SYSTEMIC DISEASES IN THE HEAD AND NECK REGION

DEFINITION OF SYSTEMIC DISEASE

- More organs involved in the process of disease
- Very often combined with developmental disorders
- 1000-1500 syndromes written down in the literature
- 150-200 syndromes have stomatologic relevance

ETIOLOGY

- Congenital
- Autoimmune
- Metabolic disease
- Infection

DIAGNOSIS

- **Imaging methods:**
  - **X-ray, orthopanthomograph, CT, MRI, sialography**
- **Laboratory tests:**
  - **Metabolic parameters seBUN, creatinine, uric acid, Ca, Bi, etc**
  - **Blood count (WBC, RBC, PLT, HCT, HGB, qualitative count)**
  - **Serology (autoimmune AB)**
- **Histology**
- **Genetic tests (detection of chromosomal abnormalities, mutations by DNA sequencing or PCR)**

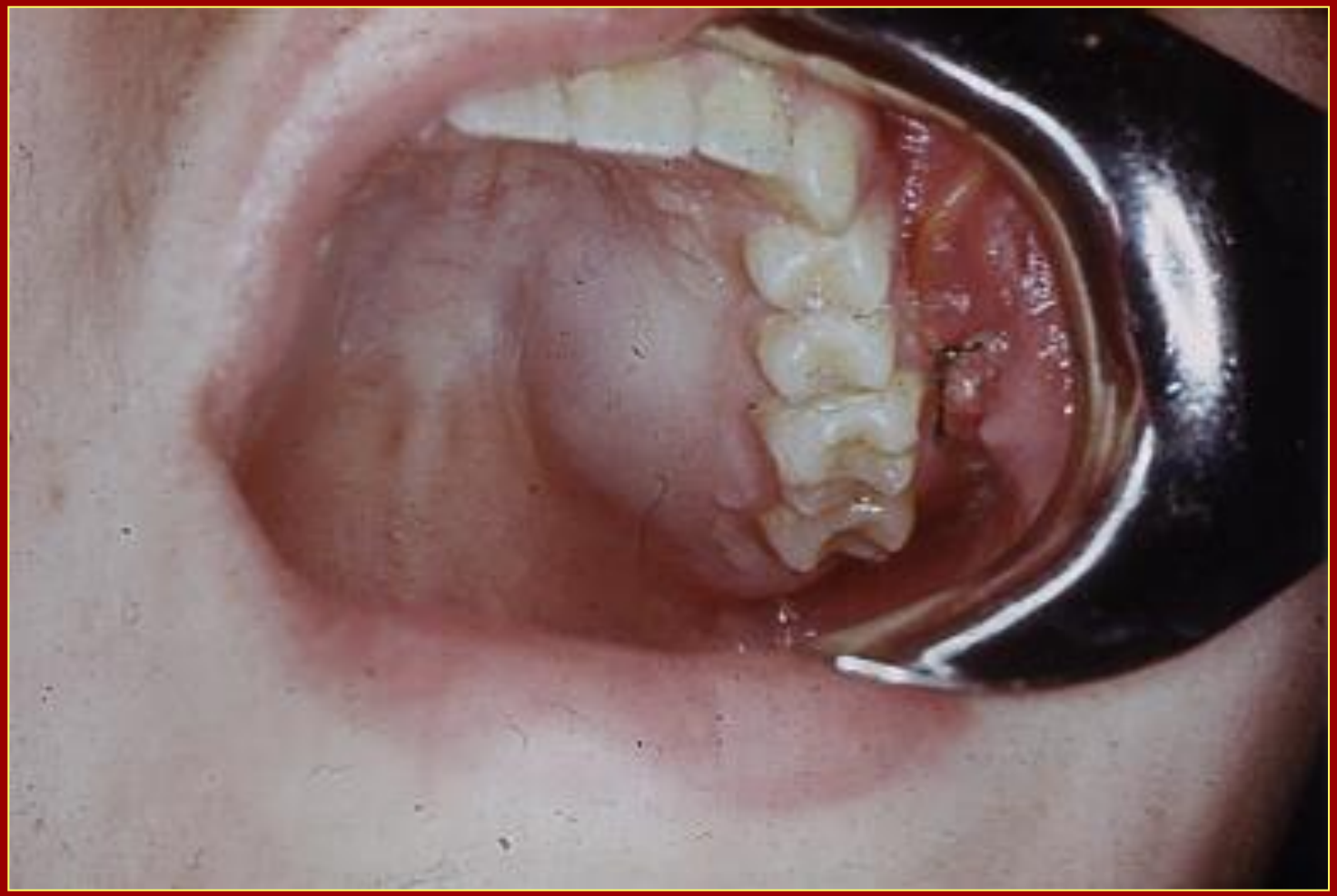
CLASSIFICATION

- **Pathologic (histiology)**
- **Etiologic**
- **Under the pathomechanism**
- **Clinical (surgical)**

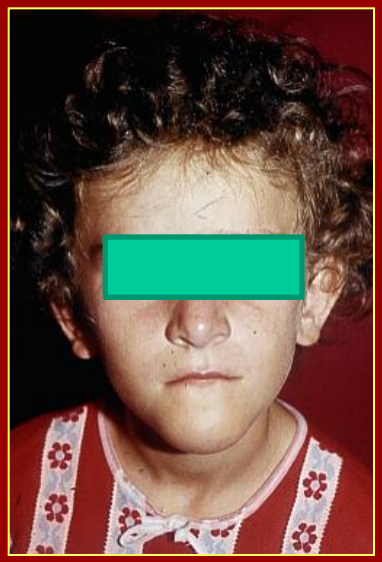
SYSTEMIC DISEASE WITH STOMATOLOGIC RELATION I. (clinical classification)

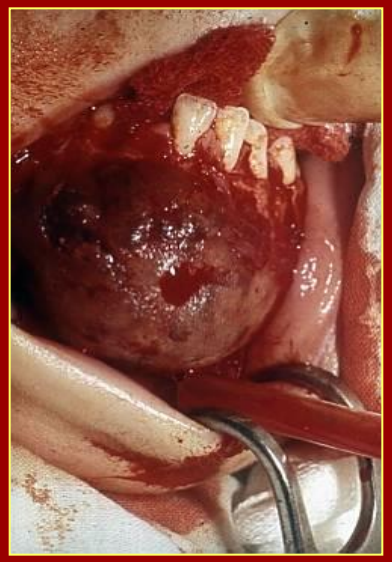
- **Bone system diseases**
  - **Exosotosis:** 1) Torus palatinus
    2) Torus mandibularis
    3)Multiplex exostosis
  - **Central cell granuloma**
  - **Fibrotic displasia (Cerubism → bilateral form)**
    - **Monostotic form (maxilla or mandible)**
    - **Polyostotic form (more seviere) Types:** 1) Jaffe (skin alteration cafe-au lait)
      2) Allbright sy (hypophysis-adrenal gland, ovarial problems)

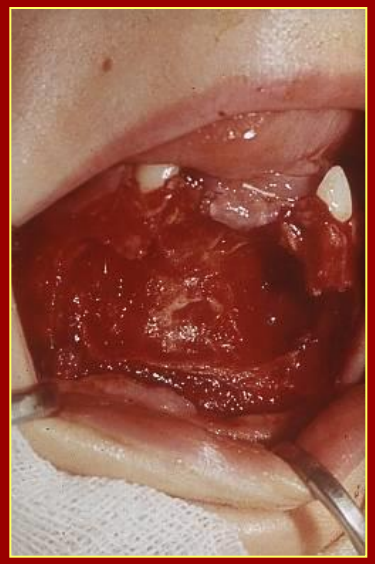
Torus palatinus

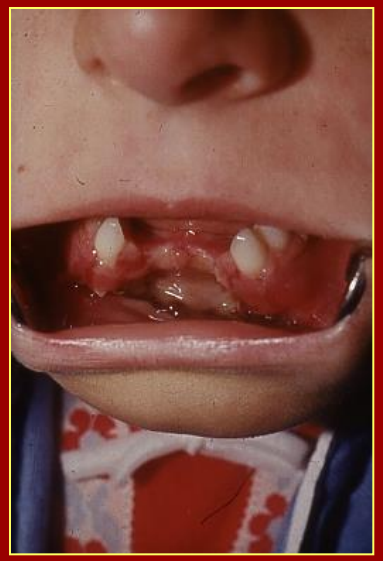


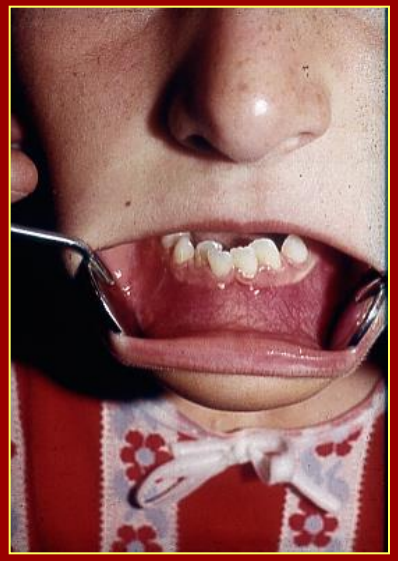
Osteoclastoma (Central cell granuloma)



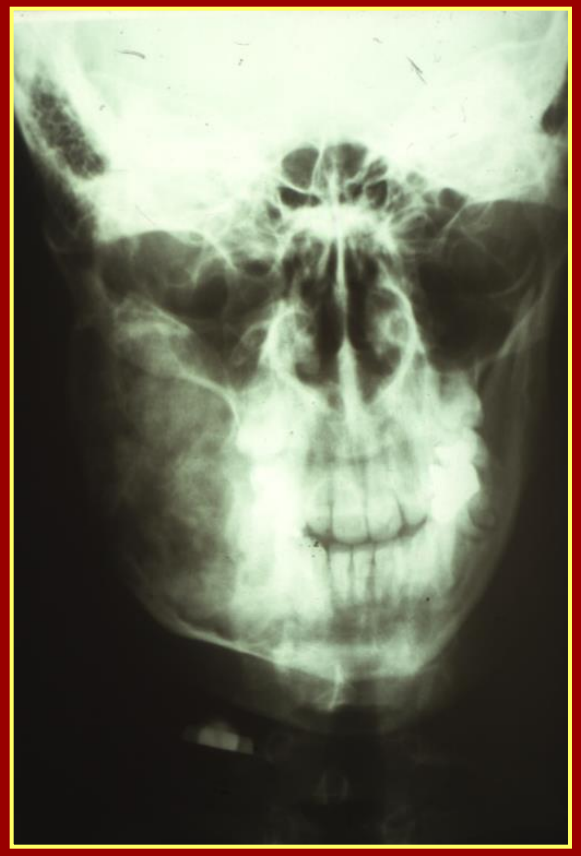


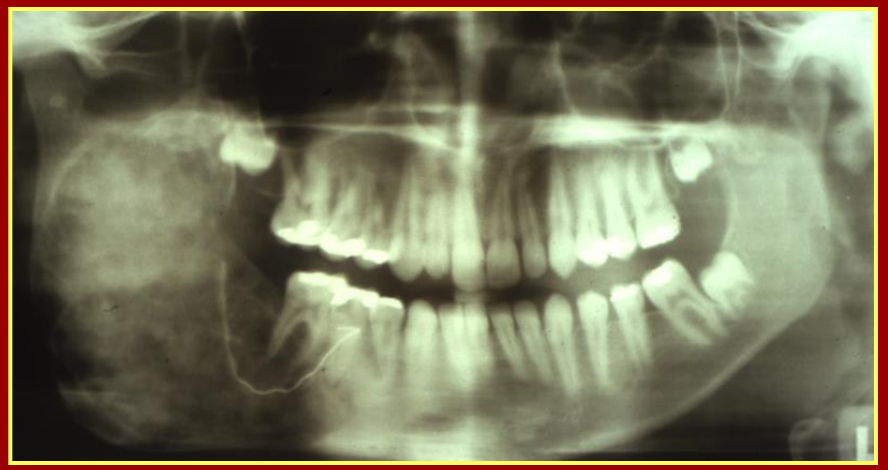


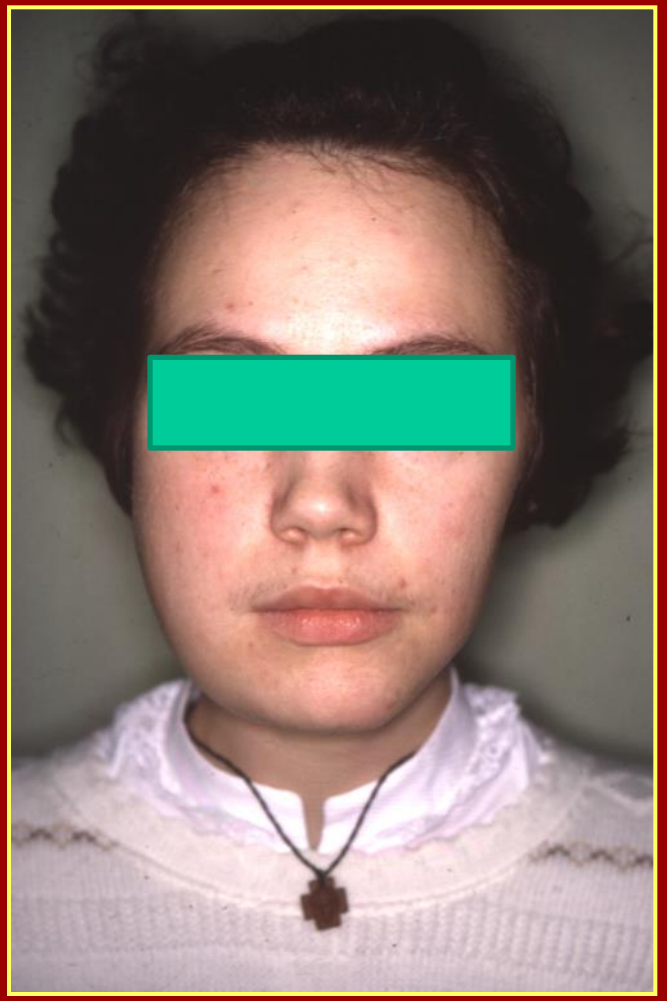


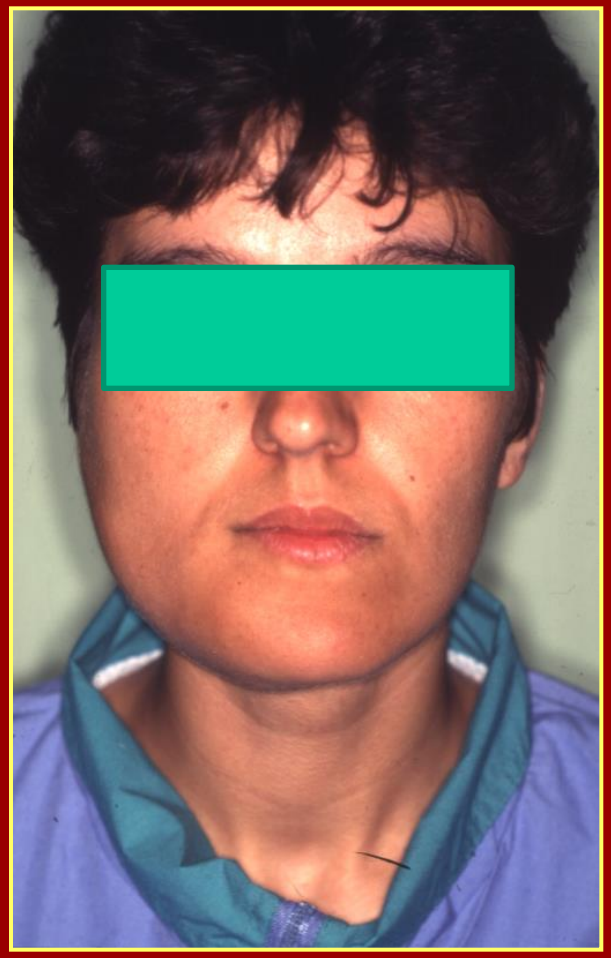


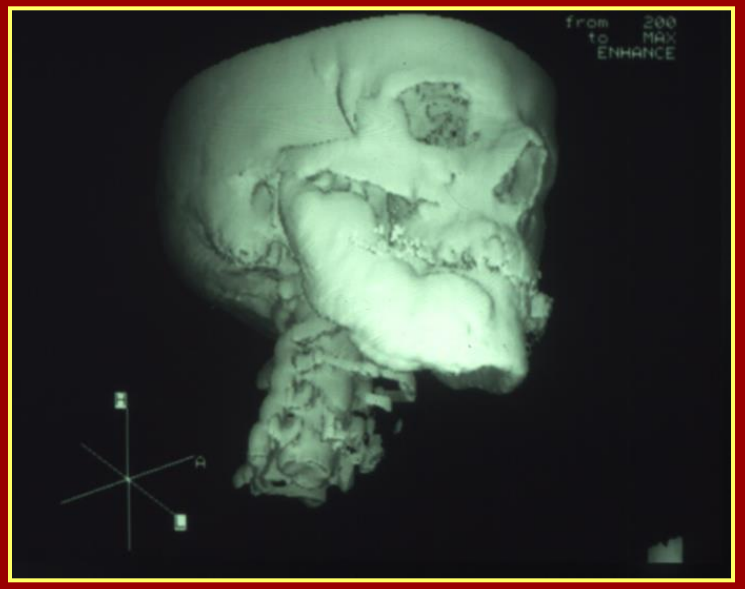
fibrotic dysplasia

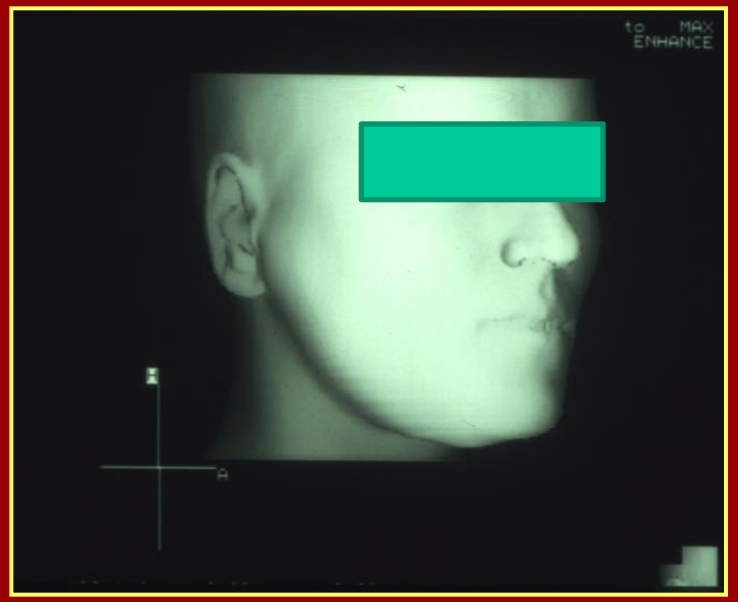




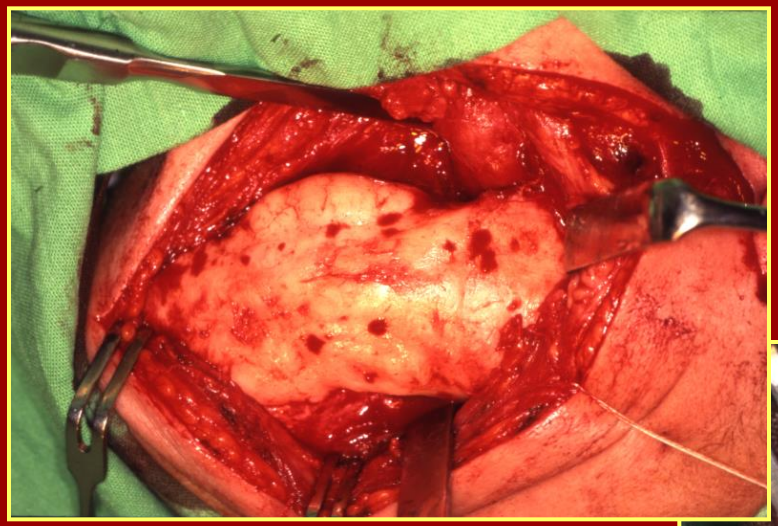


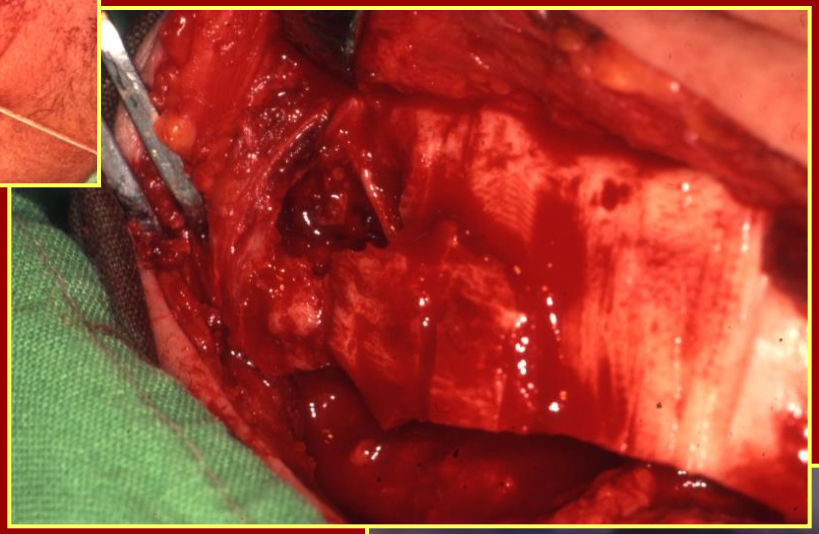


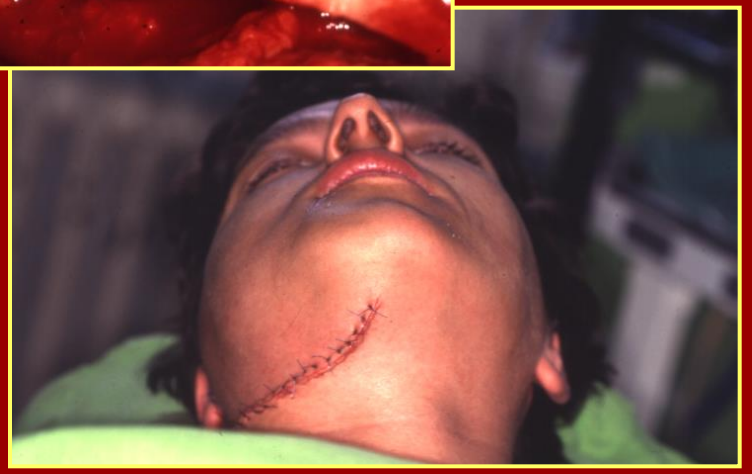




fibrotic dysplasia







fibrotic dysplasia

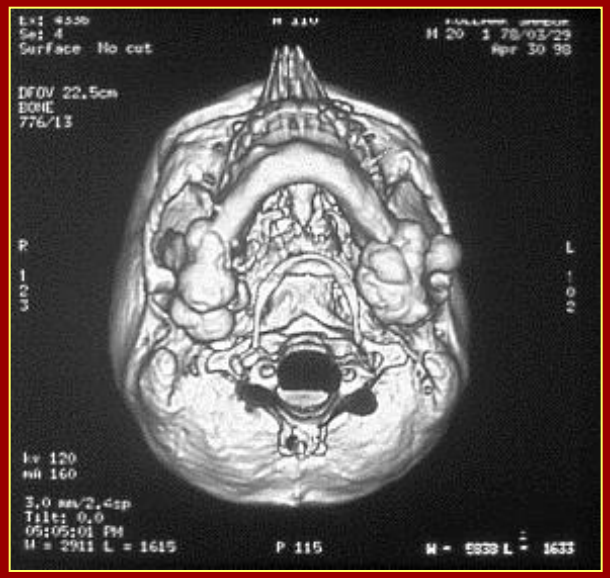
SYSTEMIC DISEASE WITH STOMATOLOGIC RELATION II. (clinical classification)

- Osteodystrophia deformans (Paget-disease)
- Osteogenesis imperfecta
- Osteopetrosis
  - Forms: 1) Malignant (recessive)
    2) Beningn (dominant)
- Osteoporosis
- Renal osteodystrophy
- Phantom bone disease (idiopathic bone resorption)

SYSTEMIC DISEASE WITH STOMATOLOGIC RELATION III: (clinical classification)

- **Gardner syndrome (I. form: Weiner-Gardner syndrome)**
  - **dominant herediter**
  - **colon polyposis**
  - **Atheromas**
  - **Skin fibroma**
  - **osteoma**

Gardner sy.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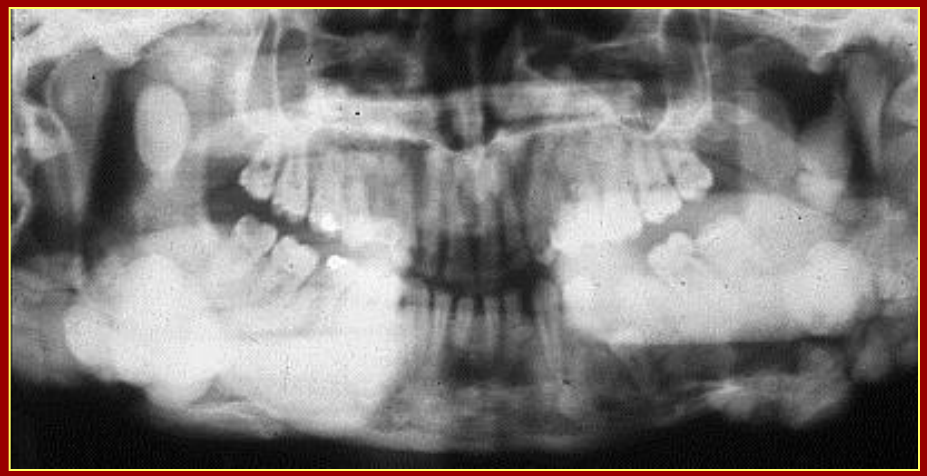

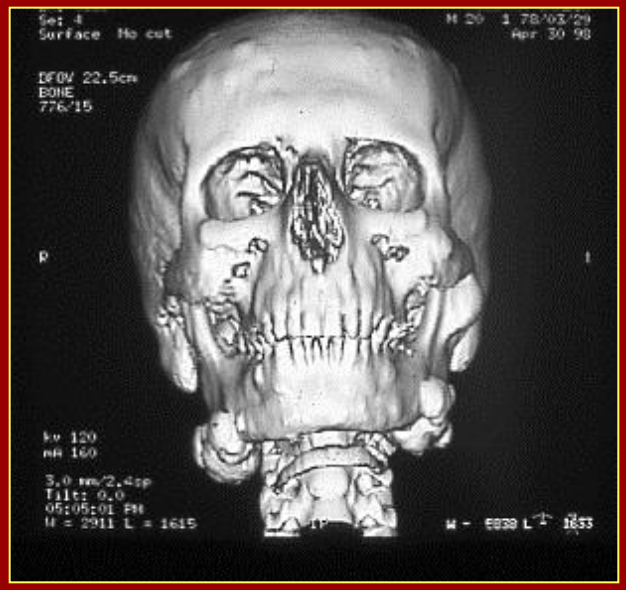
Surface No cut
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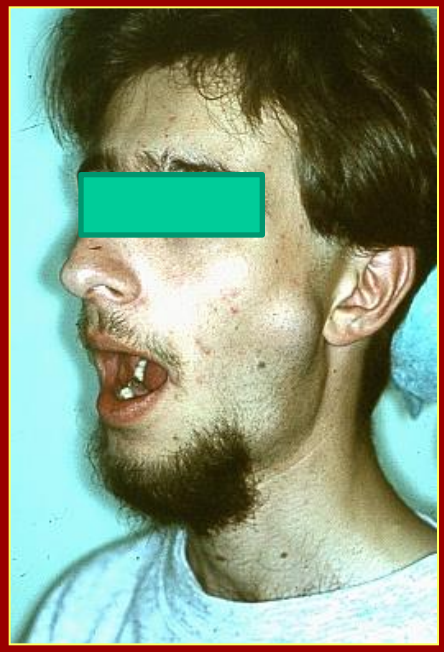


DEVELOPMENTAL DISTURBANCES

- More than 100 syndromes with stomatologic relevance
- Developmental disturbances with skull and or face morphological deformities. There are very often mental retardation, nerve system and hormonal disorders. Role of heredity is improved in most of the cases.
  - Facial hemiatrophy
  - Facial hemihypertrophy
  - Craniofacial microsomia
  - Apert sy.
  - Crouson sy.
  - Pierre-Robin sy.
  - Mandibulofacial dysostosis Treacher-Collins sy.), etc.

DEGENERATIVE DISEASES

- **GENERAL SYMPTOMS:**

  TMJ dysfunction, pain, joint edema, histiolgic alterations

  → Osteoarthrosis

  → Rheumatoid arthritis

  → Ankylosing spondilitis (Marie-Strümpell-spondilitis)

  → Psoriatic arthritis

  → Reiter syndrome (urethritis, conjunctivitis, arhtritis)

OVERVIEW OF ORAL MANIFESTATIONS OF DIFFERENT MULTIORGAN DISEASES

Gastrointestinal diseases

Hematologic disorders

Connective tissue diseases

Pulmonary disorders

Drug induced disorders

Infective diseases

Cutaneous diseases

GASTROINTESTINAL TRACT DISEASES

Crohn disease

Intraoral involvement in Crohn disease occurs in 8-29% of patients

Orofacial symptoms:

(1) diffuse labial, gingival, or mucosal swelling
(2) cobblestoning of the buccal mucosa
(3) aphthous ulcers
(4) angular cheilitis.

Ulcerative colitis

aphthous ulcerations or superficial hemorrhagic ulcers

Gastroesophageal reflux

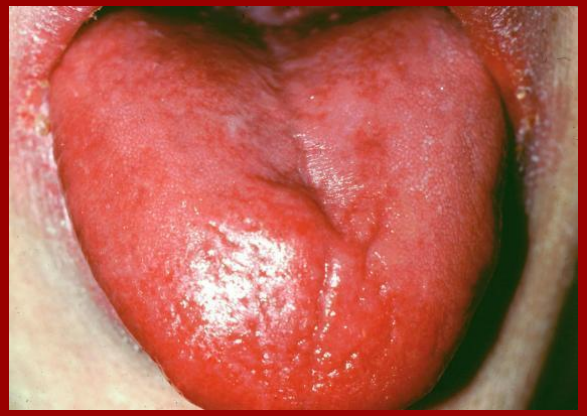
Erosion of the enamel

Chronic liver disease

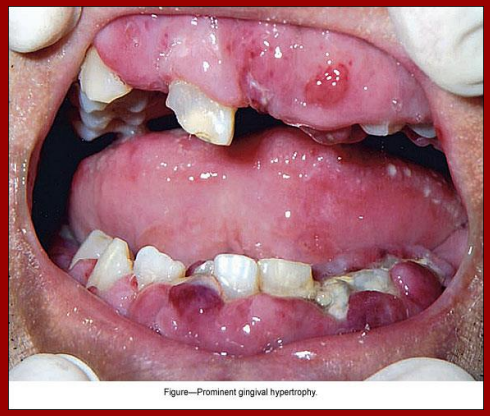
jaundice, petechiae or excessive gingival bleeding

Hematologic disorders

Anaemias



Leukemias



Figure—Prominent gingival hypertrophy.

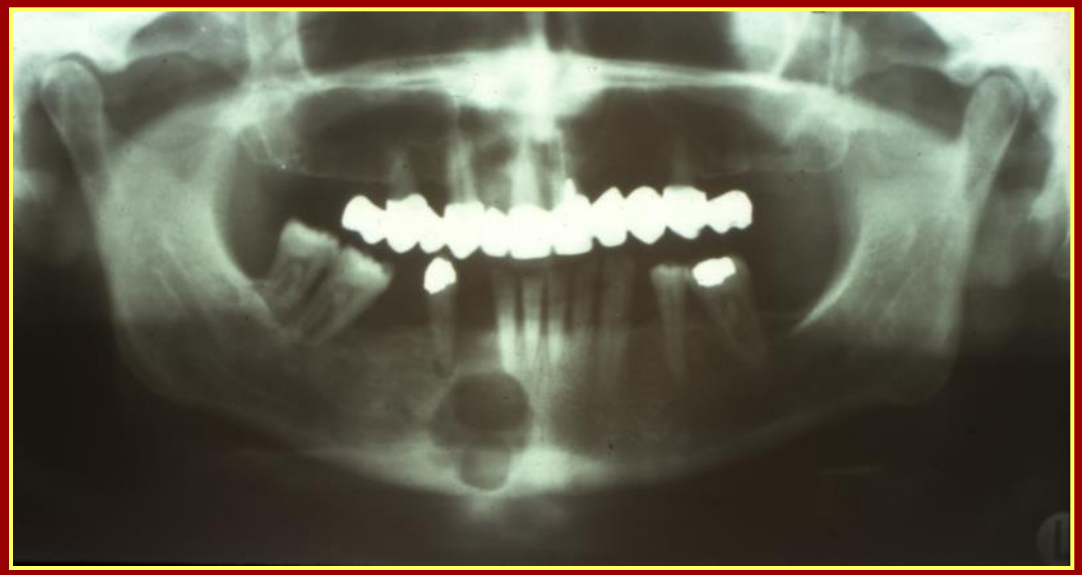
Histiocytosis X (malformation of lymphoreticular system – Non-Hodgkin lymphoma)

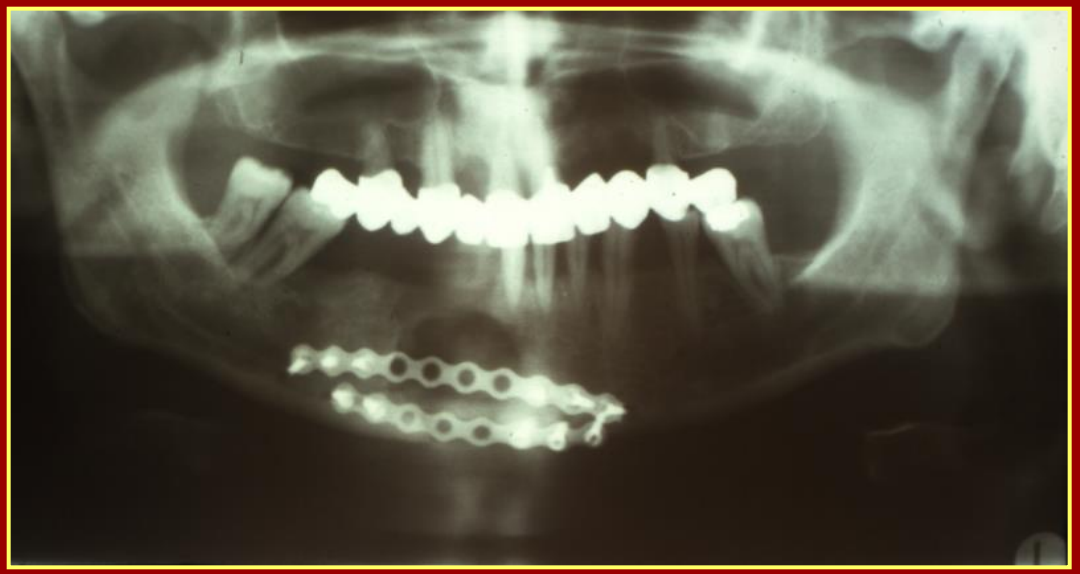
Groups: **1) Langerhans-cell 2) Non-Langerhans-cell 3) Malignant** Older form: **1) Eosinophil granuloma,**

2) Hand-Schüller-Christian (skull-defect, exophtalmus, diabetes insipidus)

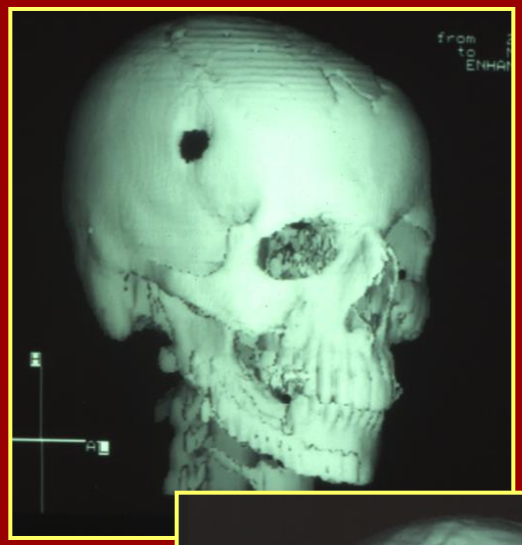
3) Abt-Lettere-Siwe diseases

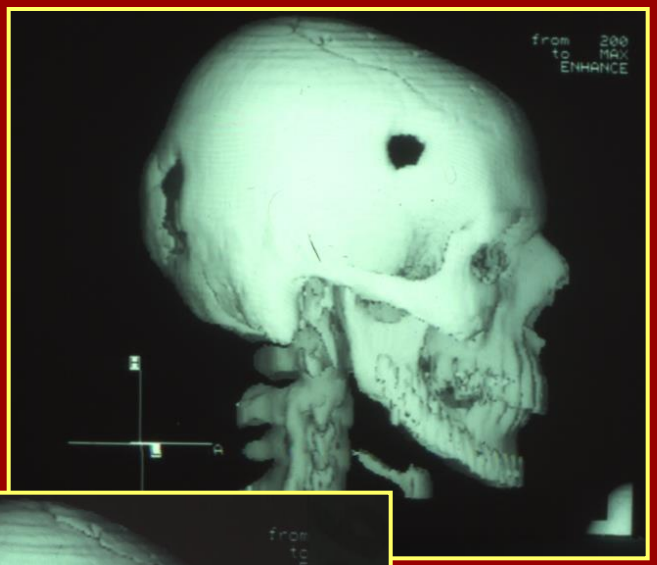
eosinophil granuloma

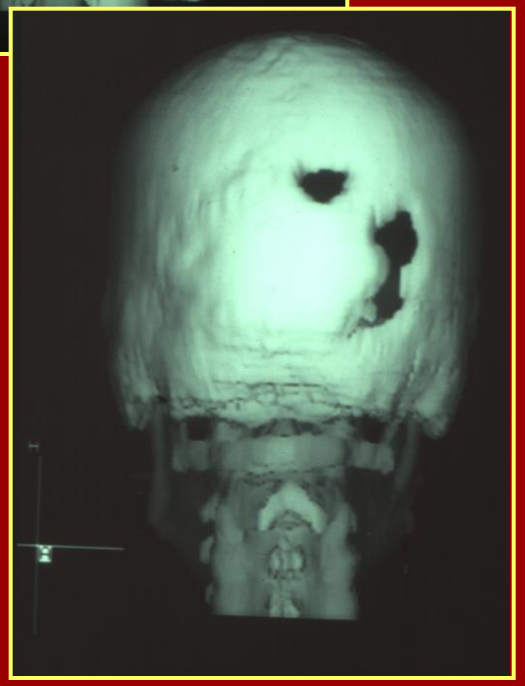


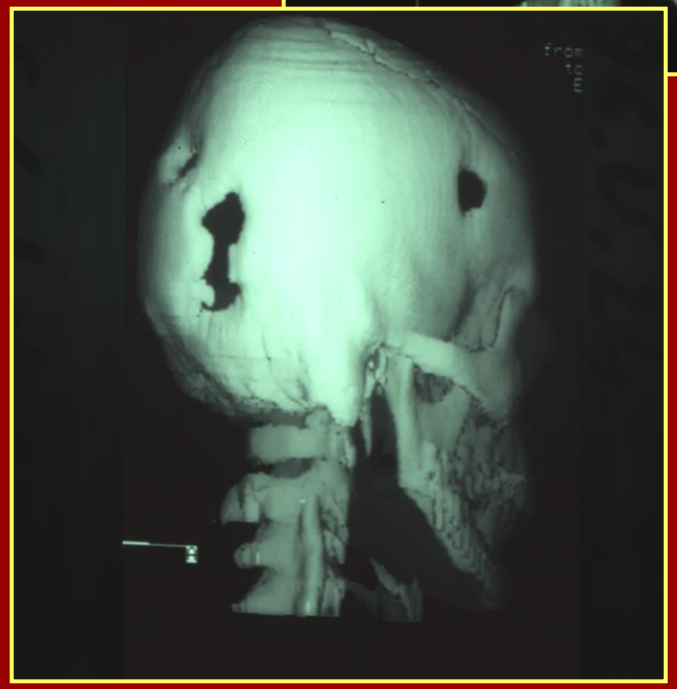


Hand-Schüller-Christian disease





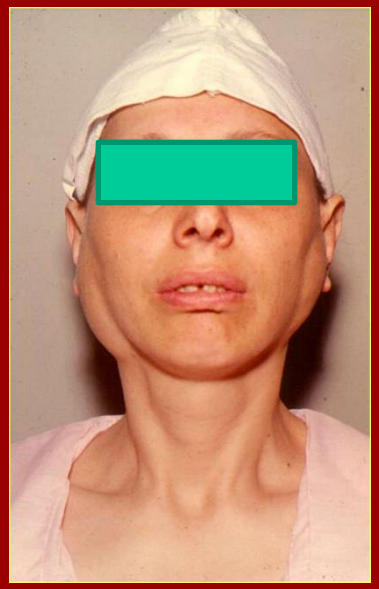




CONNECTIVE TISSUE DISORDERS

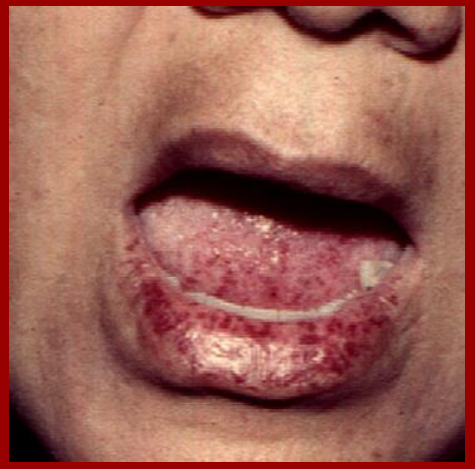
1. SALIVARY GLAND DISEASES

Sjögren syndrome



Heerfordt syndrome (epithelial cell granuloma)

inflammation of the eye
swelling of the parotid gland
chronic fever
some cases palsy of the facial nerve

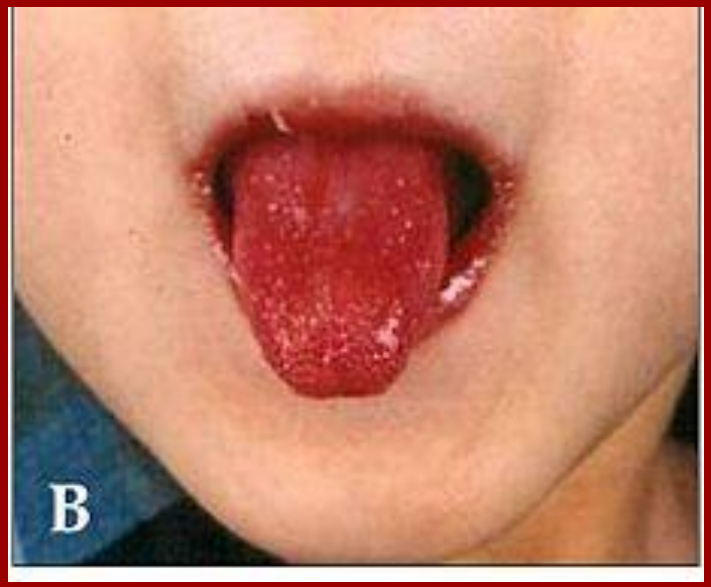


Randu-Osler-Weber-disease (herediter hemorrhagic teleangiectasy)

CONNECTIVE TISSUE DISORDERS

2. KAWASAKI DISEASE

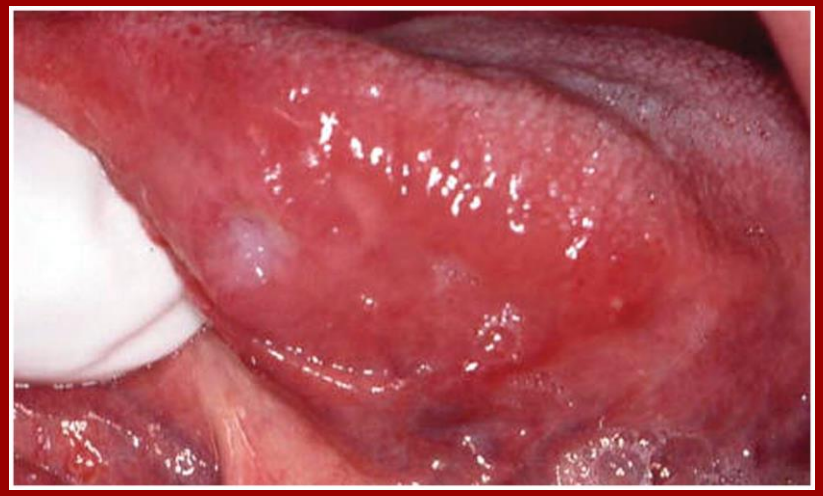
extremity edema, erythema,
bilateral conjunctival injection;
erythema and strawberry tongue
acute cervical adenopathy

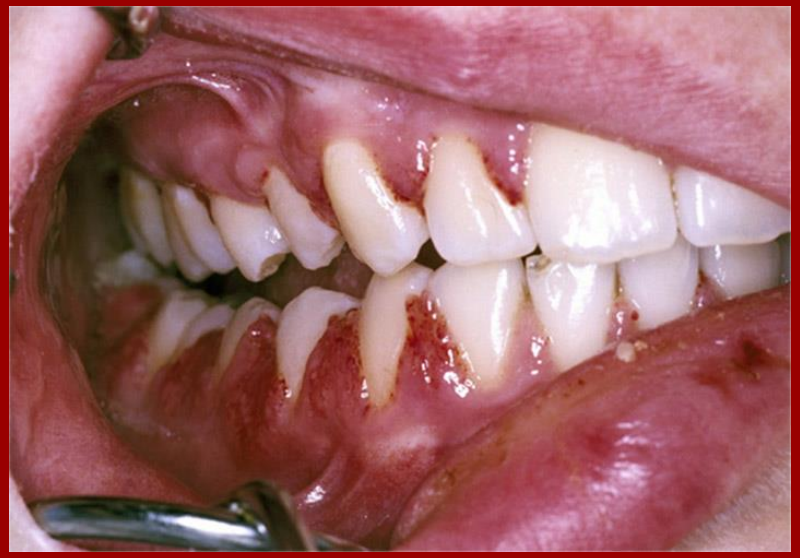


PULMONARY DISORDERS

Sarcoidosis
Wegener granulomatosis (necrotizing vasculitis)

Oral lesions include ulcerations and gingival enlargement





DRUG INDUCED DISORDERS

Aphthous stomatitis: (NSAIDs), nicorandil, ACE inhibitors

Dry mouth: diuretics, antidepressants

Lichen planus: ACE inhibitors, beta-blockers, NSAIDs, diuretics, hydroxychloroquine

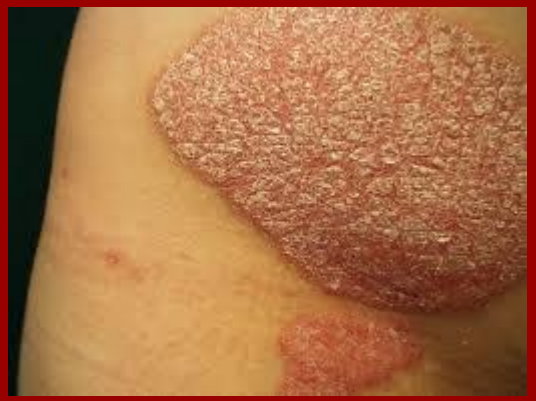
Gingival hyperplasia: phenytoin, calcium channel blockers, cyclosporine

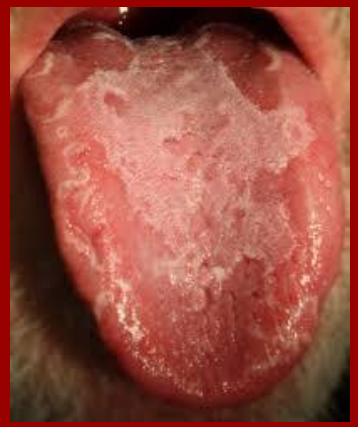
INFECTIVE DISEASES

Candidiasis
Human papillomavirus
Cytomegalovirus
HIV Disease
Syphilis
Tuberculosis

CUTANEOUS DISEASES

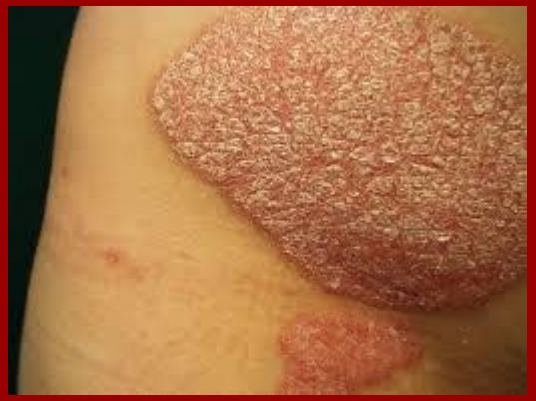
Psoriasis
Acanthosis

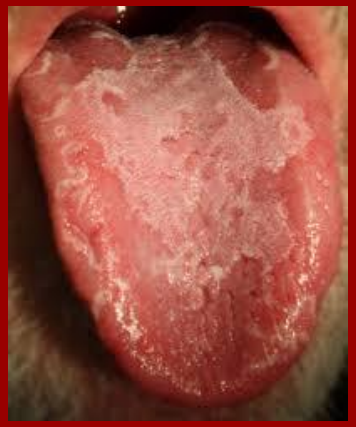




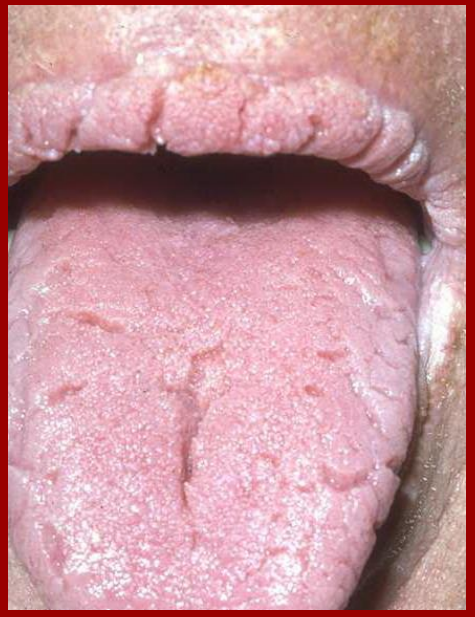
CUTANEOUS DISEASES

Psoriasis
Acanthosis





Acanthosis
cutaneous and oral papillomatosis



Thank You!