BENIGN TUMORS, PREMALIGNANT LESIONS AND CONDITIONS IN THE ORAL CAVITY

Dr. Tatiana Shkolnik MD., DMD

- Epithelial tumours
- Tumours of connective tissues
- Odontogenic tumours
- Tumours of jaws of non odontogenic origin

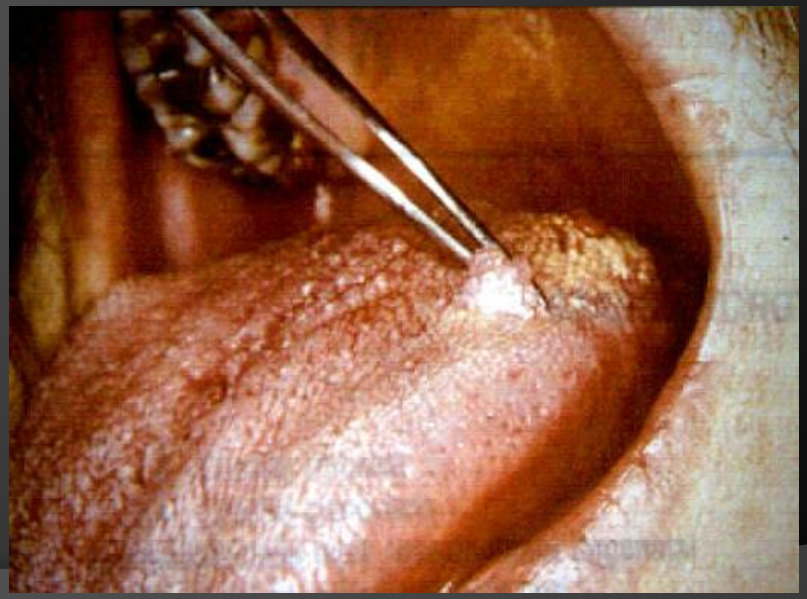
Epithelial tumours

- Papilloma

-cauliflower-like growth, pedunculated

- affects superficial epithelial layer

- malignant transformation is rare



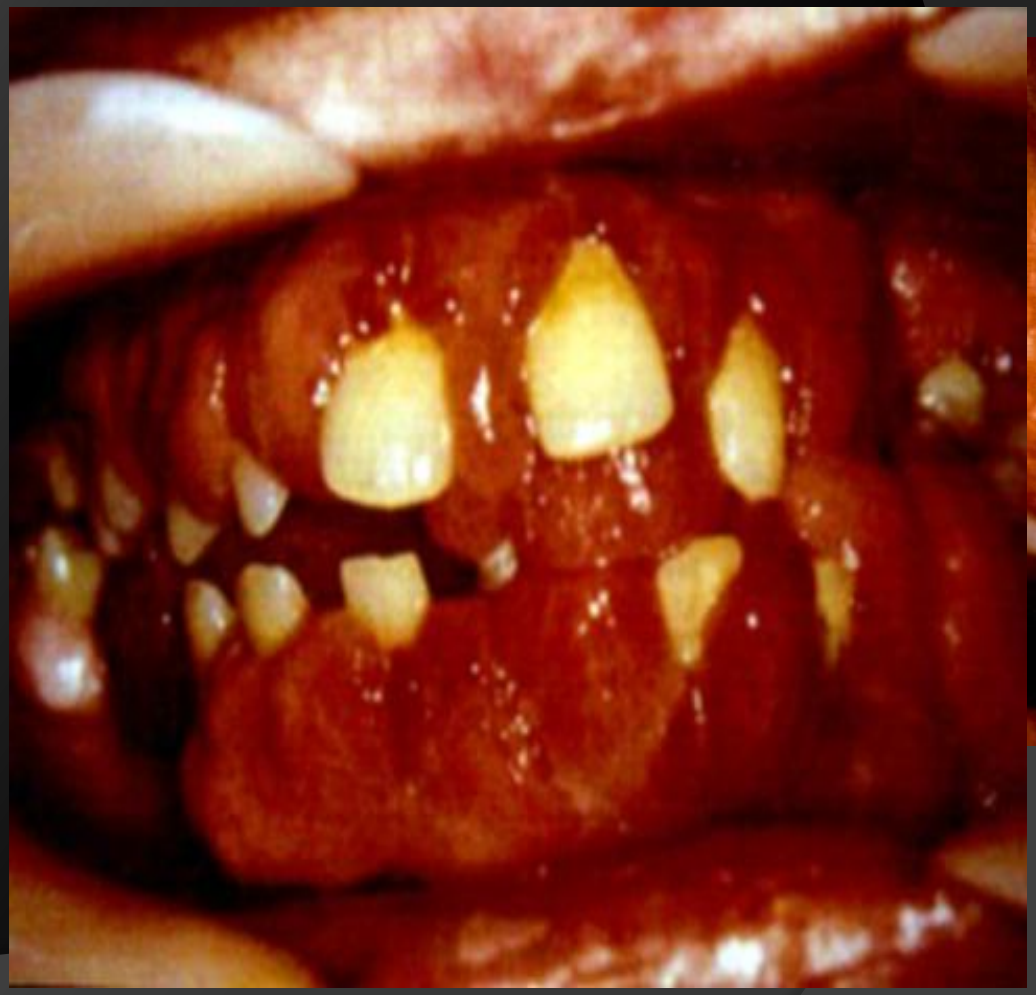
Tumors of connective tissues

- Fibroma

Mostly cosists of collagen fibers

- lipoma
- haemangioma

Gingival fibromatosis



Tumours of connective tissues

- fibroma
- Lipoma
  - Extends into the depth
  - Lipocytes, connective tissue capsule
- haemangioma

Tumours of connective tissues

- fibroma
- lipoma
- Haemangioma

- vascular tumors

- Groups: -beingn: capillary, venous, capillary, arteriovenous

-malignant: kaposi sarcoma, malignat endovascular papillary angioendothelioma, proliferative angioendothelioma, epithelioid hemangioepithelioma (borderline)

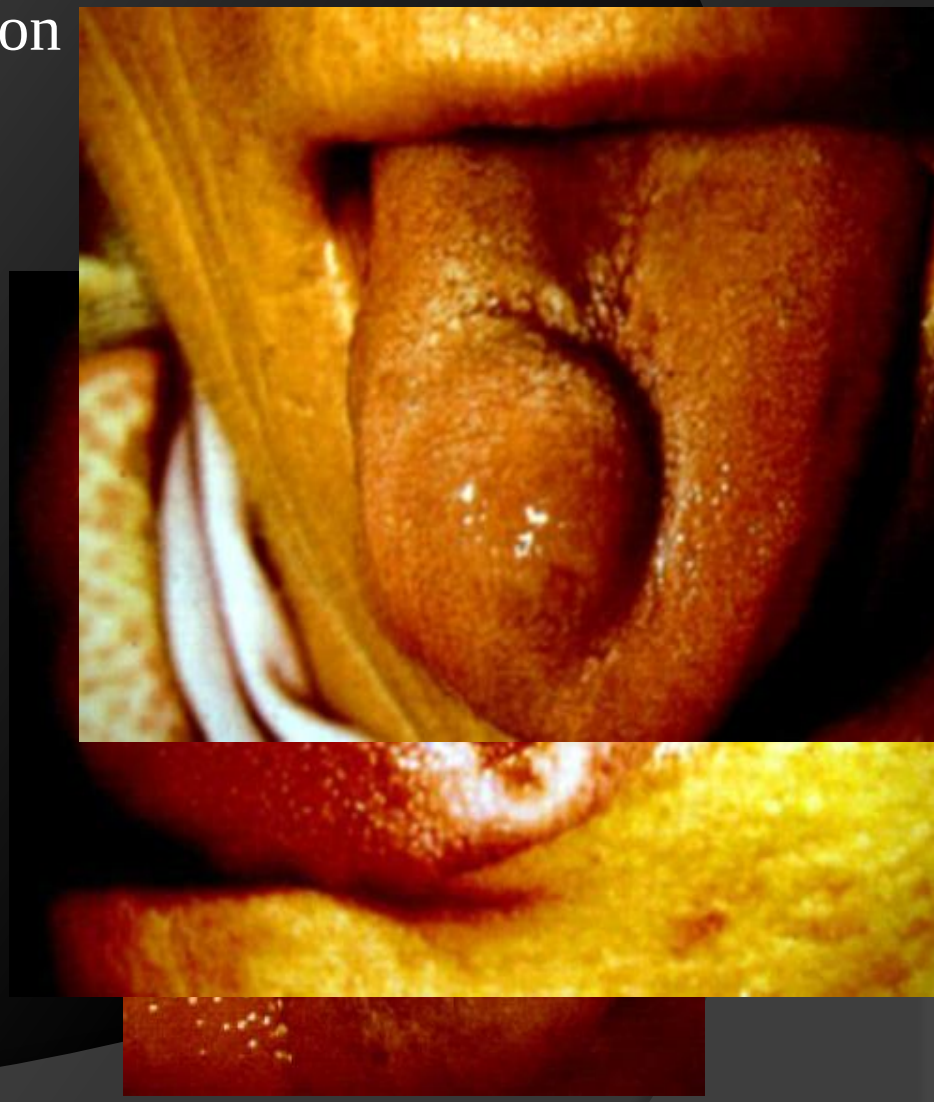
Tumours of connective tissues

- Lymphangioma (sclerotization is
- not effective, sensitive to irradiation
- Myxoma (rare, hypocelluar,
- no mitotic activity, has stroma
- Tumors of muscle tissues:

  leiomyoma

  rhabdomyoma
- Tumors originated from the
- nerve tissues:

  neuroma, neurinoma



Epulis (peripheral giant cell reparative granuloma, parodontoma)

- Not a true tumor but tissue proliferation of reparative nature.
- Originates from periodontium or mucoperiosteum of the alveolar process
- Rare in places without tooth
- Occurs both jaws

Epulis (peripheral giant cell reparative granuloma, parodontoma)

- granulomatous epulis

-leukocytes, fibroblasts, vasculated.

- Always on gingiva next to the tooth

- fibrous epulis

- develops from the former

- mostly consists of the connective tissue,

maybe large in size

Epulis (peripheral giant cell reparative granuloma, parodontoma)

- Giant cell epulis

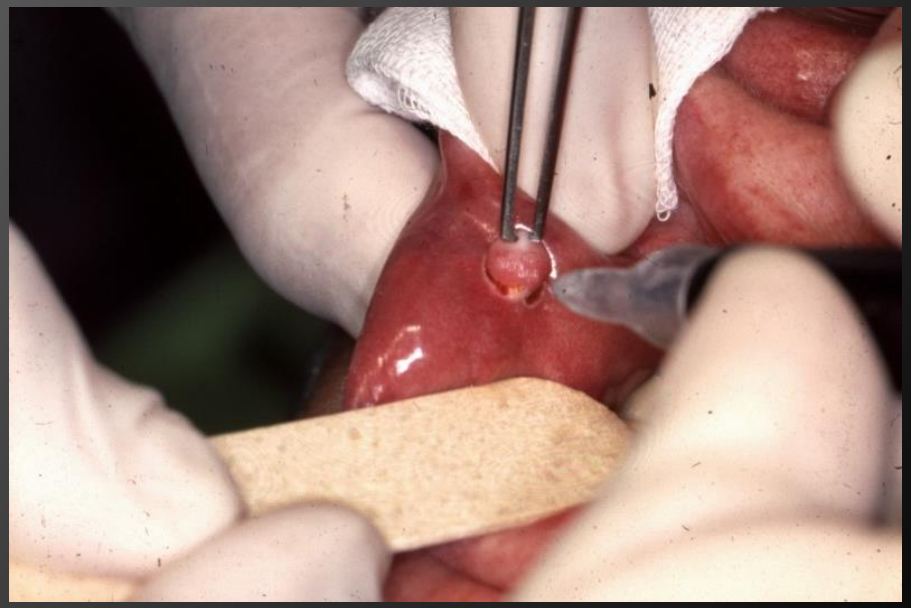
-large in size

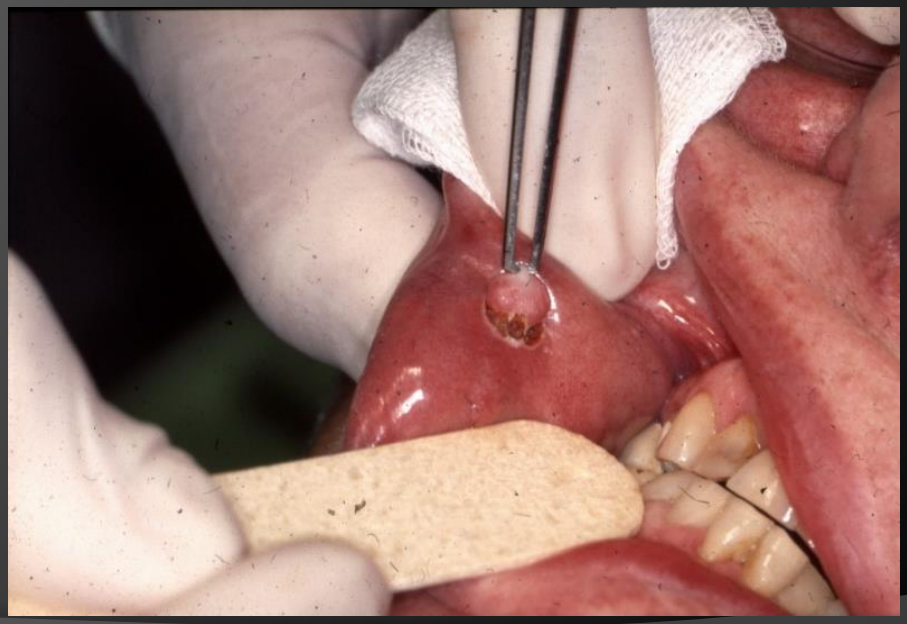
-consists of multinuclear giant cells, originated from capillaries, connective tissue

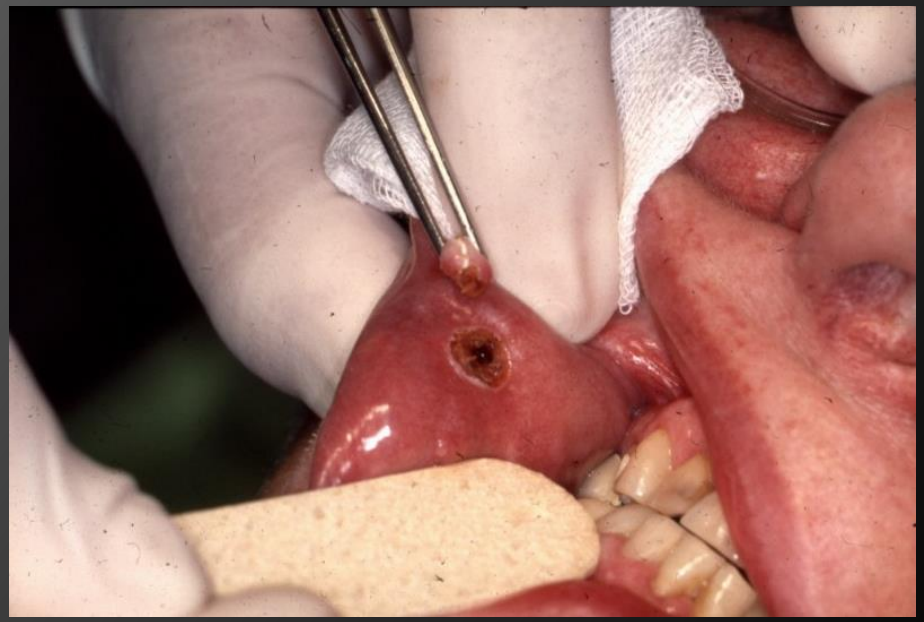
- when persists for long period of time, can destroy the underlying bone

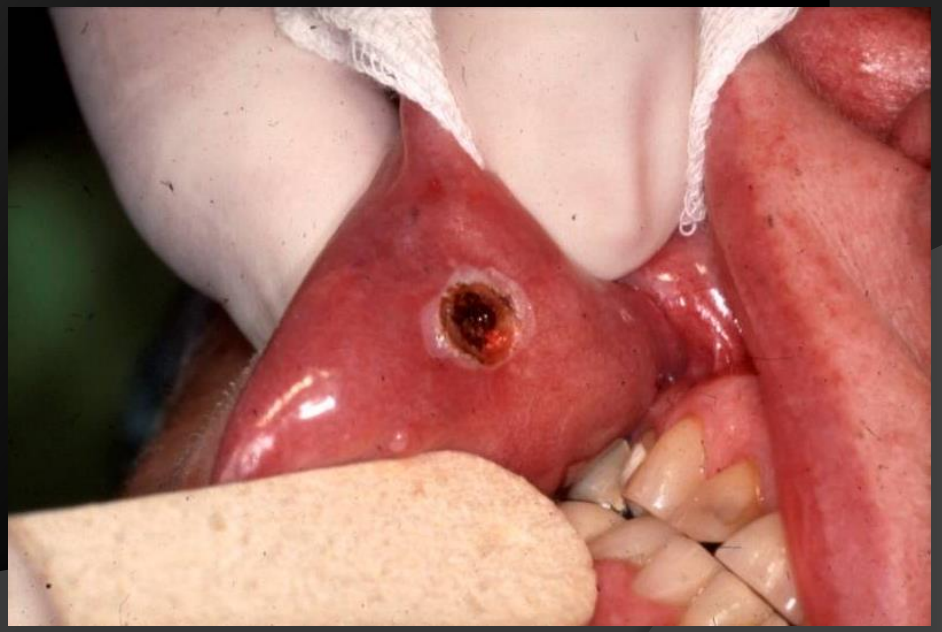
Therapy of benign tumours

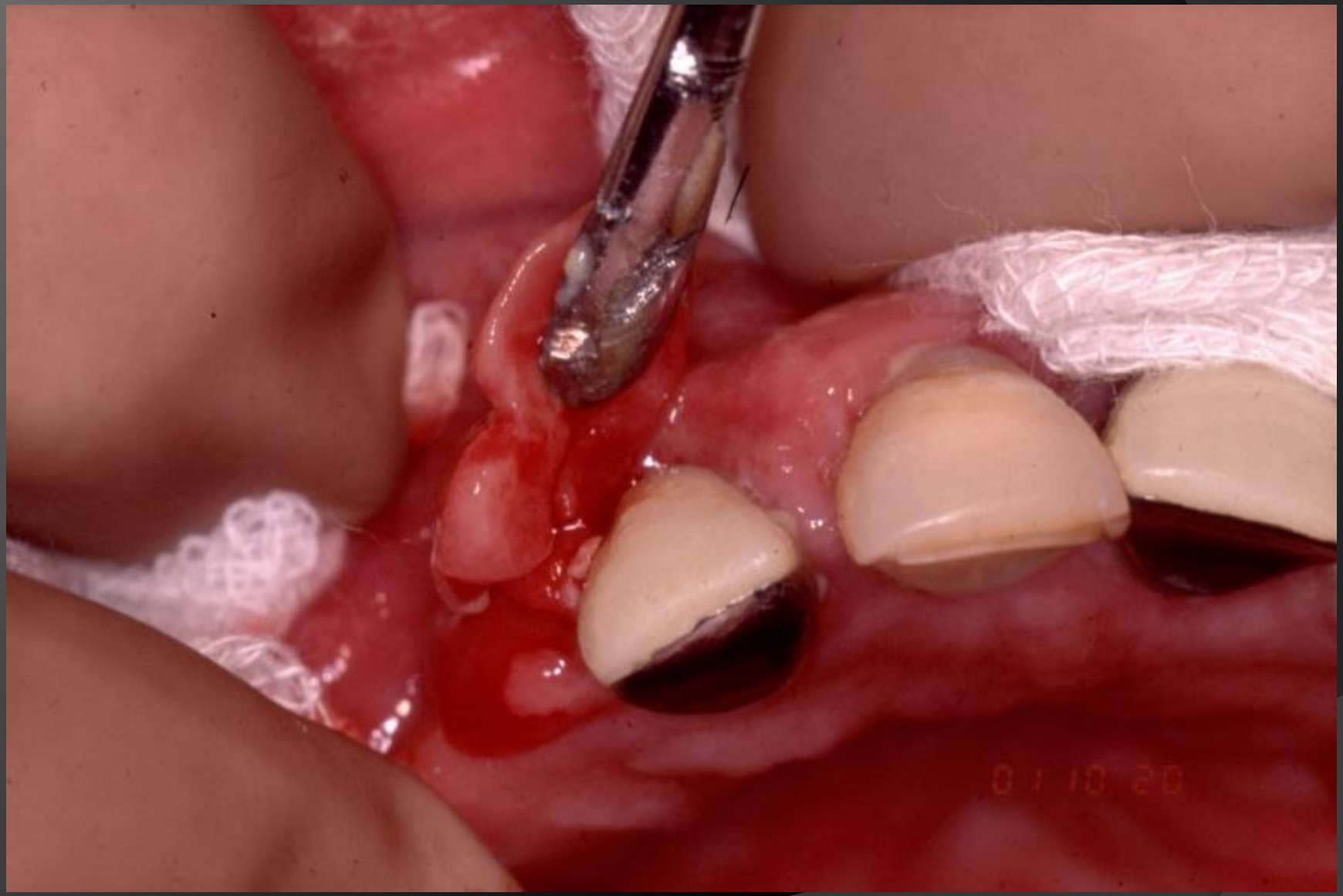
- Excision
- Embolisation
- Laser
- Electrocoagulation
- Cryotherapy
- Combinations











Therapy of benign tumours

- Excision
- Laser
- Electrocoagulation
- Cryotherapy
- Combinations



Odontogenic tumours

- ameloblastoma
- calcifying epithelial odontogenic tumour (Pindborg tumour)
- dentinoma
- cementoma
- odontoma

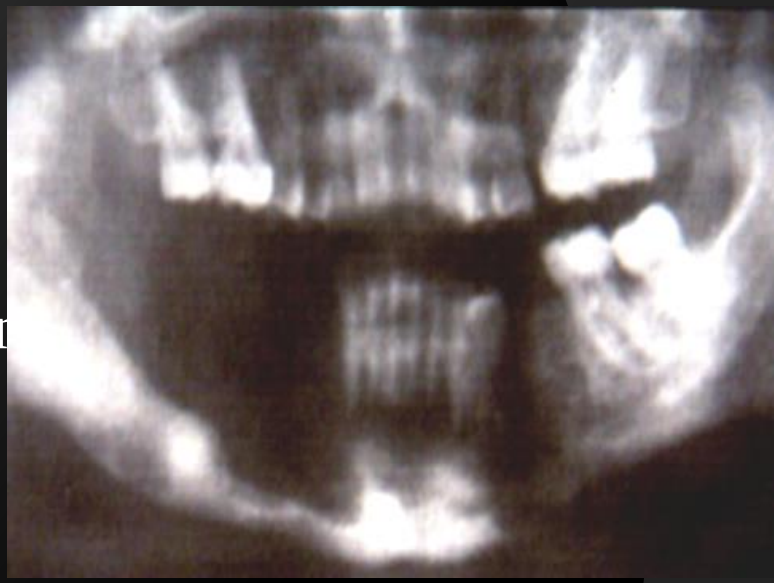
Odontogenic tumours

- Ameloblastoma

- Formed from remnants of dental lamin
- Mostly in mandible
- Solid or cystic form
- Typical X-Ray picture
- Destroys surrounding bone and teeth by preesure

- 0,5% of malignant transformation

Radical treatment!



Odontogenic tumours

- ameloblastoma
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Odontogenic tumours

- ameloblastoma
- calcifying epithelial odontogenic tumour (Pindborg tumour)
- dentinoma
- cementoma
- Odontoma

- 3 types: - consists of rudimentary teeth (conglobate)

- consists of amorphous calcified sustance (complex)

- appears in the wall of the cyst (cystic)

Odontoma

Tumours of jaws, non odontogenic origin

- Central fibroma
- Chondroma (rare)
- Myxoma
  - Affects young people
  - Fast growth with destruction of bone
  - Radical extripation
- Osteoma

- painless, slowly growing

Tumours of jaws, non odontogenic origin

- exostosis
- enostosis
- palatal, mandibular to
- Central giant cell:
  - tumour
  - granuloma

Salivary gland tumours

- epithelial
  - Adenomas
- mesenchymal

Epithelial tumour

- pleomorphic adenoma (mixed tumour)

Adenolymphoma

- Whartin tumour (papillary cystadenolymphoma)

TUMOURS IN THE MAXILLARY SINUS

Special features of therapy of the tumours in the maxillary sinus

- Prime importance: the localisation
  - Alveolar process and palate
  - Facial wall
  - Orbital base
  - Posterior wall
  - Masticatory muscles

Premalignant lesions and conditions in the oral cavity

- Oral cavity cancer accounts for approximately 3% of all malignancies and is a significant worldwide health problem.
- Majority are SCC (5-year survival rate only about 50-60%)
- Many SCC arrive from premalignant lesions of oral cavity
- In order to prevent malignant transformation of these precursor lesions, multiple screening and detection techniques are available.
- The early detection of cancer is of critical importance because survival rates markedly improve when the oral lesion is identified at an early stage.[3]

- Despite the general accessibility of the oral cavity during physical examination, many malignancies are not diagnosed until late stages of disease.

Premalignant diseases

- Facultative
- Obligatory

Premalignant diseases

Lesions

- (is a morphologically altered tissue in which cancer is more likely to occur than in its normal counterpart tissue) These precancerous lesions include leukoplakia, erythroplakia, and the palatal lesions of reverse smokers.[21]

Premalignant diseases

Conditions

(general disease of the oral mucosa or generalised state of the patient associated with significantly increased risk of cancer)

The precancerous conditions include submucous fibrosis, lichen planus, epidermolysis bullosa, and discoid lupus erythematous.

Risk factors and pathophysiology

- Use of tobacco (risk of development of SCC is 5-9 times in smokers)
- Alcohol (3-9 times)
- Combined tobacco and alcohol use (risk increases 100 times)
- HPV (ongoing investigation)

-HPV type 16 and 18

- HPV DNA observed in 17.6% leukoplakia and 19.7% lichen oris

Despite the association between tobacco and alcohol and the development of persistent oral lesions, a definitive etiology is seldom identified in many of these lesions. In addition, the lack of distinctive histopathologic features in many of the potentially malignant disorders supports the multifactorial pathogenesis of these lesions.

Premalignant lesions

- Leukoplakia
- Erythroplakia (erythroplasia)

Premalignant conditions

- Lichen oris
- Intraoral: sideropenia, leukoplakia syphilitica, submucous fibrosis
- Lip: cheilitis actinica chronica, cheilitis glandularis, cornu cutaneum
- Extraoral: keratoacanthoma, keratoma senile, lentigo maligna, xeroderma pigmentosum, lupus erythematodus discoides

Leukoplakia

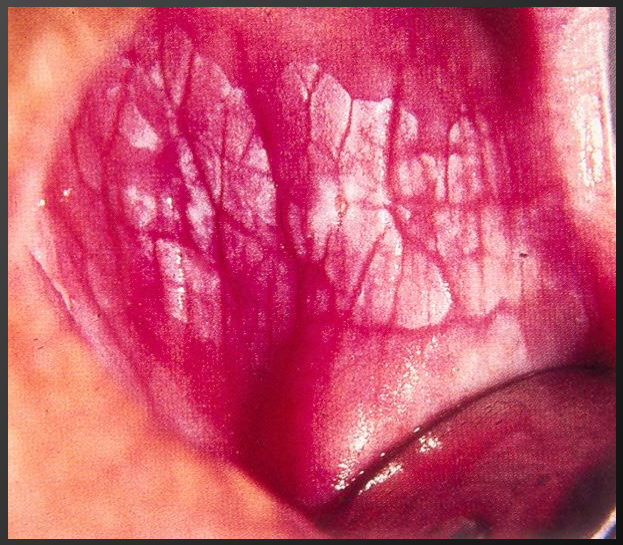
- **Term (Ernő, Schwimmer 1877),** WHO white patch or plaque that cannot be characterised as any other disease. The precise definition of leukoplakia continues to undergo refinement in an attempt to distinguish benign from premalignant lesions, and leukoplakia remains a clinical diagnosis of exclusion.

- Leukoplakia occurs most often in middle-aged and older men and arises most frequently on the buccal mucosa, alveolar mucosa, and lower lip.

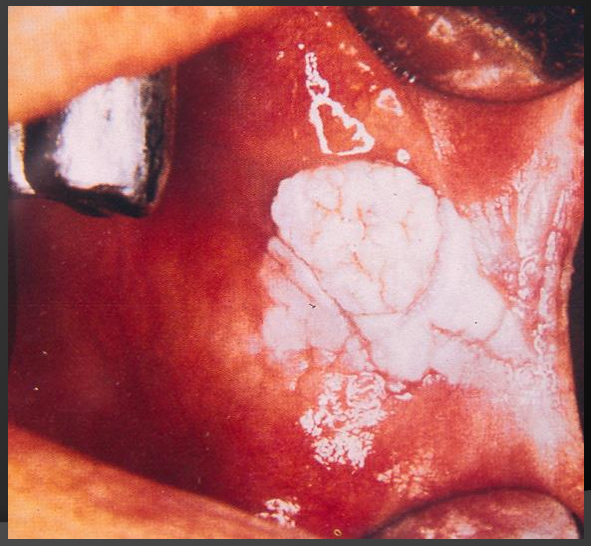
Leukoplakia

- Clinical types
  - Homogeneous
  - Nonhomogeneous
    - **verrucose**
    - **nodular**
    - **erythroleukoplakia**

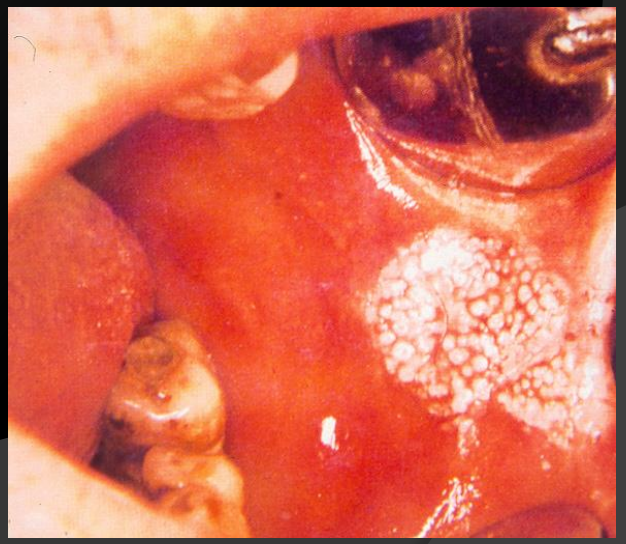
Leukoplakia simplex (homogen)



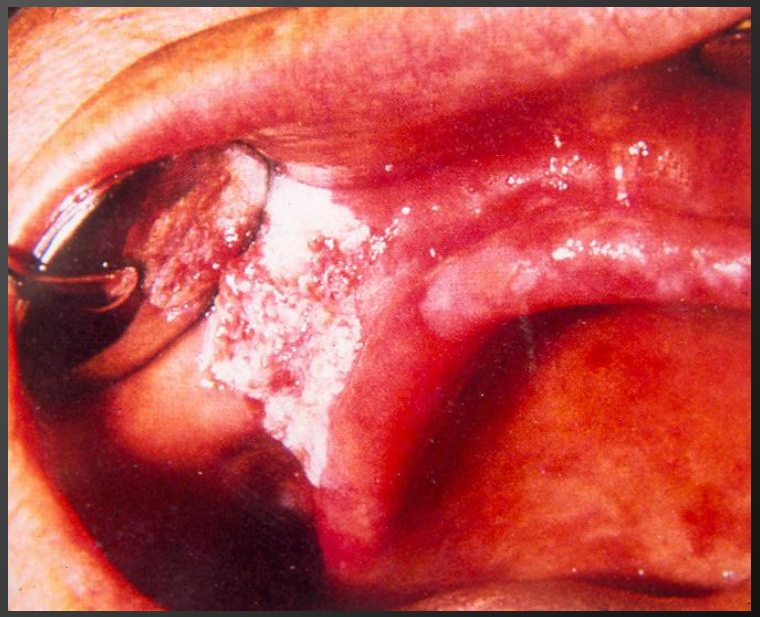
Leukoplakia verrucosa



Leukoplakia nodular



Leukoplakia erosiva (erythroleukoplakia, speckled lp.)



Leukoplakia, therapy

- Instructions:
  - Smoking cessation
  - Improvement of oral hygiene
  - Prohibition of alcohol, hot, spicy foods

- Medical treatment:
  - Vitamin A (oil, tablet)
  - If concommitant fungal infection: Nizoral, Pimafucin, Canesten (antifungal therapy)

Leukoplakia, therapy

- Intervention:
  - Elimination of different irritative agents (mechanical, galvanic ….)
  - Biopsy
  - (surgical; cryotherapy; laser; electrocoagulation)
  - Care, recall

Cryotherapy

Leukoplakia and malignancy

- Homogenous: No tendency
- Verrucous: 3-4%
- Nodular: 3-4%
- Erosive: 25-30%
- Average: 4-6%

healthy mucosa: 1

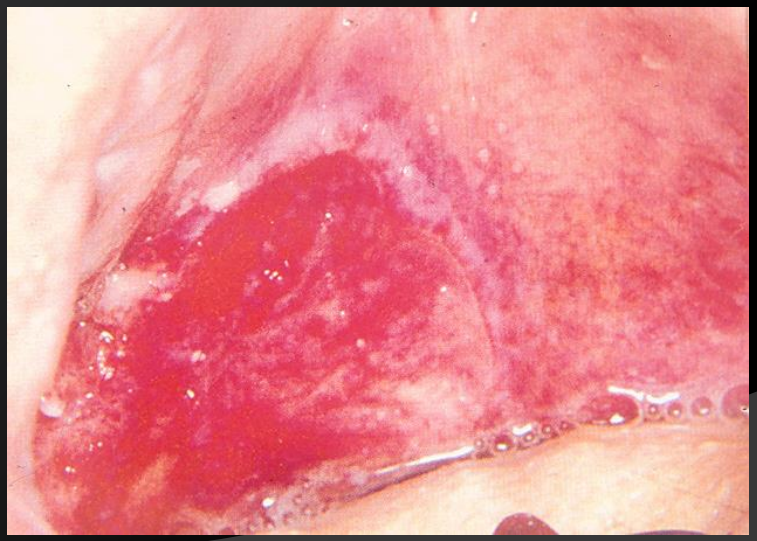
leukoplakia: 50-100* **(!)**

Leukoplakia, hystology

- Hyper(ortho)keratosis,
  epithelial dysplasia,
  acanthosis,
  lymphoid infiltration,
  cc. in situ,
  cc.

Erythroplakia

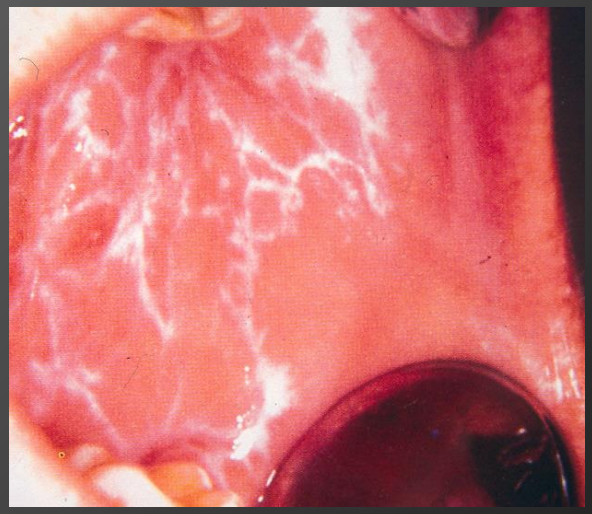
- Bright red, silky,
  slightly below the mucosal level
- Malignancy: 100% (in situ)
- Therapy: complex (as malignant tumours)



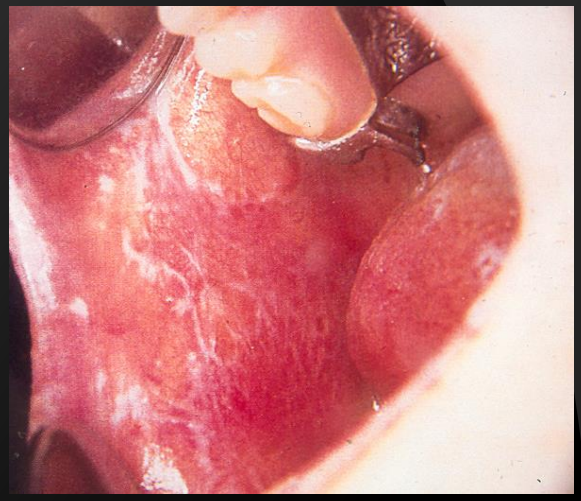
Lichen oris (lichen ruber planus)

- Chronic papulosquamotic skin- and/or mucosal disorder
- Etiology
- Clinical types:
  reticular, atrophic, annular, papular, vesicular, plaque, exulcerative

Lichen reticular (Wickham-stria)



Lichen atrophic (tendency for malignancy)



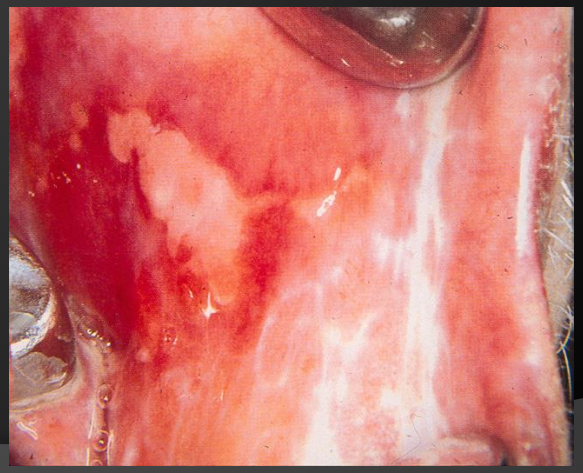
Lichen annular

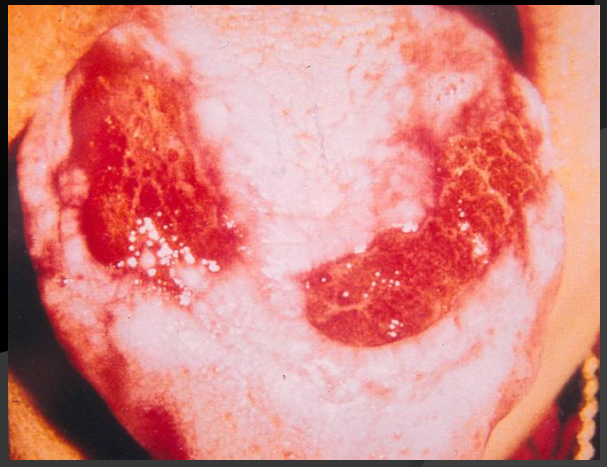
Lichen on the skin (~ 40% combined oral and dermatological manifestation)

Lichen papular - on the tongue

Plaque type lichen

Lichen erosive (high risk for malignancy)





Different types of oral lichen

Type	Typical symptoms
Reticular	Tiny, white papules reticular lines
Erosive (exulceratic)	Painful erosions, bordered by papules
Atrophicans	smooth, red, atrophic surface, bordered by papules, lines
Gingivitis desquamativa	atrophic and erosiv manifestation on the gingiva

Different types of oral lichen

Plaque	slurred, hypertrophic papules, leukopakiform plaques
Papularis	compact, mildly elevated papules
Anularis	annular papules
Bullate	Riven vesicules
Pigmented	Alteration of pigmentatied and white areas

Lichen, therapy

- Instructions
  - Prohibition of smoking alcohol, hot, spicy foods
  - Improvement of oral hygiene
- Drug treatment:
  - Vitamin A (oil, tablet)
  - Nizoral, Pimafucin
  - Panthenol (tabl., spray)
  - Decaris (immunmodulans)
  - Steroid (local, or systematic Prednisolon, Oxycort)
  - Susp. Anaesthetica
  - Anxiolytics

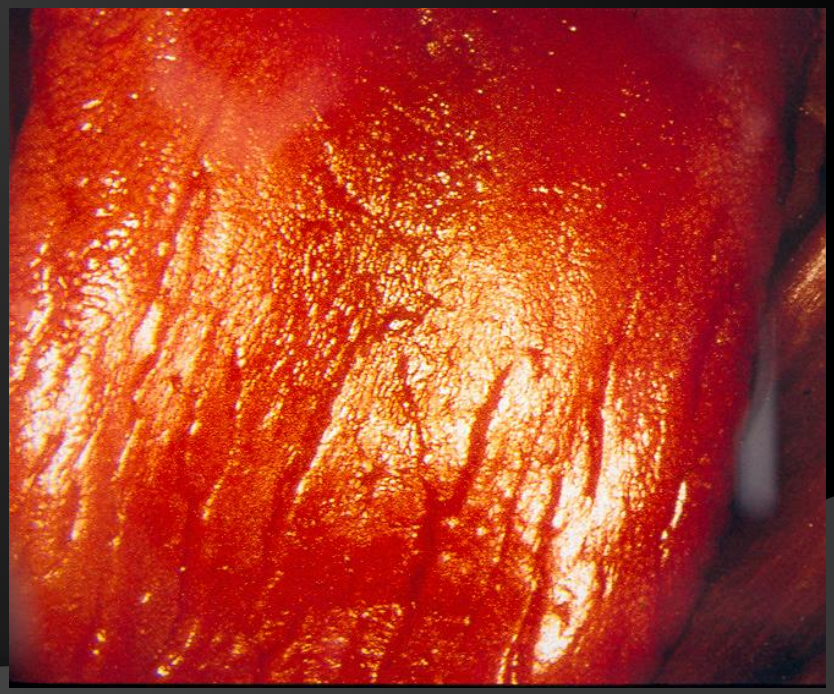
Lichen, therapy

- Intervention:
  - Elimination of different irritative agents (mechanical, galvanic ….)
  - Biopsy
  - Care, recall

Sideropenic anaemic glossitis

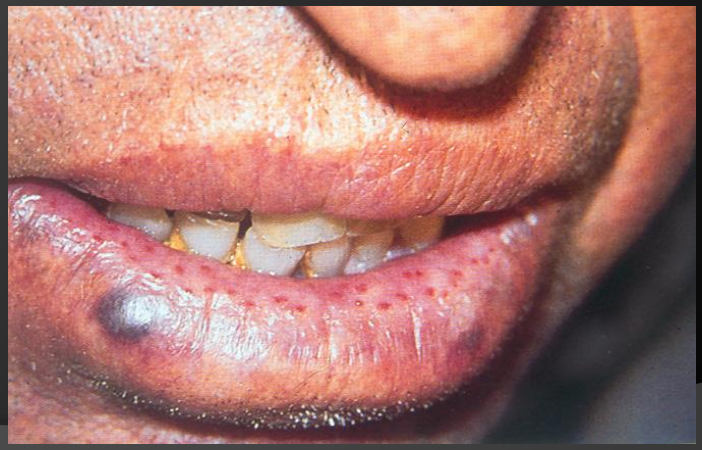
(Depapillated, shiny, smooth upper face of the tongue – predilected area of leukoplakia)

Iron deficiency + glossitis + dysphagia = Plummer-Vinson syndrome



Cheilitis actinica chronica

Cheilitis glandularis



Cornu cutaneum

Lupus erythematodes (mucosa of lip)

Lupus erythematodes

(skin of lip)

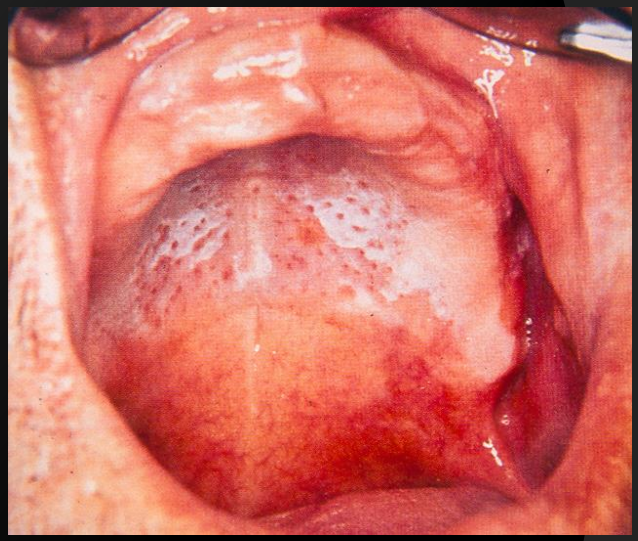
Keratoacanthoma (upper lip)

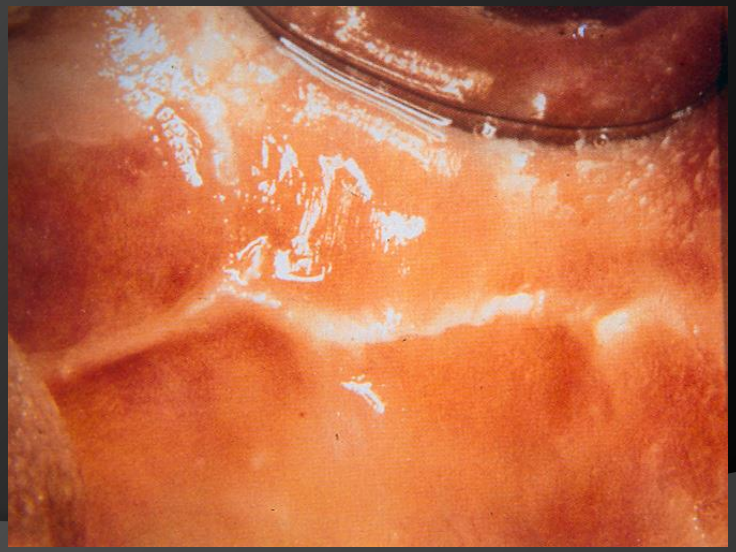
Keratoma senile (keratosis solaris)

Lentigo maligna

Other white lesions

- Leukokeratosis nicotina palati
- Leukoedema
- Linea alba





Role of screening (early diagnosis)

- Levels of prevention: primary
  secondary
  tertiary
- Malignant tumour-screening:

secondary prevention

Screening –Steps of examination

- 1. Medical history
- 2. Inspection
- 3. Palpation
- Steps 2-3:
- Differences of mucosal shade
- Tissue proliferation, enlargement of soft tissues
- Necrosis, dehiscence of soft tissues
- Lymph nodes

Relevant anatomy.

- The oral cavity extends from the vermilion border of the lips to the junction of the hard and soft palates in the roof of the mouth superiorly, and to the circumvallate papillae on the tongue. The oral cavity consists of the lips, commissures, lingual tonsil, gums, floor of mouth, hard palate, buccal mucosa, and retromolar trigone, and most of the tongue with the exception of the base.

Physical examination

- Extraoral
- Inspect the head and neck.
- Palpate cervical lymph nodes and salivary glands.
- Lip: Inspect and palpate inner and outer surfaces of the upper and lower lip.
- Buccal mucosa
- Inspect and palpate buccal mucosa and cheek.
- Inspect and palpate parotid duct to express saliva.
- Gingival and alveolar ridge: Inspect and palpate gingival and alveolar ridge on facial and lingual aspects.
- Tongue
- Inspect and palpate dorsal and ventral surfaces with accompanying retraction of the tongue with gauze.
- Inspect and palpate lateral borders from anterior to posterior with manual retraction.

- Floor of the mouth
- Inspect and palpate floor of the mouth.
- Inspect and palpate submandibular ducts to express saliva.

- Hard palate: Inspect and palpate.
- Soft palate and oropharynx: Depress the dorsal surface of the tongue and inspect soft palate and anterior oropharynx.
- Salivary glands: Palpate the parotid, submandibular, sublingual, and minor salivary glands. Ensure clear salivary flow.

Mucosal lesions in the oral cavity, scars, ulcerations, prolonged wound healing

- Tasks of doctor
- Tasks of the dentist
- Elimination of different irritative agents
- Improvement of oral hygiene
- Improvement, changes of alimentation
- Medical treatment
- Biopsy

THANK YOU FOR YOUR ATTENTION !