthem palmary and plantary)

Therapy: symptomatic, 10% borax-glycerin locally

Lesions of oral mucous membrane

a) Stomatitis vesiculosa with exanthem palmary and plantary (hand-foot-mouth disease)

enterovirus, most frequently Coxackie group A, B, or ECHO virus

similar to herpangina, fever, throatache, diarrhea,

vesiculous exanthem palmary and plantary

vesicles also orally – affects all types of oral mucosa with the exception of gingiva

Duration: approximally one week

**Diff. diagn.: gingivostomatitis epidemica
stomatitis epidemica**

Therapy symptomatic



Lesions of oral mucous membrane

- a) Infectious mononucleosis**
- b) EBV virus (virus Epstein-Barr), or cytomegalovirus**

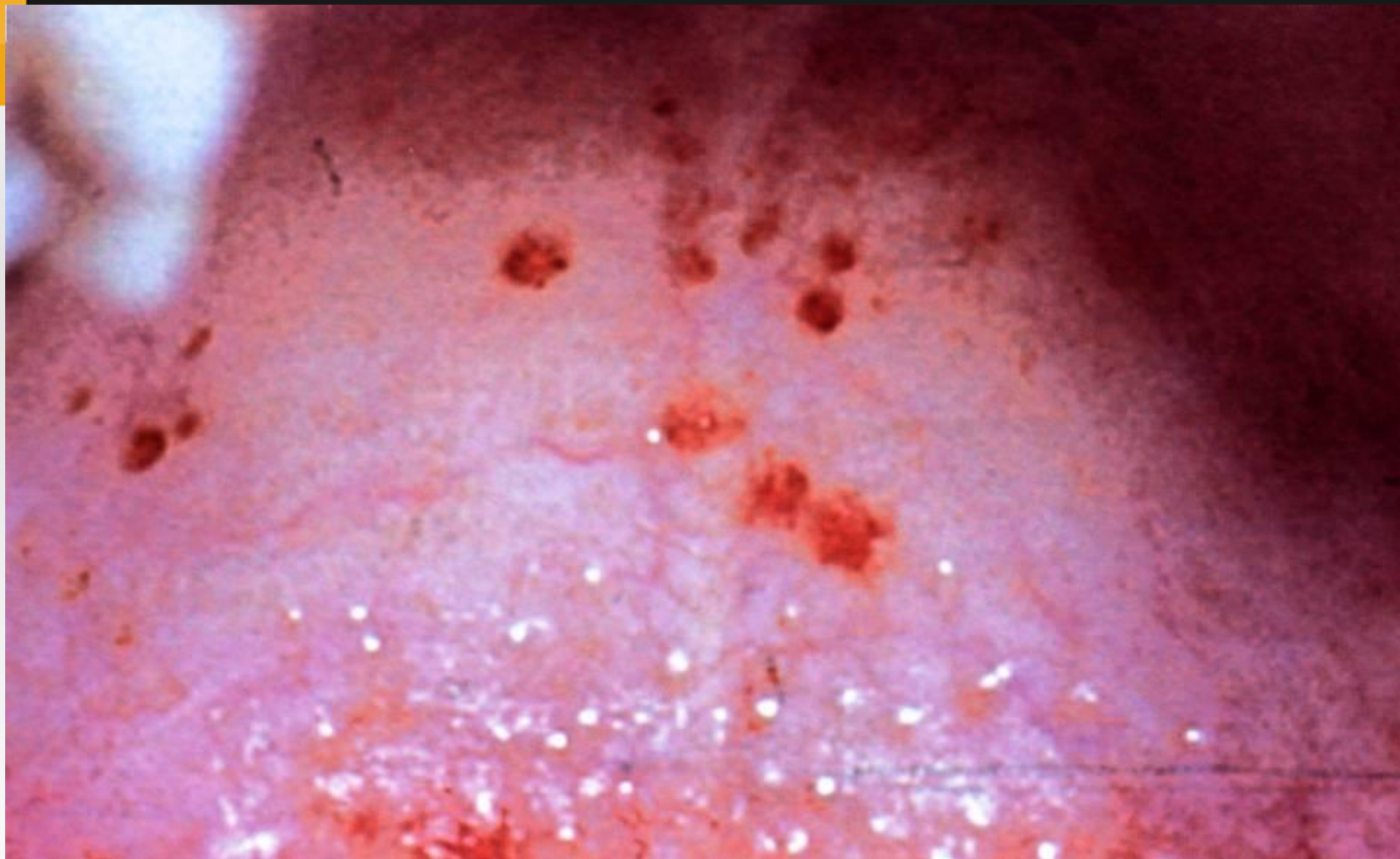
General symptoms (fever, anorexia, weakness)
acute gingivostomatitis with ulcerations, or herpetic form, petechial haemorrhage on palate
momentary face swellings
pseudomembranaceous tonsillitis
Lymph nodes enlargement – non painful
hepatosplenomegaly
neurologic complications

Lesions of oral mucous membrane

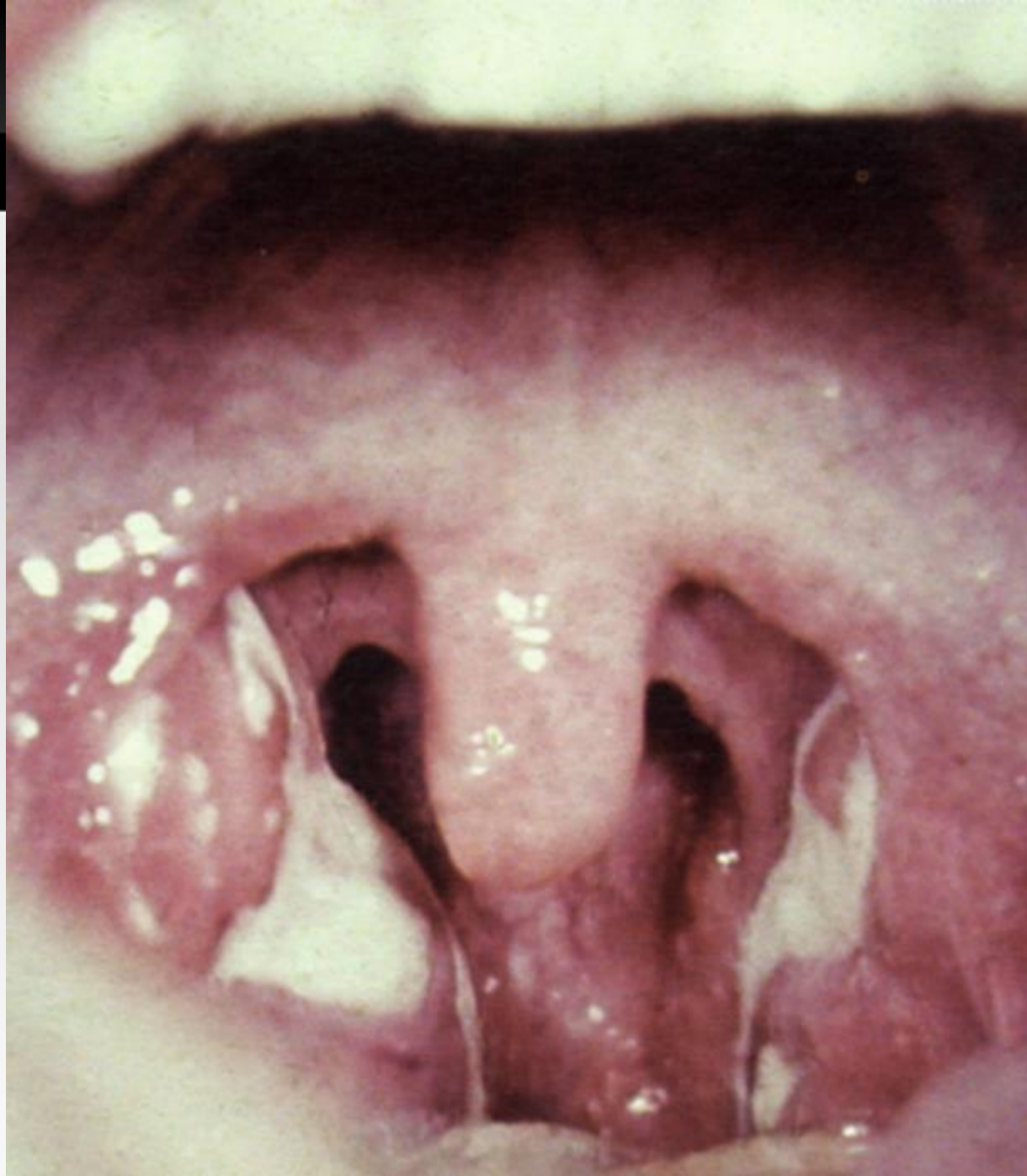
**Diagn.: blood count – lymphocytosis
virology – proof of antibodies**

**Diff. diagn.: streptococcal tonsillitis
herpetic gingivostomatitis (without
tonsillitis)
acute hemoblastosis (blood count)**

Therapy: general treatment (infectology), diet







Lesions of oral mucous membrane

a) Aphtae (recurrent aphtous stomatitis)

The most frequent stomatitis

Ethiology – unknown

Not frequent in small children, in big children, in puberty and adolescence – more frequently

Superficial oval defect of epithelium, covered by fibrin (whitish), red inflammatory halo

Aphtosis minor – longlasting course

Aphtosis major - less common (tongue, cheeks, lips)

Lesions of oral mucous membrane

Herpetiform aphtae

primary mucous defect is the aphta

Alteration of general state - uncommon

Diff. diagn.: localization of aphtae – non keratinized mucosa (lips, buccal mucosa, margins of tongue, mouth floor, soft palate, palatal arches)

sharp, exactly limited margins with inflammatory halo

varicella – always in hairs

Lesions of oral mucous membrane

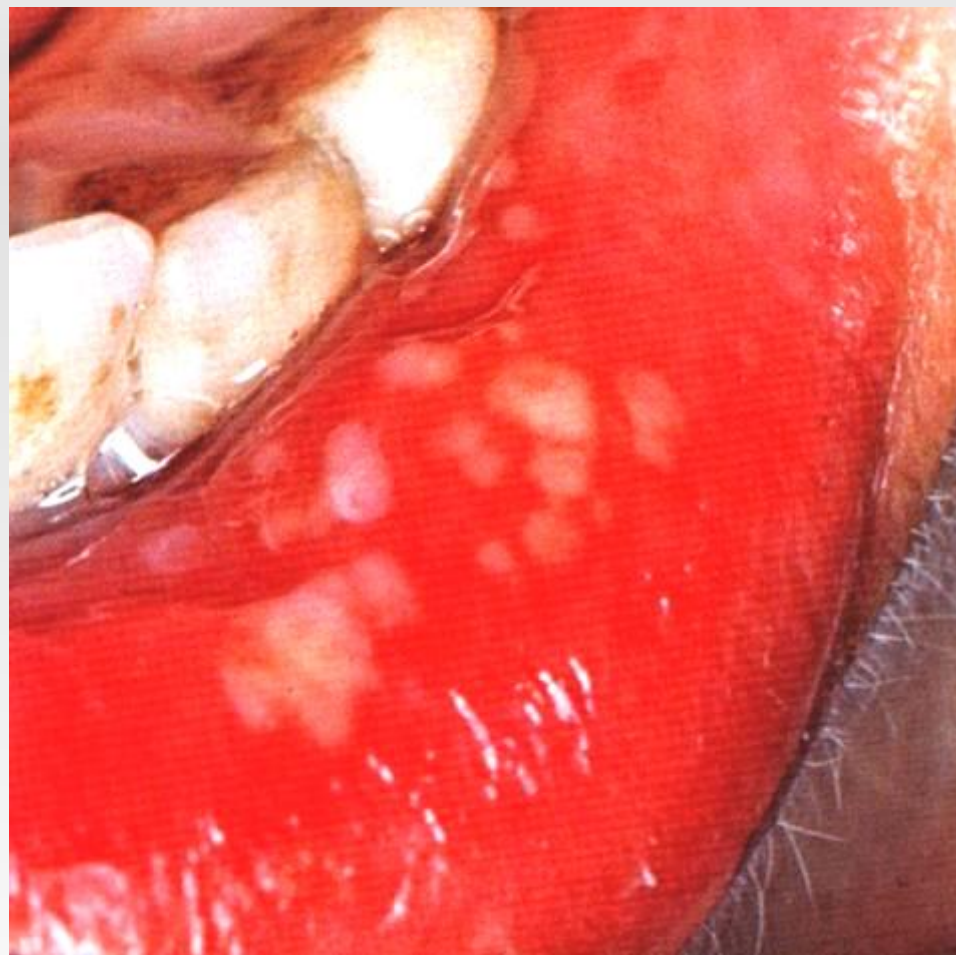
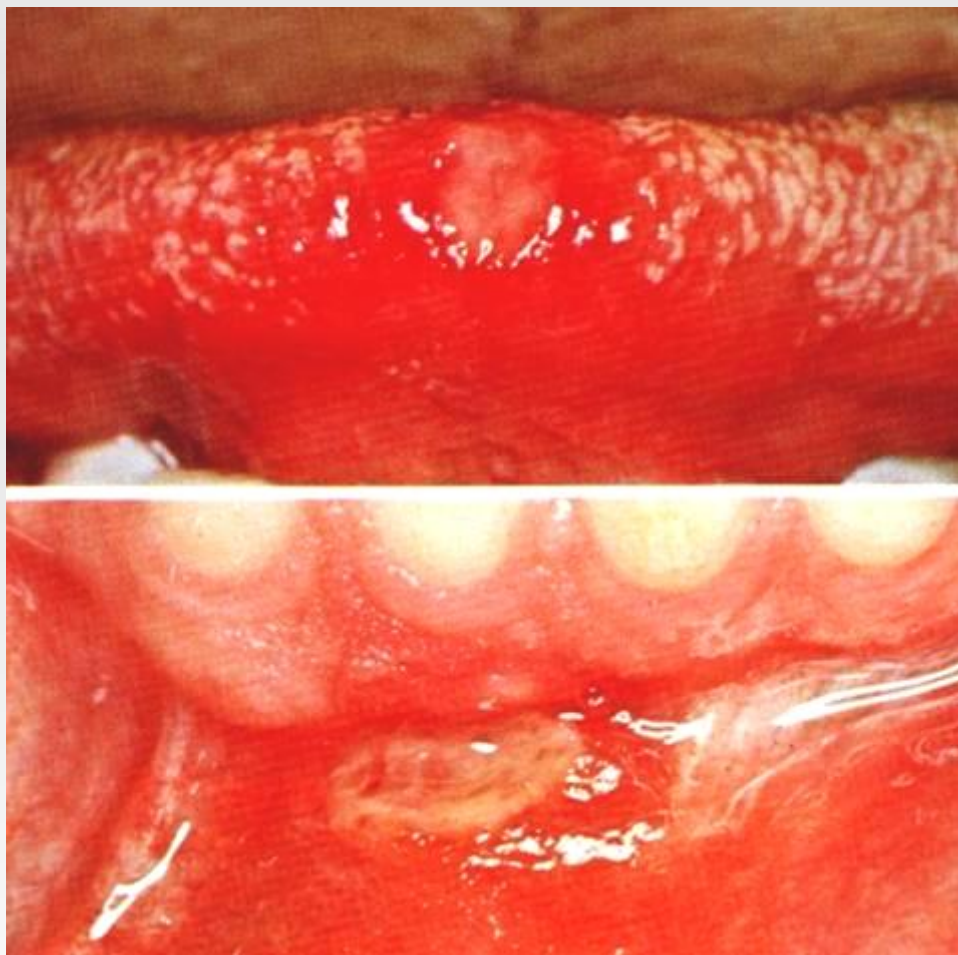
viral types of stomatitis

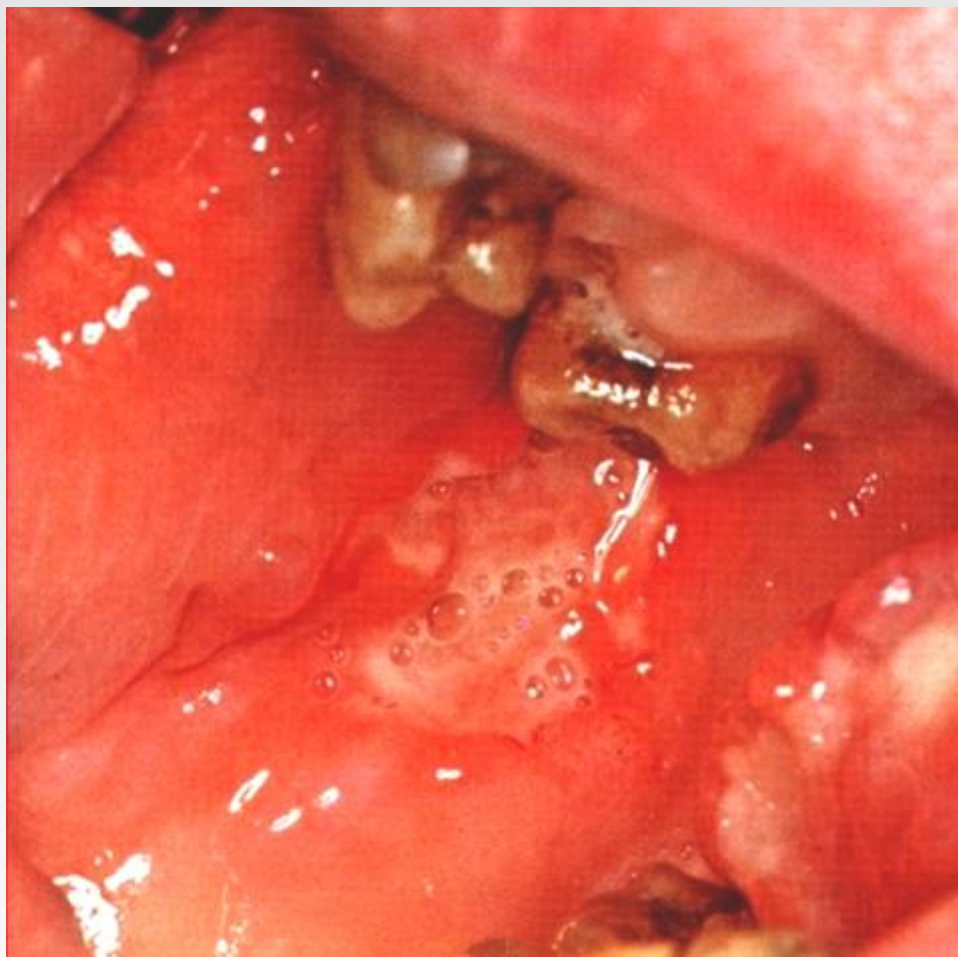
autoaggressive diseases

difficult toxico-allergic reactions

Therapy: symptomatic

locally: superficial anesthetics, antiseptics, antiflogistics, bioadhezives







275 Minor aphthae.



276 Major aphthae.





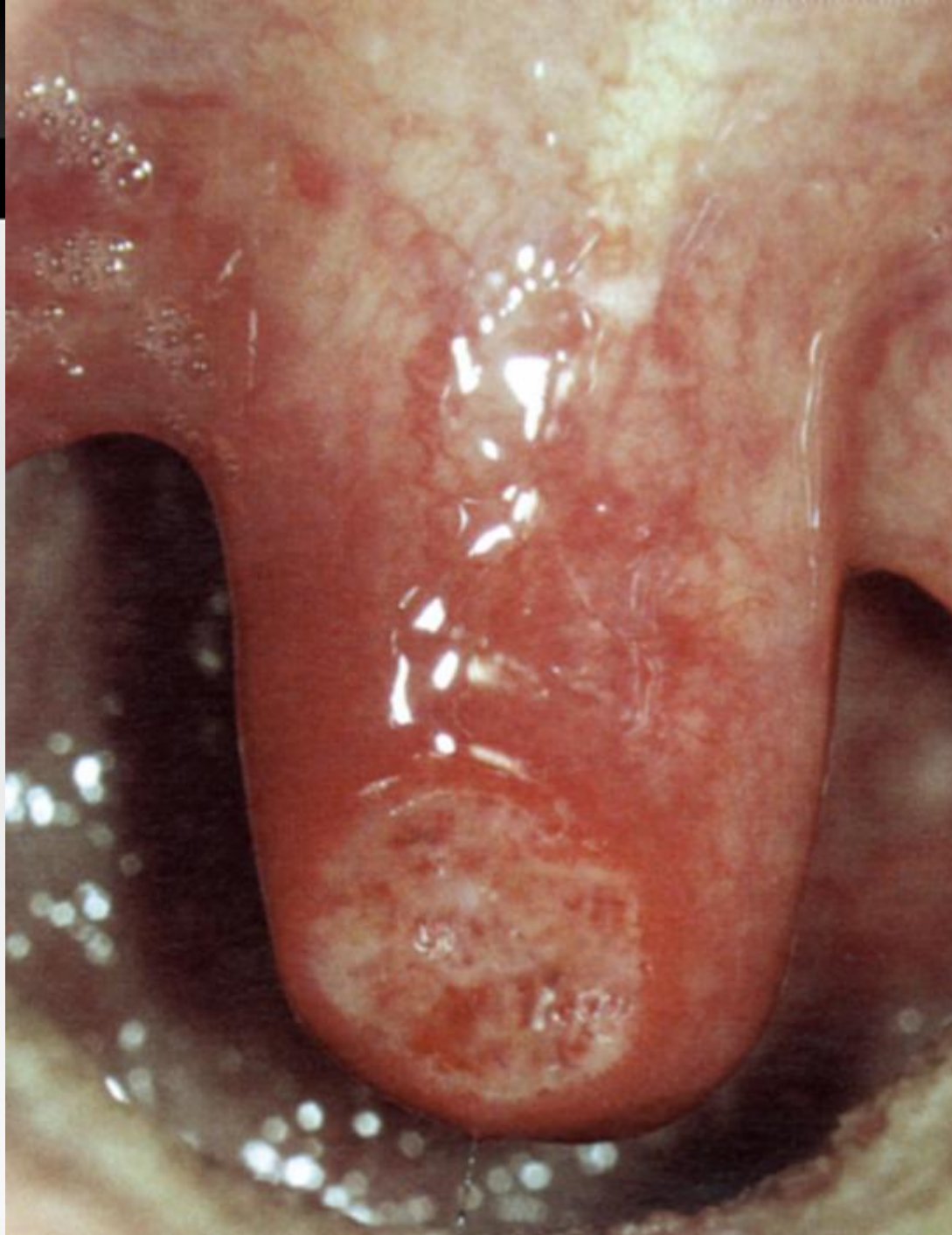
Fig. 14.4 Minor aphthous ulceration. (By kind permission of Wolfe Publishing.)



29.4.2014

Onemocnění sliznic dutiny ústní u dětí - přehled nejčastějších chorob

96

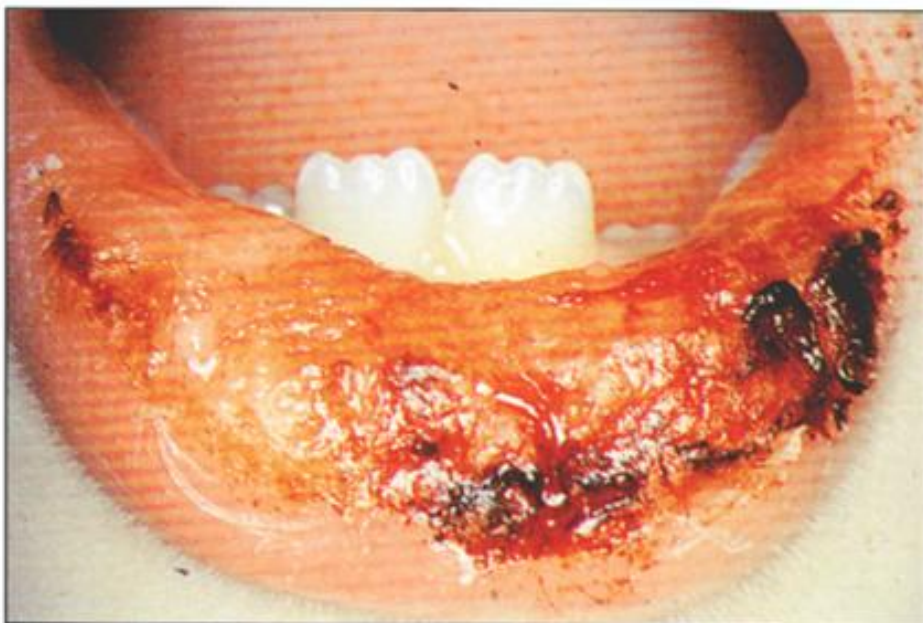


Lesions of oral mucous membrane

a) Range of other diseases

Erythema exsudativum multiforme Hebrae, Stevens-Johnson's syndrome, Behcet's syndrome, toxico-allergic reaction

311



311 Labial swelling and blood-stained crusting of a young boy with oral erythema multiforme.

312



312 Oral erosions in erythema multiforme.



Fig. 14.5 Erythema multiforme in a teenager.



Fig. 14.12 Cavernous haemangioma of the right buccal mucosa. (By kind permission of Wolfe Publishing.)

Lesions of oral mucous membrane

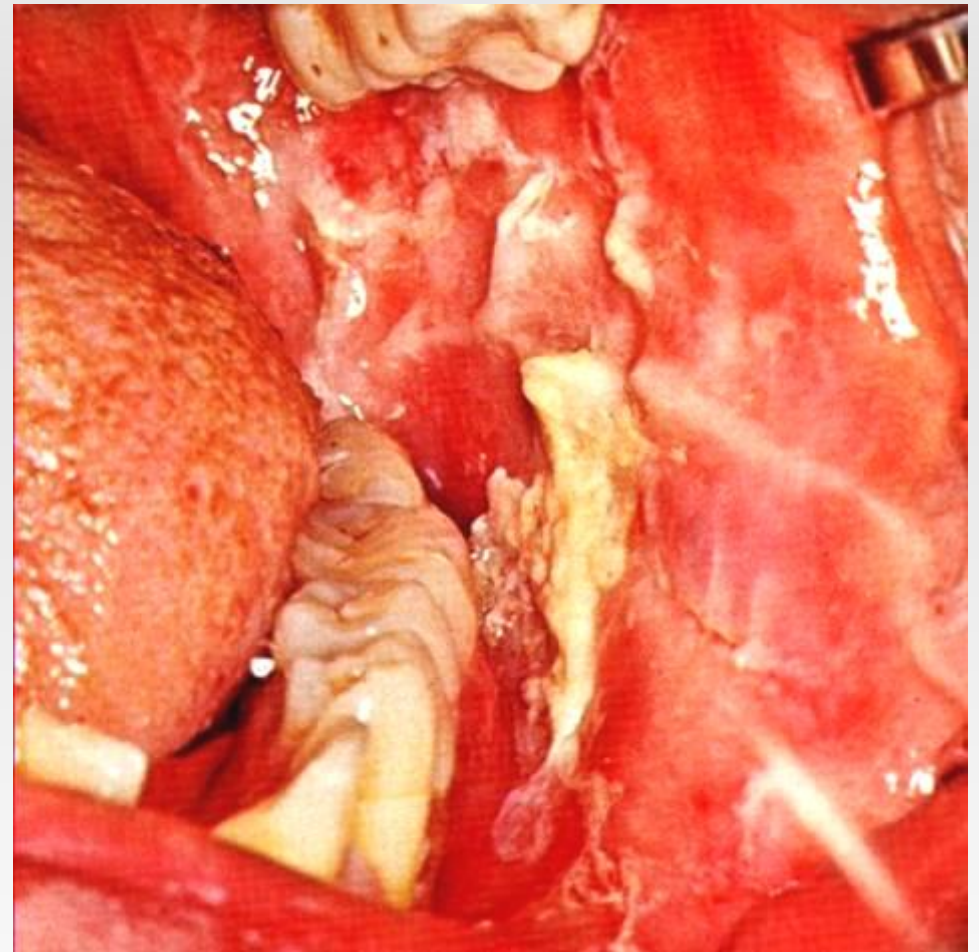
1. Bullous diseases

a) pemphigus group

b) pemphigoid group

c) dermatitis herpetiformis

d) epidermolysis bullosa acquisita





Lesions of oral mucous membrane

1. Ulcers in the oral cavity

■ **Ulcerous gingivostomatitis (ANUG)**

chiefly affecting young adults 17-25 years, not children

mixed anaerobic bacterial microflora (spirochaetes, fusiform bacteria, and other anaerobes)

ulcerous gingivitis, ulcerous gingivostomatitis

no prodromal symptoms

sudden appearance of gingivitis (frontal area, third molars)

ulcers necrotizing tips of papillae, after separation papillae are shorter (cut-off)

Lesions of oral mucous membrane

- **Ulcerous gingivostomatitis**
- **Diff. diagn: acute viral stomatitis (has prodromal stage, does not affect gingiva)**

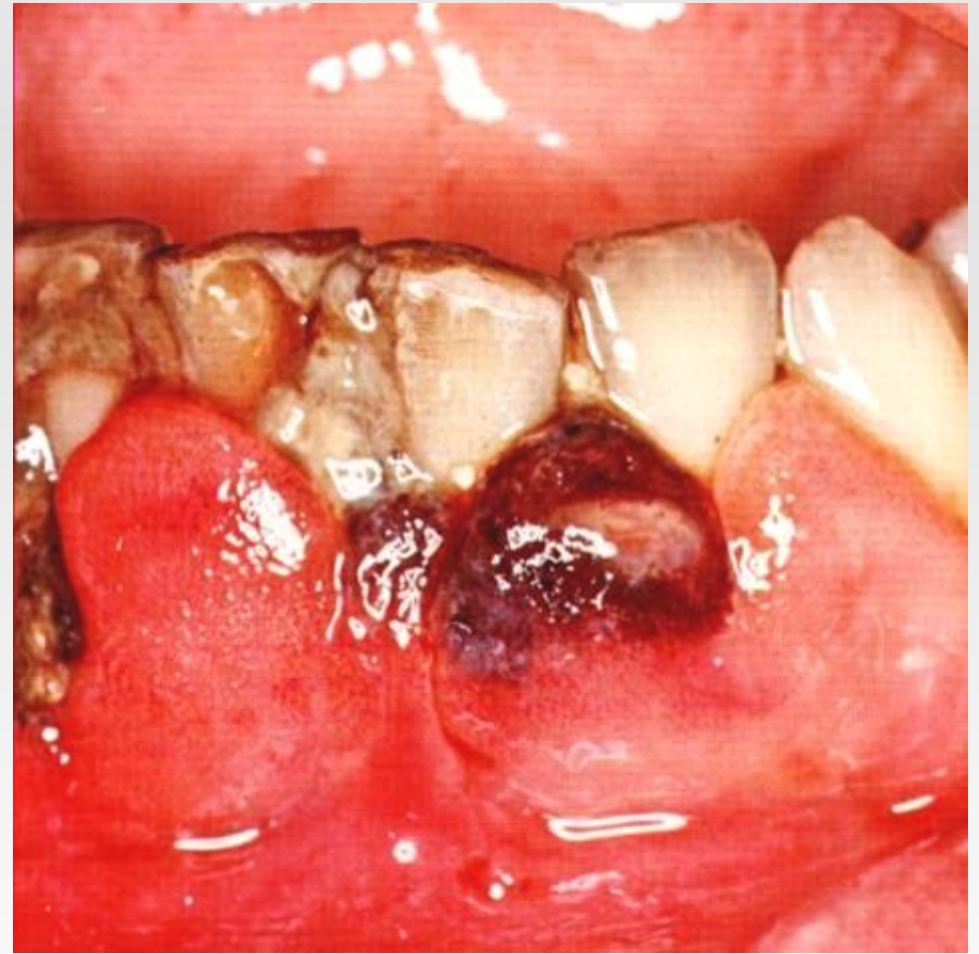
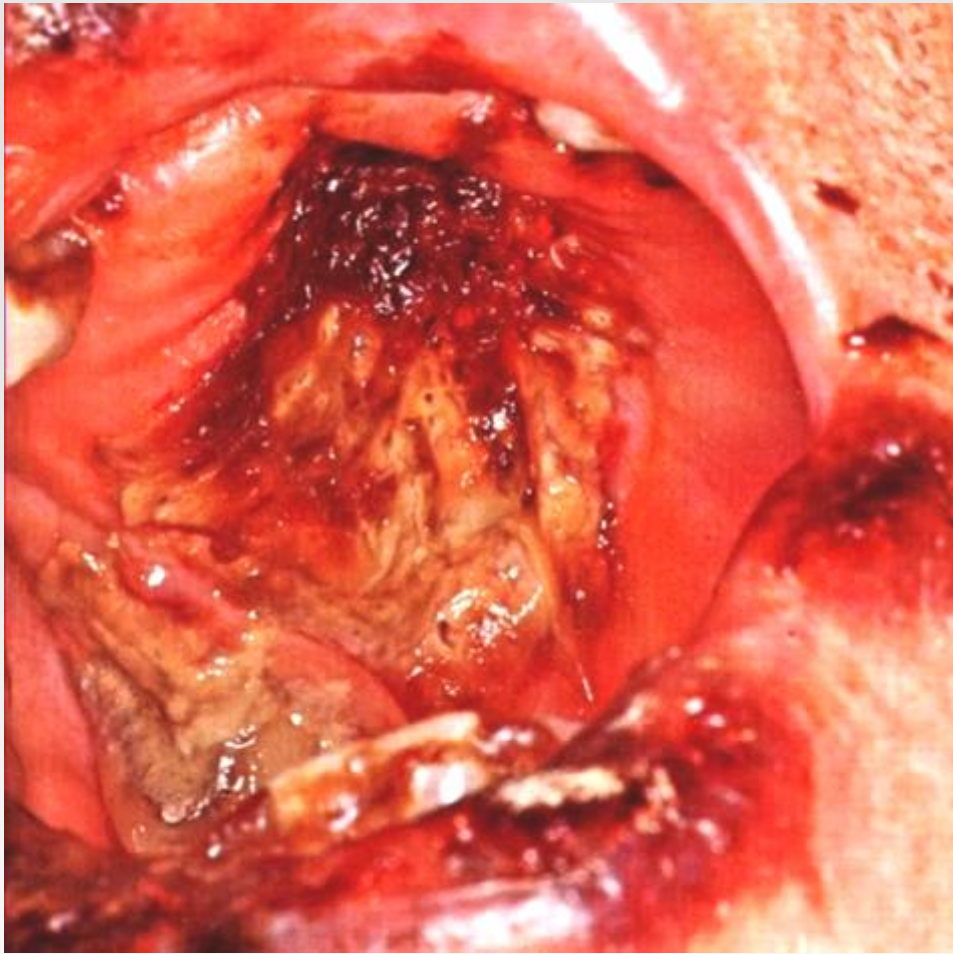
infectious mononucleosis – in smaller and small children

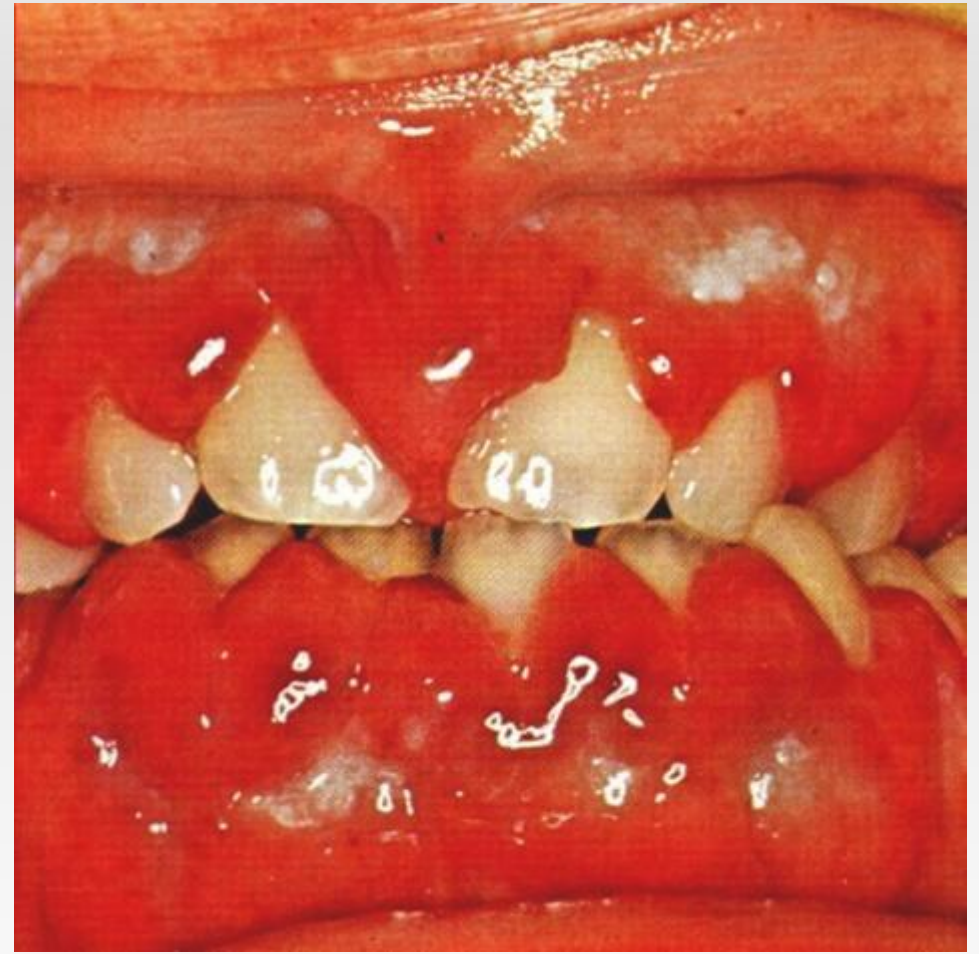
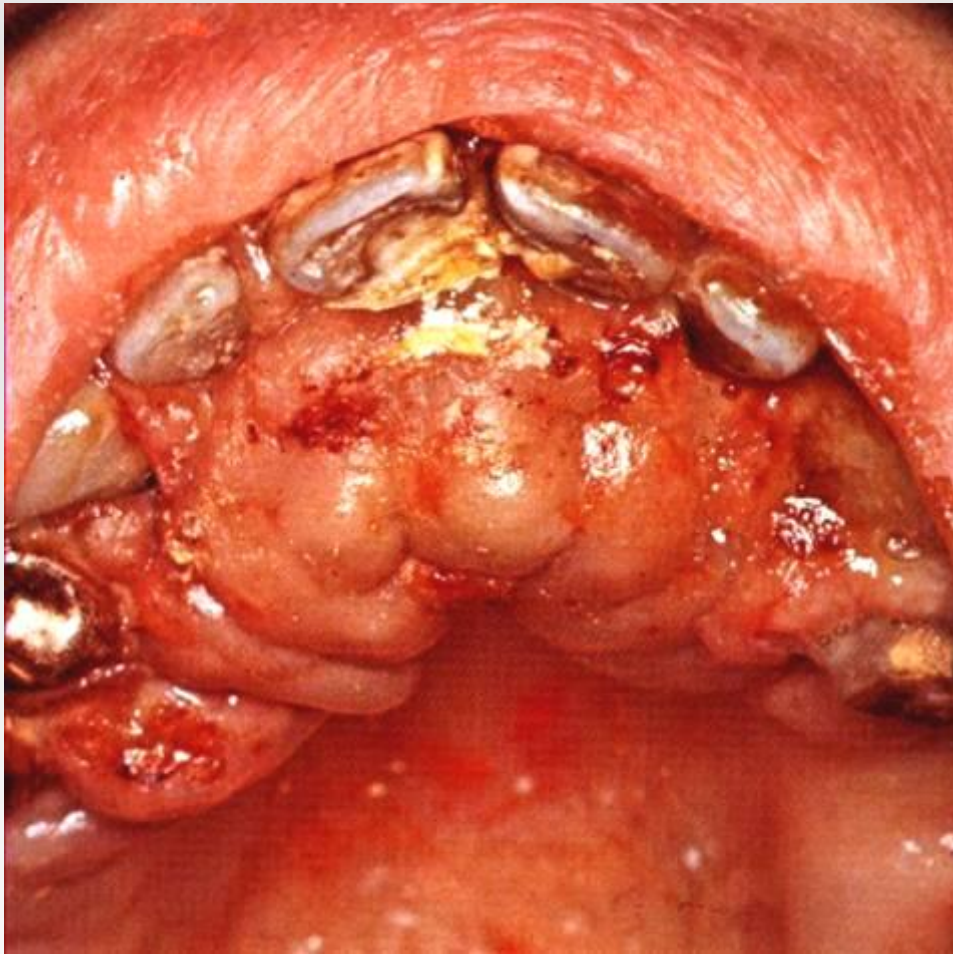
leukemia, lymphoma, agranulocytosis

***Therapy: locally - antiseptics, antiflogistics ,
H₂O₂***

***general - ATB (penicillin),
chemoterapeutics***







Lesions of oral mucous membrane

- **Manifestation of systemic diseases on the oral mucous membrane**
 - a) **influenza**
affection of tongue mucosa (hyperemia),
buccal mucosa – enanthema
 - b) **morbilli (measles)**
buccal mucosa, lip mucosa, soft palate –
Koplick´ s-Filatov´ s spots – white speckling
surrounded by a red margin (fibrin)
tongue – hyperemia, thick tongue coating

Lesions of oral mucous membrane

- **Manifestation of systemic diseases on the oral mucous membrane**
 - a) rubeola**

oral mucous membrane is not affected, tongue affected similarly as in measles
 - b) parotitis epidemica**

enanthema on oral mucous membrane, inflammation in the Stenon's duct surroundings
Diff. diagn.: another types of parotitis

Lesions of oral mucous membrane

- **Manifestation of systemic diseases on the oral mucous membrane**
 - a) **scarlatina (scarlet fever)**
general infectious disease –streptococcus
enanthema on oral mucous membrane – tonsils flame-like red
tongue – thick coating, later is peeled-off, tongue – raspberry like appearance
Diff. diagn.: morbilli, rubeolla, toxico-allergic reaction

Therapy: penicillin

Lesions of oral mucous membrane in different age groups

- Newborn

Bohn´ s nodules

Fordyce granules

Clefts

Infection - virus herpes simplex

Candidiasis

Lesions of oral mucous membrane in different age groups

- **Small children – up to 3 years**

Herpes simplex

Herpetic gingivostomatitis. gingivitis

Anguli infectiosi

Angular candidiasis

Cheilitis

Impetigo

Symptoms of infectious diseases –viral

Injuries (glossitis, cheilitis)

Lesions of oral mucous membrane in different age groups

- **Children 3 – 5 years**

Essentially the same diseases, increase in number of injuries:

burns

etching (acids, chemicals)

electrogalvanic injuries

Lingua geographica

Lesions of oral mucous membrane in different age groups

- School age

Cheilitis

Glossitis (superficialis, profunda)

Glossitis atrophica

Symptoms of diseases on oral mucosa (children diseases)

Most of diseases affecting also younger children

Most frequently than in small children – aphtous stomatitis

Lesions of oral mucous membrane in different age groups

- Adolescents

Herpes simplex, gingivitis and herpetic gingivostomatitis

Further: stomatitis and ulcerous gingivostomatitis
Infectious mononucleosis

Symptoms of general diseases and toxic-allergic reactions may appear anytime