

# **Oral manifestations of systemic diseases**

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1. Established diseases, the orofacial alterations are parts of them
2. Some orofacial lesions raise the possibility of a hitherto unknown systemic disease



direct the patient toward a specialized institute

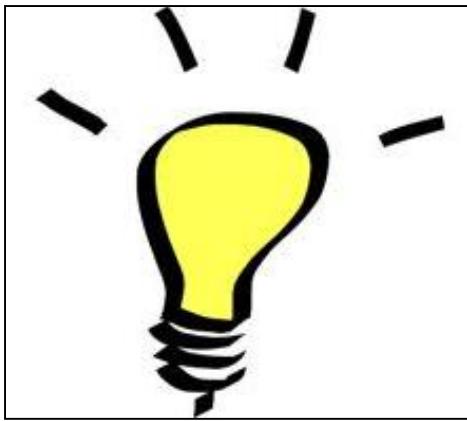


application of UV-light  
composite resin is treated by  
curing light



teeth whitening

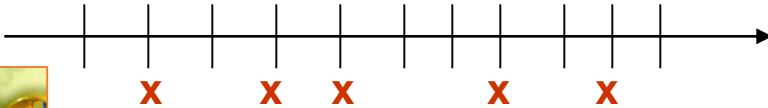
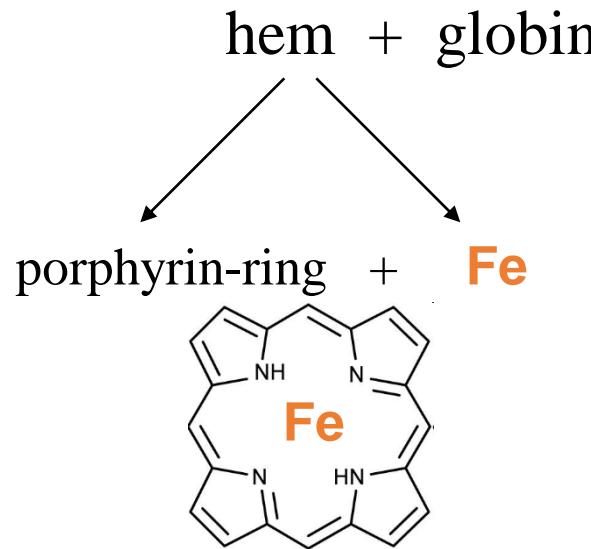




# Porphyrias



hemoglobin



9 subtypes  
AR, AD, X-linked



## Hormonal effects

Puberty – increased blood supply, prone to gingival bleeding

Period – spontaneous gingival bleedings

Pregnancy – relaxation of the periodontal ligament, mild loosening of teeth

gingivitis, pyogenic granulomas

increased salivation

decreased frequency of recurrent aphthae!

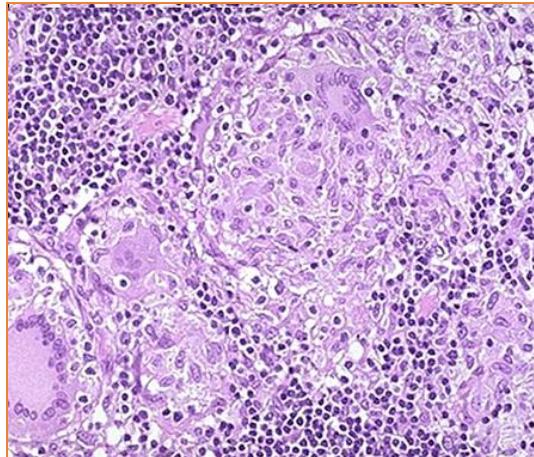
Menopause – dry mouth, glossitis, loosening of teeth

atrophic, tender mucosal surfaces

desquamative gingivitis

Acromegaly – macroglossia, teeth movement

# Gastrointestinal effects: Crohn's disease



Intraoral involvement: 8 – 29 %

May precede the gastrointestinal symptoms

- diffuse labial, gingival, mucosal swelling
- pavement-like gingiva and buccal mucosa
- aphtae
- angular cheilitis
- decreased saliva production
- granuloma formation

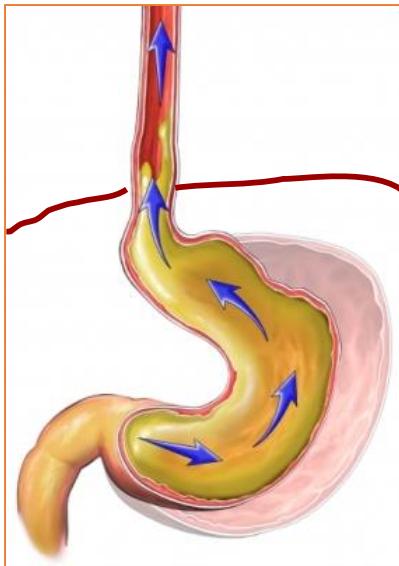


## Gastrointestinal effects: ulcerative colitis

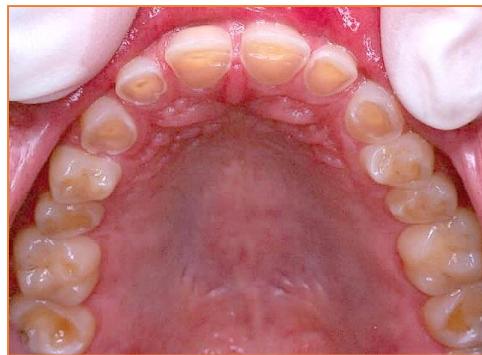


- 5 – 10 % frequency
- during the established disease
- aphtous ulcers, superficial bleeding ulcerations
- angular stomatitis

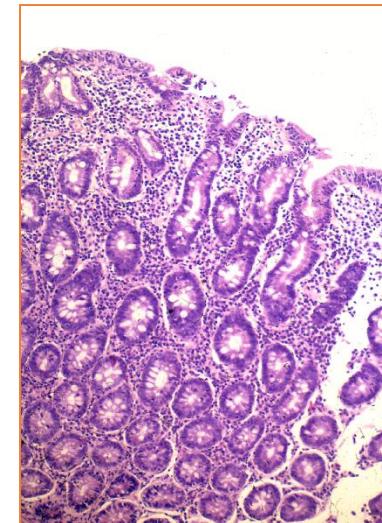
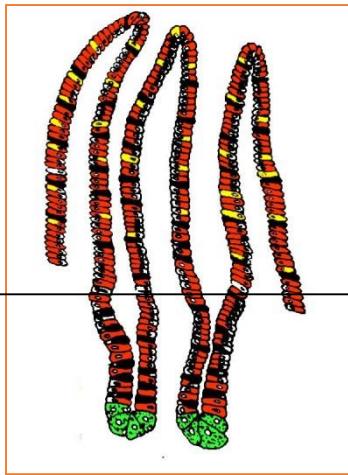
# Gastrointestinal effects: gastroesophageal reflux



- pH 1-2
- enamel erosion (palatal surfaces!)
- sensitive teeth
- increased caries-frequency
- not in childhood, just in adults



# Gastrointestinal effects: celiac disease



complex malabsorption (iron, calcium, vitamin D, folic acid, B12-vitamin)

enamel hypoplasia (mainly incisors)

accelerated tooth decay

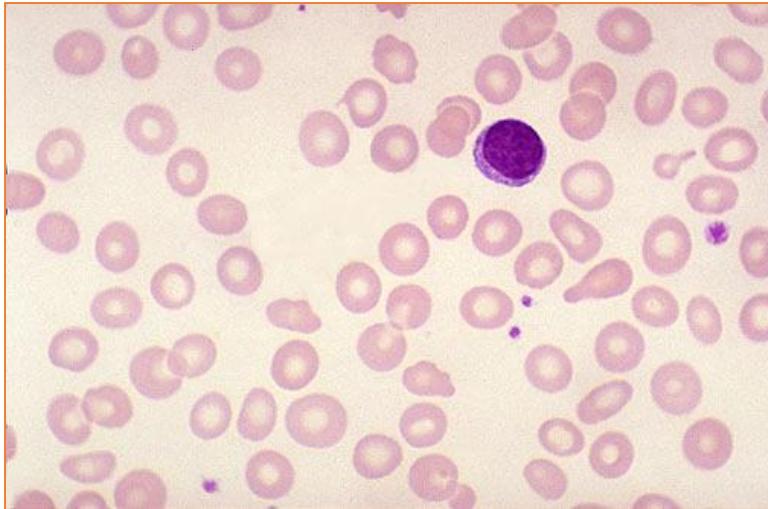
recurrent aphthae

## Peutz-Jeghers syndrome



Increased risk for breast, ovarian and pancreatic cancer

# Hematological diseases: anemias



- atrophic glossitis (may be the first sign of pernicious anemia)
- recurrent aphtae
- Plummer-Vinson syndrome
- angular stomatitis
- geographical tongue: 10 %
- aplastic anemia: petechiae, gingival hyperplasia, prone to Candidiasis



## Hematological diseases



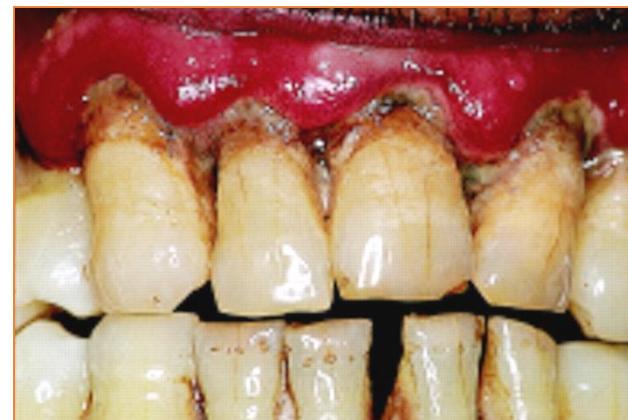
AML – early gingival hyperplasia



Polycythaemia vera, leukemias – gingival bleedings

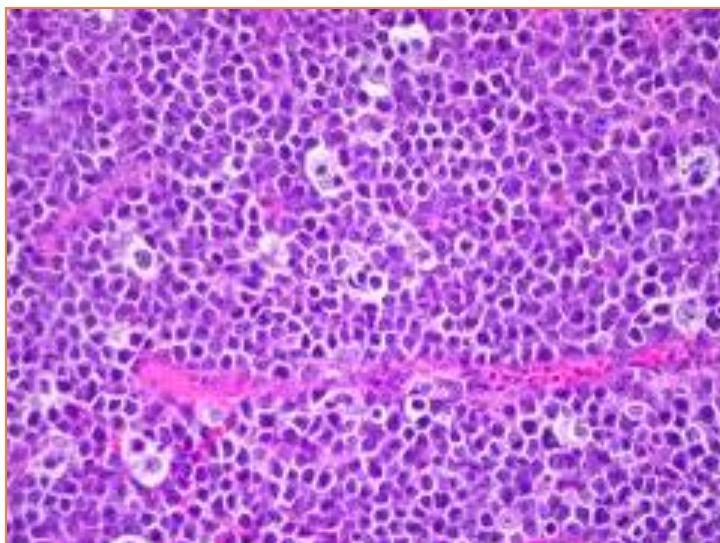


Thrombopenias – petechiae



Agranulocytosis, AML – necrotizing gingivitis

## Hematological diseases



CLL, Burkitt-lymphoma

## Deficiencies

C-vitamin deficiency – gingival bleedings

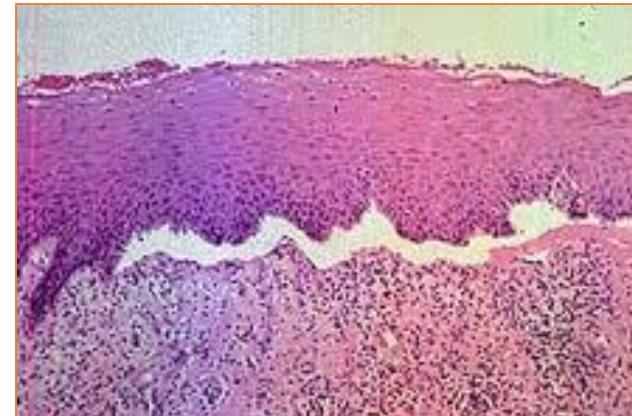


Iron deficient anemia –  
atrophic glossitis, angular cheilitis

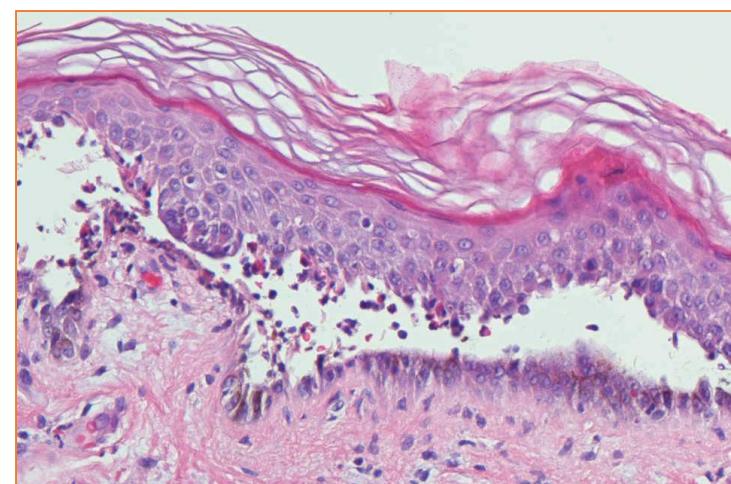


Ca-deficiency – enamel hypoplasia

## Immunological diseases: pemphigus vulgaris, mucosal pemphigoid



pemphigoid

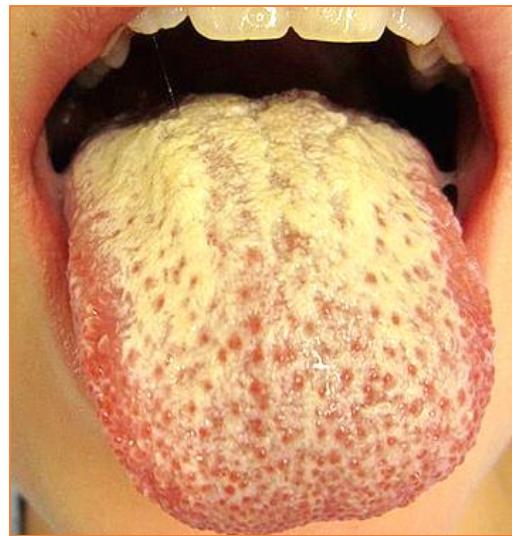


pemphigus vulgaris

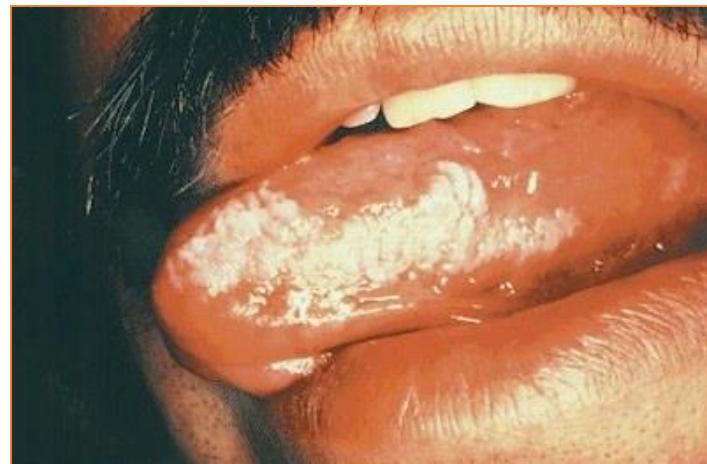
(Desquamative gingivitis)



## Immunological diseases: immune deficiency, AIDS



candidiasis



Kaposi-sarcoma

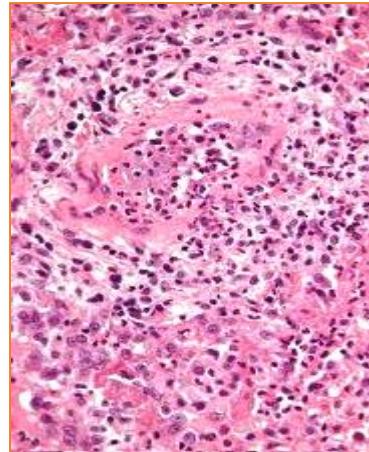
Hairy leukoplakia

# Immunological diseases: Wegener-granulomatosis

cANCA-positive granulomatous vasculitis

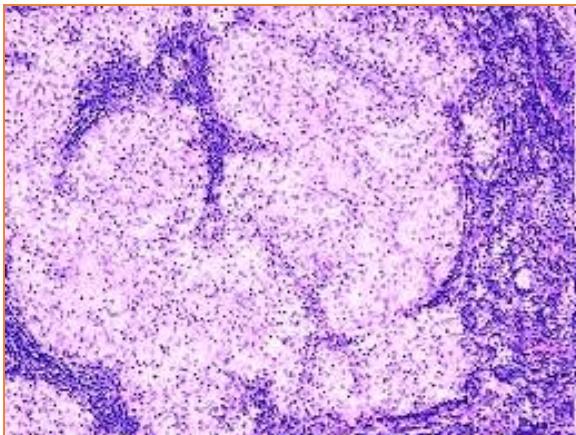
Upper airways, lung, kidneys

Oral cavity, pharynx: gingival hyperplasia, aspecific ulcerations,  
strawberry gingiva, tongue



„strawberry-gingiva”

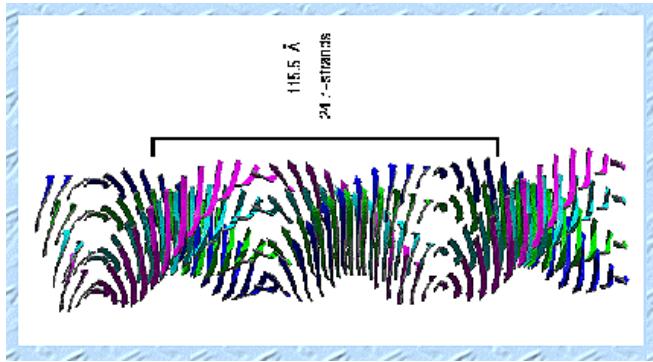
# Immunological diseases: (Boeck)-sarcoidosis (BHL-syndrome)



- multiple, nodular mucosal ulcerations
- granulomas on the lips
- salivary gland swelling
- xerostomia
- Heerfordt-syndrome:
  - | parotis-swelling
  - | n. VII. palsy
  - | xerostomia
  - | uveitis



# Immunological diseases: amyloidosis



AL – primary amyloidosis (tongue, heart)

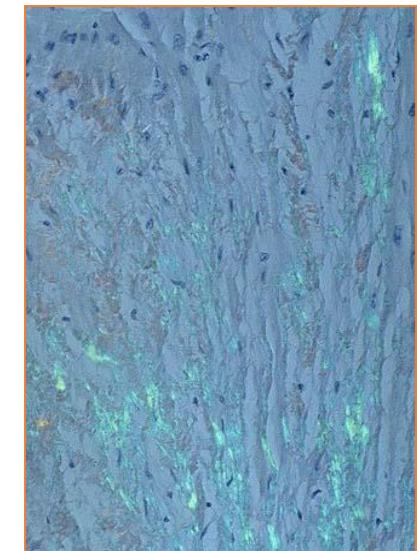
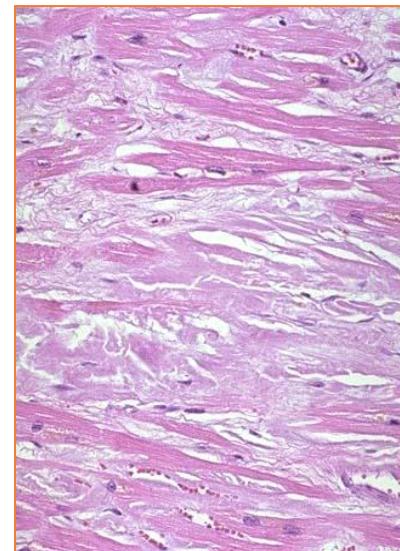
multiple myeloma

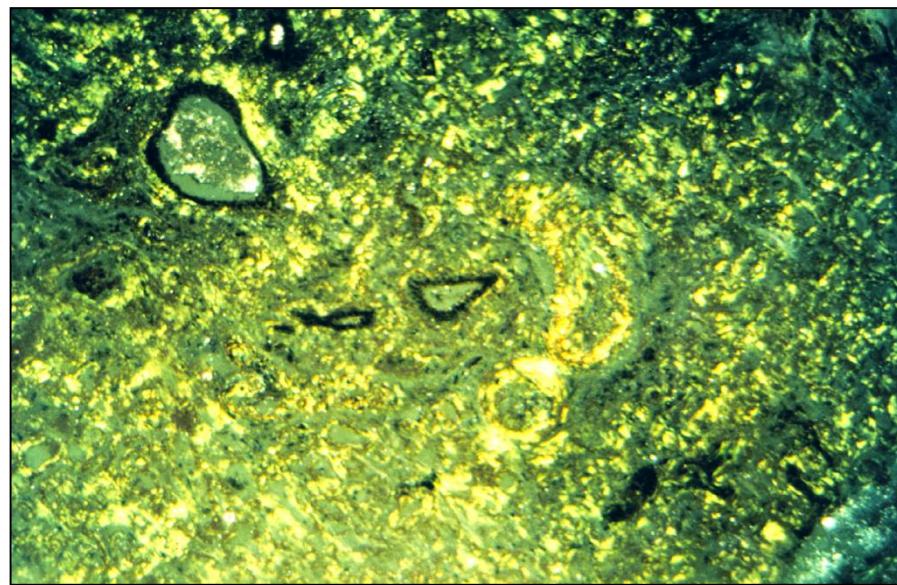
AA – secondary amyloidosis (liver, kidney, gum)

chronic purulent diseases

AE – endocrine amyloid (thyroid)

In salivary glands: xerostomia





# Diabetes mellitus

Mainly in uncontrolled cases

More severe periodontitis

(similar oral bacterium flora!

→ altered tissue response reactions

phagocytosis

collagen-metabolism

vascular reactions

Increased alveolar bone loss (smoking accelerates)

Recurrent aphtae, lichen planus, candidiasis

Salivation disturbances

Tasting disturbances, tongue paresthesias

# Infectious diseases



gonorrhea



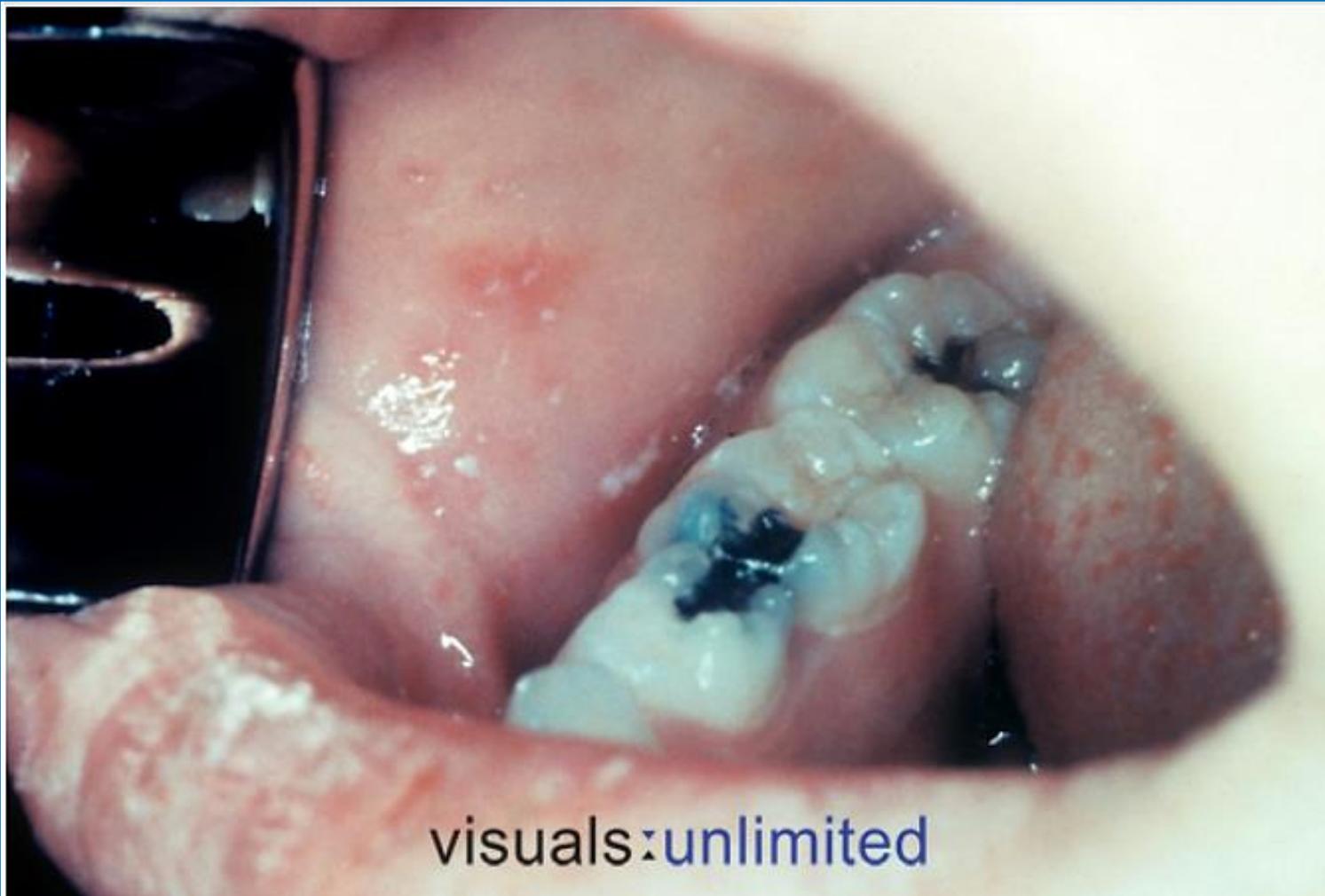
Koplik-spot (measles prodrome)



Hutchinson-teeth



Strawberry-tongue – scarlet fever



visuals:unlimited

Koplik-spot

# Medicinal drugs

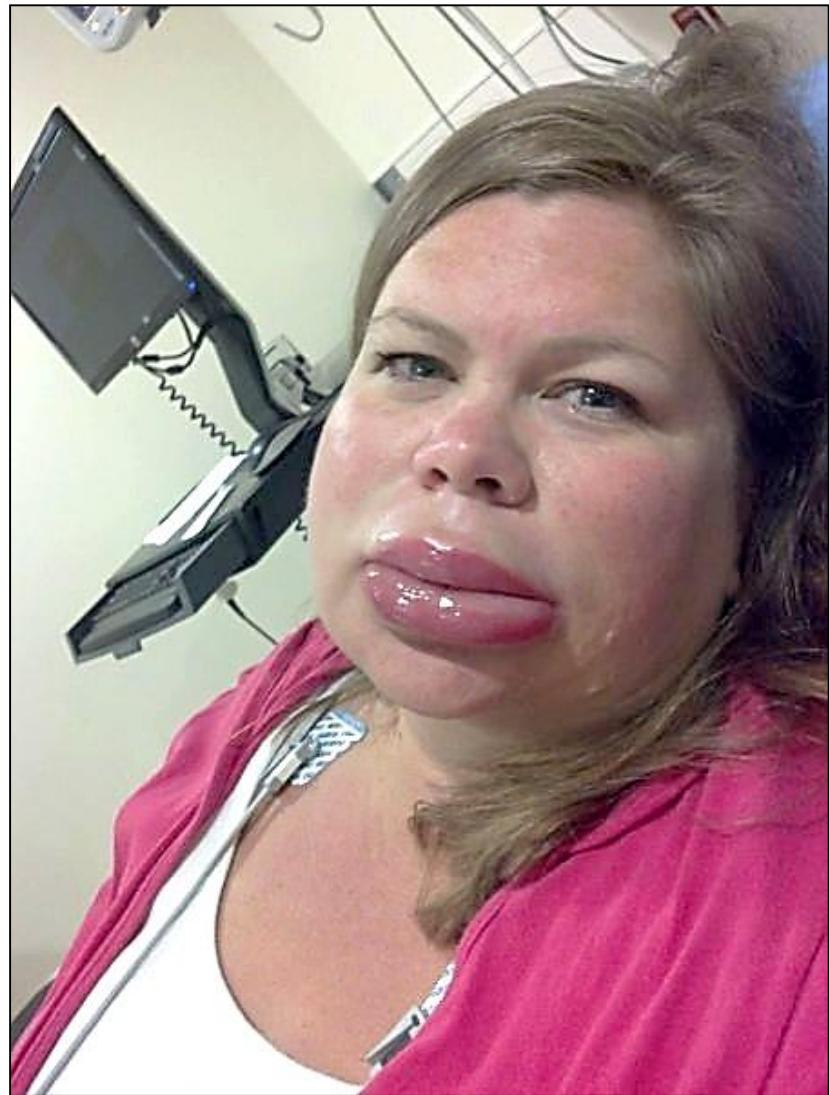


- aphtous stomatitis (any drug; NSAID, ACE-inhibitors...)
- xerostomia (anticholinergic drugs, antidepressants)
- lichen planus (40-50 drugs, ACE-inhibitors, beta-blockers, NSAIDs...)
- gingival hyperplasia (antiepileptics, cyclosporin-A, Ca-channel blockers)
- enamel discoloration (tetracyclines)
- mucositis (cytostatics, irradiation)
- fluorosis
- candidiasis: inhalation steroids

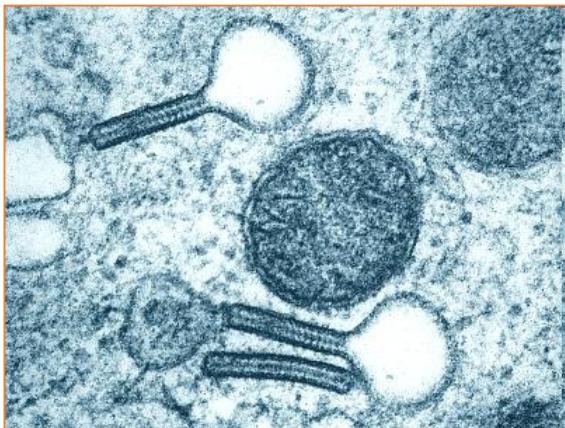
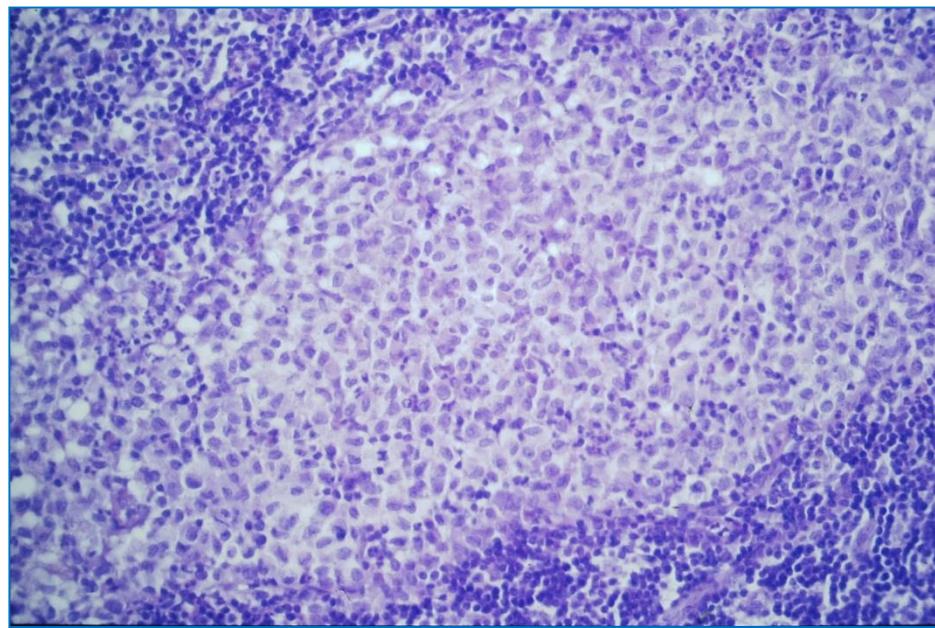


ciprofloxacin  
(Cipro)





# Langerhans-cell histiocytosis



- mucosal ulcerations (gingiva, palate, floor)
- necrotizing gingivitis
- IHC: Cd1a positivity