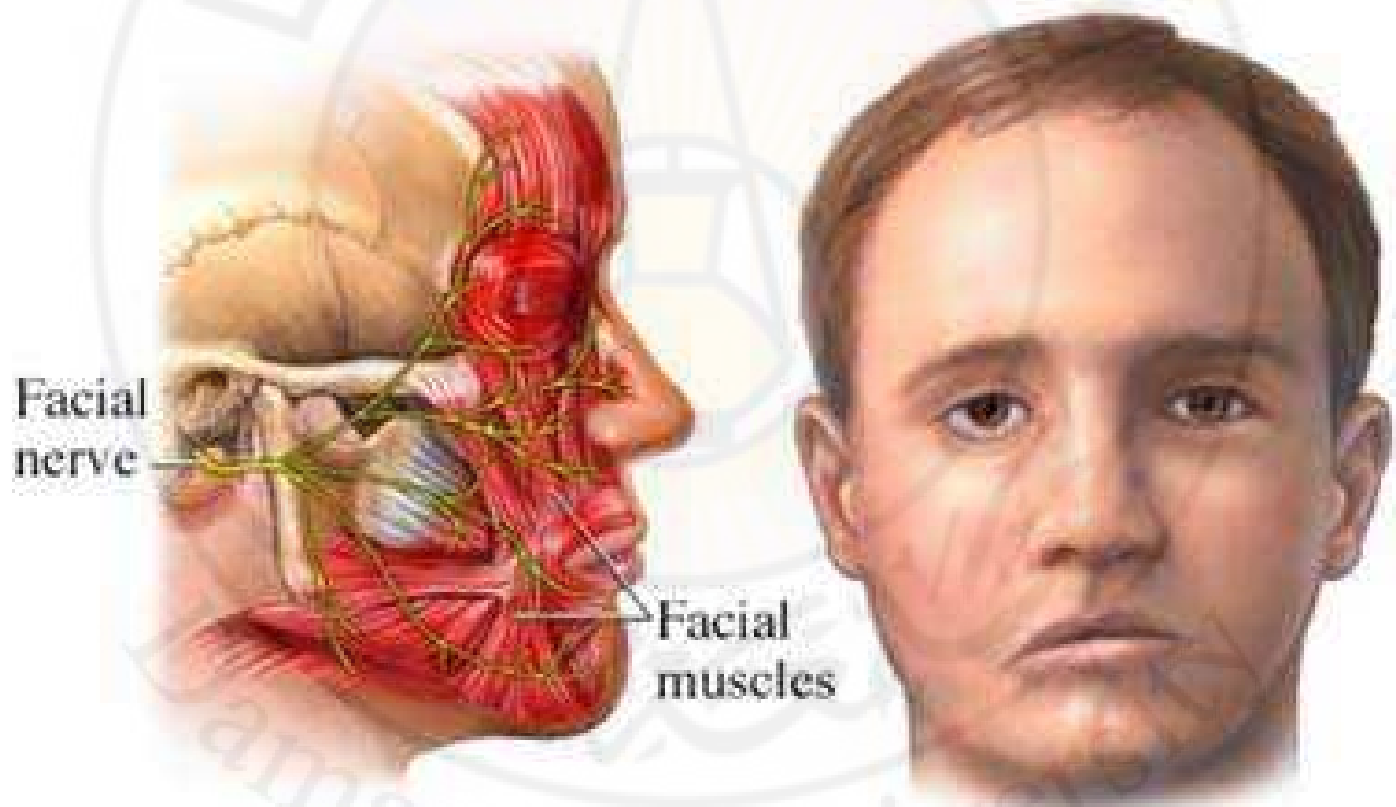
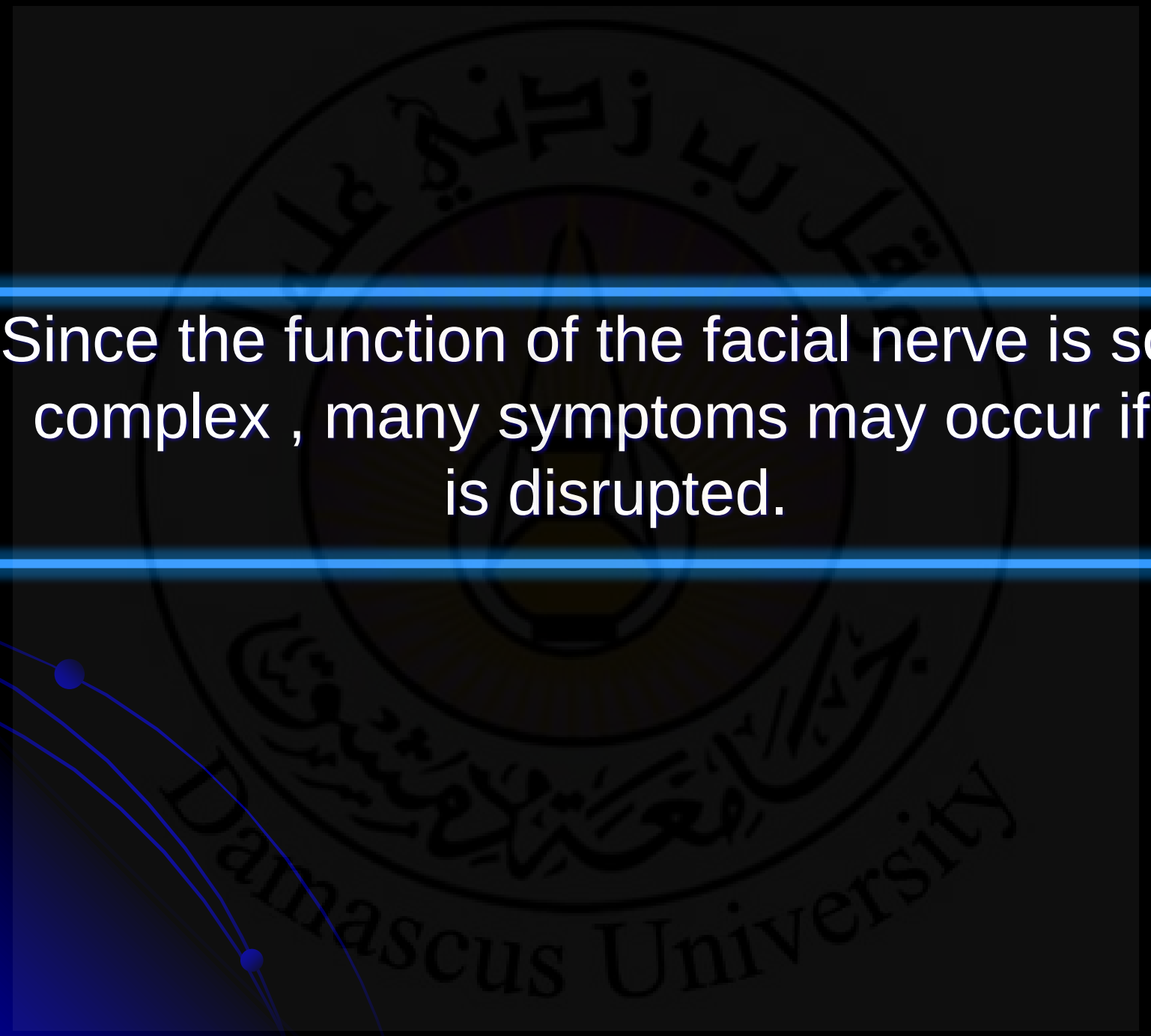


# Bell's Palsy

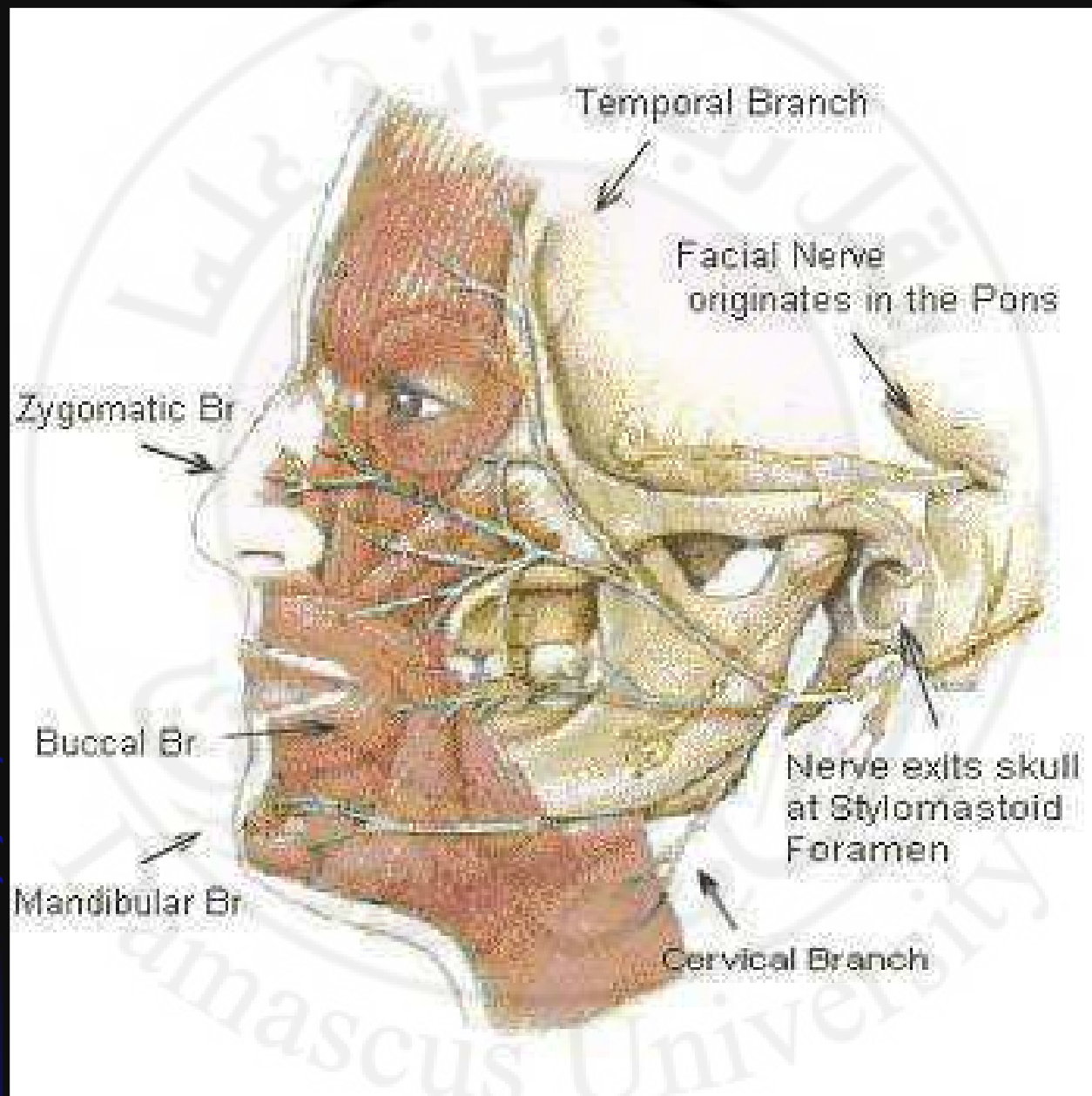


The background of the slide features a large, faint watermark of the Damascus University logo. The logo is circular, containing Arabic calligraphy and the English text "Damascus University" at the bottom. In the bottom-left corner, there are decorative blue curved lines with small circular dots.

Since the function of the facial nerve is so complex , many symptoms may occur if it is disrupted.

## Key Points

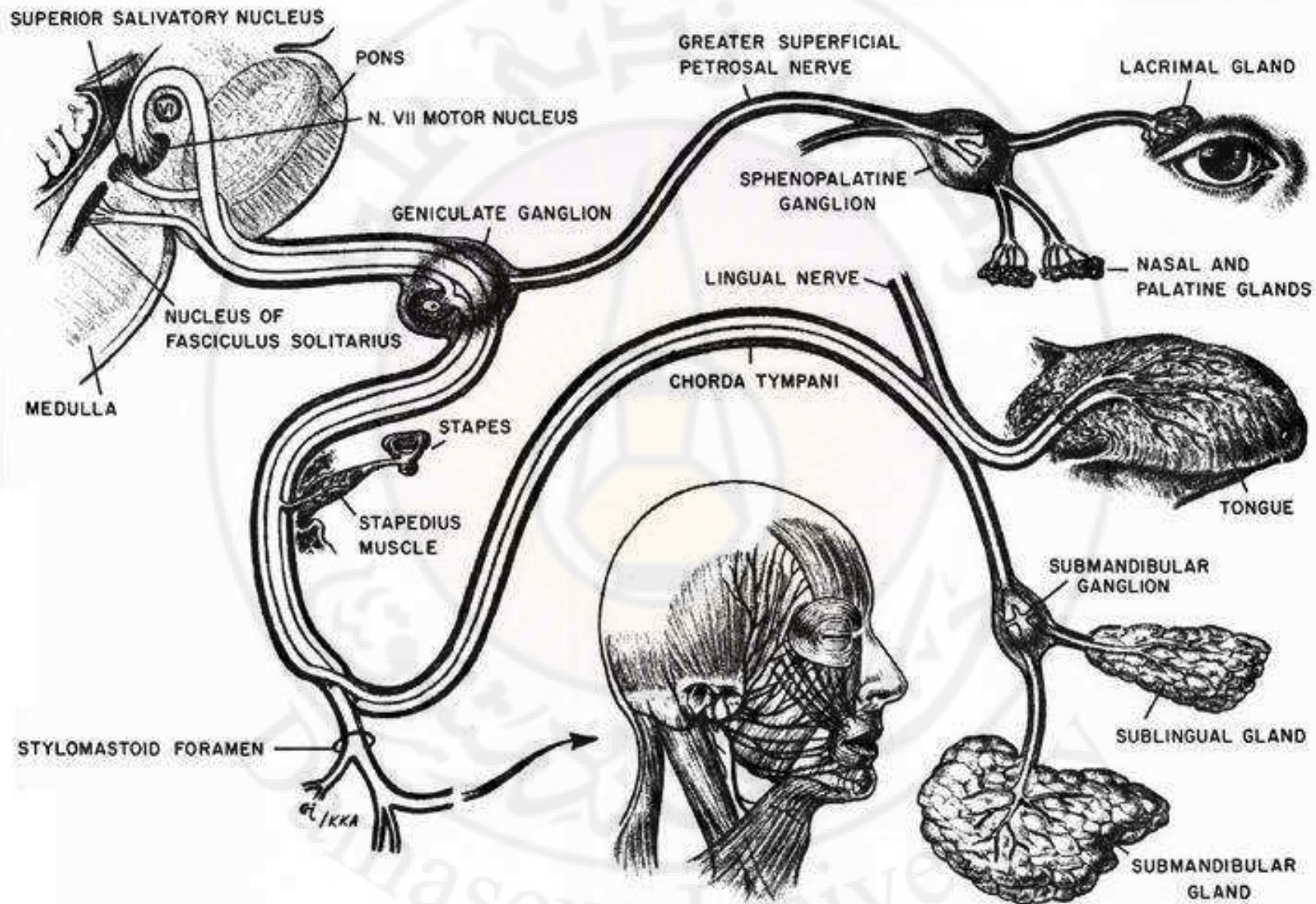
- **Bell`s palsy** is an acute face palsy caused by inflammation and oedema in the facial nerve canal (usually in the stylomastoid canal) causing demyelination of the facial nerve.
- Most cases are related to viral infections, mainly **herpes simplex virus**.
- Management is with **antivirals** & **cortico-steroids**.





The facial nerve carries:

- Motor nerve impulses to the face muscles, facial expression and the stapes in the middle ear.
- Secretomotor fibers to the lacrimal glands, and to the submandibular & sublingual salivary gland.
- Taste from the anterior tongue



# incidence

Bell`s palsy represents 50% of all facial palsies, but it is **rare** at possibly 10 cases per 100 000 population.

# Predisposing factors

- Pregnancy .
- Hypertension.
- Diabetes.
- Chronic granulomatous disorders( orofacial granulomatosis).
- Lymphoma.

# Etiology & pathogenesis

- 1- Usually associated with Herpes simplex virus **HSV**.
- 2- Rarely associated with:
  - Varicella-zoster virus
  - Epstein-barr virus
  - Cytomegalovirus
  - human herpesvirus-6



# Etiology & pathogenesis

- 3- retrovirus ( HIV).
- 4- bacterium (otitis media).
- 5- idiopathic conditions.
- 6- disseminated sclerosis.
- 7- kawasaki disease.
- 8- sarcoidosis.
- 9- Melkersson-Rosenthal syndrome.

# Clinical features

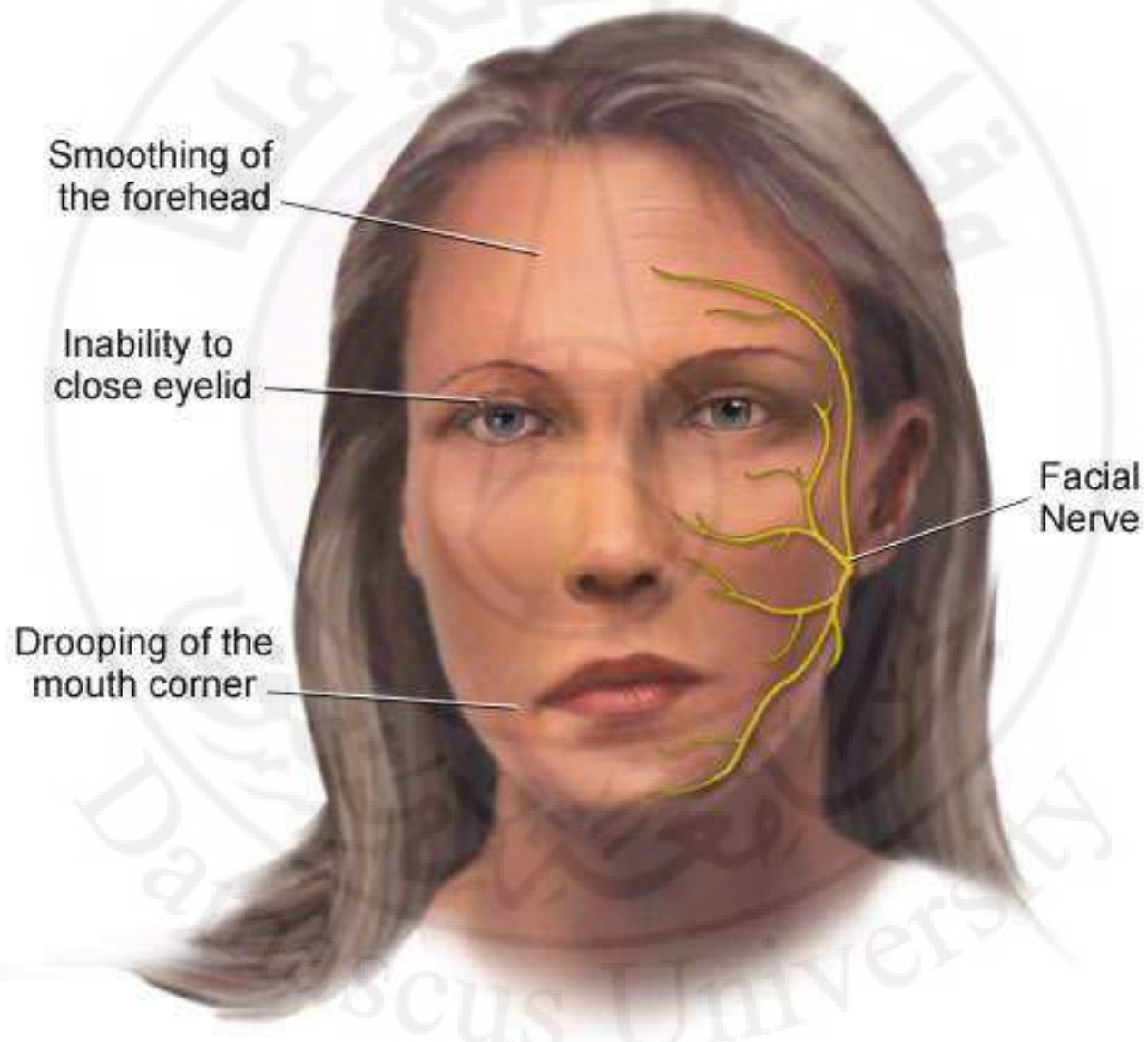
Damage to the facial nerve may result in twitching , paralysis of the face, eye or mouth dryness, and/ or disturbance of taste or hearing .

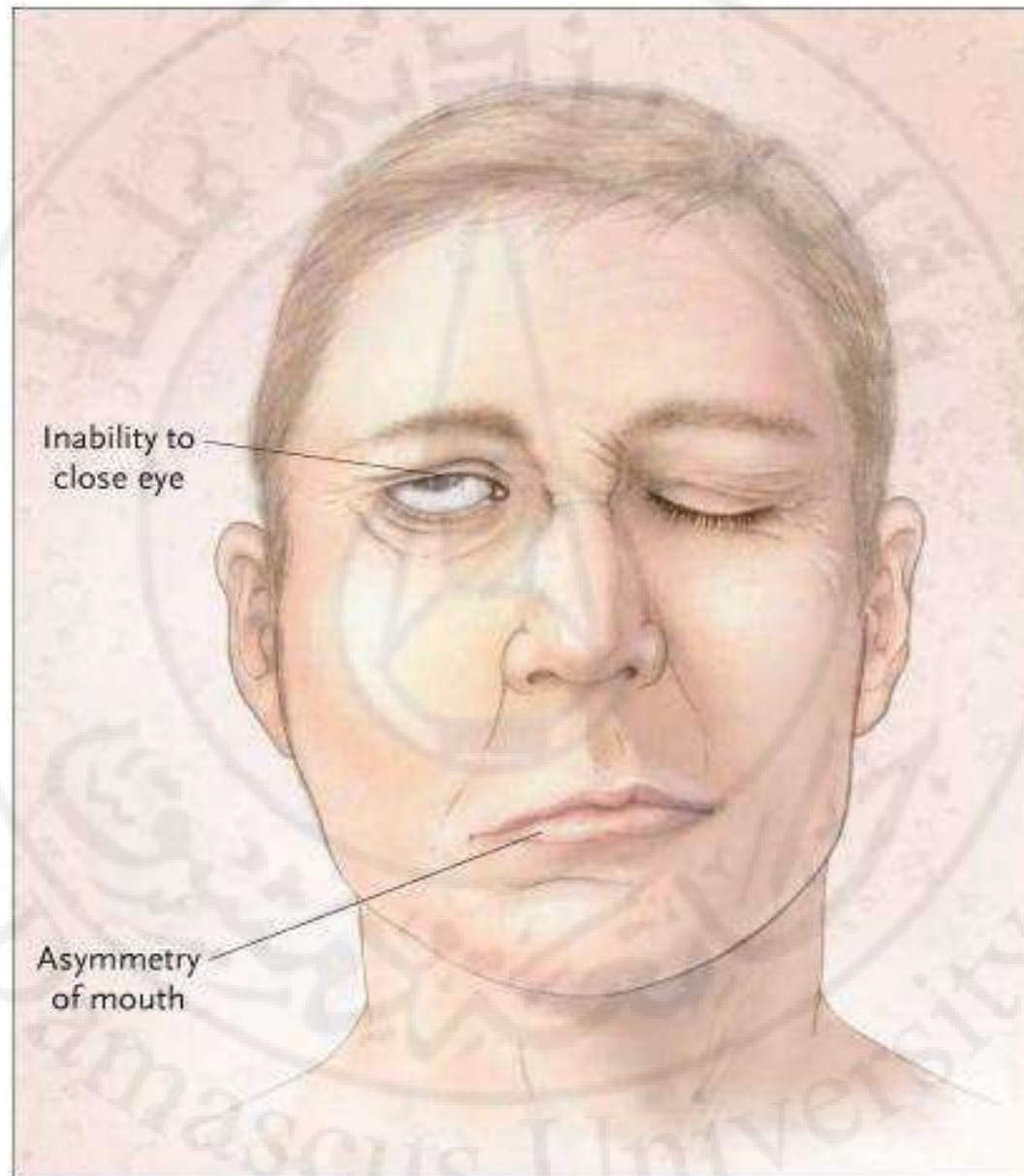
# Clinical features

- 1- acute onset of palsy.
- 2- usually unilateral.
- 3- diminished blinking & absence of tearing.
- 4- occasionally: pain, numbness, hyperacusis and loss of taste.



## Bell's Palsy





# diagnosis

The history should be directed to exclude facial palsy caused by:

- stroke.
- Trauma.
- Tumors.
- Inflammatory disorders.
- Infections.

# The examination include :

- A full neurological examination.
- Examination of the facial nerve.
- Ear & mouth examination.

# investigations

- A test of the degree of nerve damage.
- Test of hearing.
- Test for taste loss.
- Test of balance.
- Test of tear production.
- Blood pressure.
- Blood tests( fasting blood suger)

# management

- Most patients with Bell's palsy (up to 85%) improve spontaneously within a few weeks.



# prognosis

Prognosis can be assessed on several factors:

**1-** favourable prognostic signs :

- Incomplete paralysis in the first week.
- Persistence of the stapedial reflex.

# prognosis

2- bad prognostic signs:

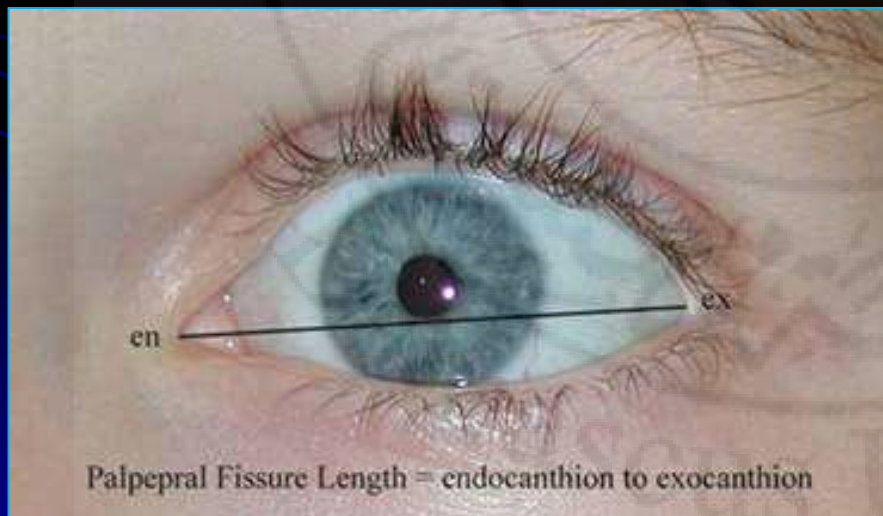
- Initially complete paralysis.
- Hyperacusis.
- Severe taste impairment.
- Diminished lacrimation or salivation.

# treatment

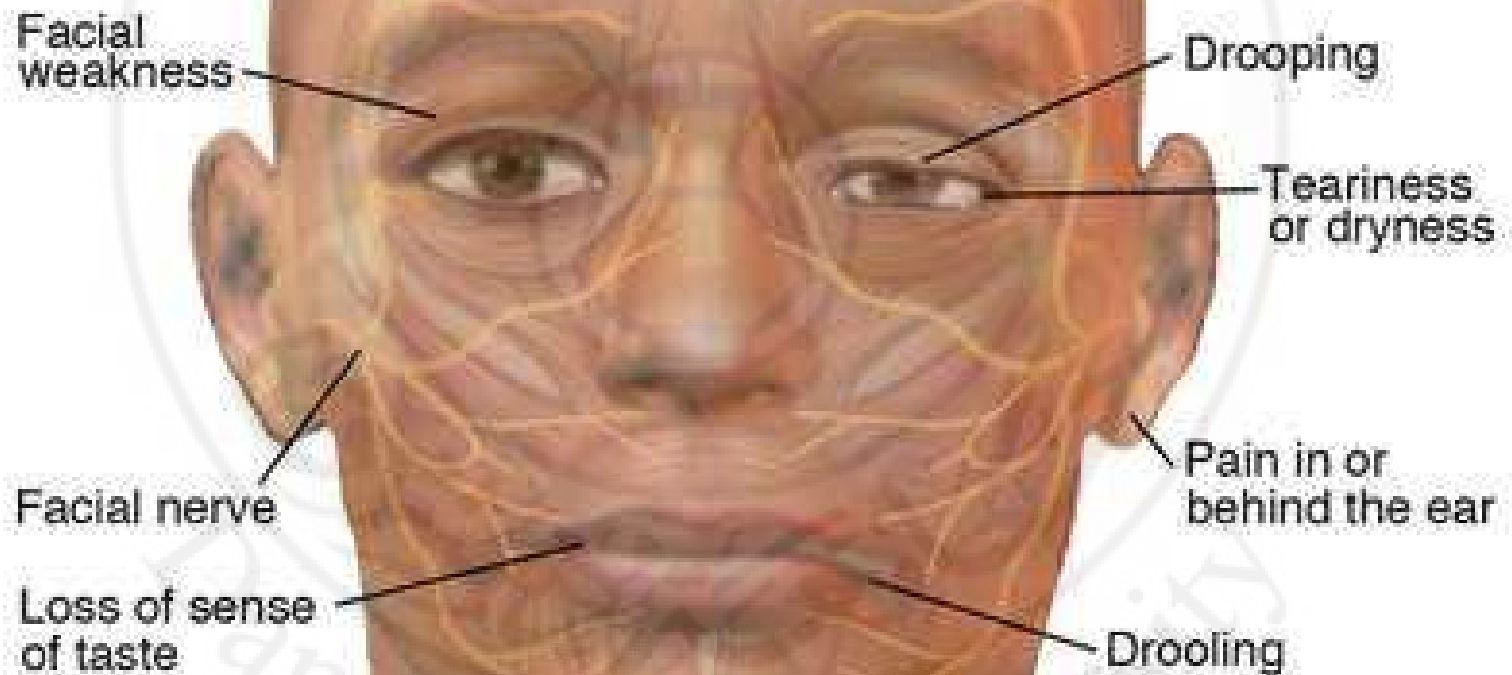
- Treatment with systemic **corticosteroids** (prednisolone) result in **80-90%** complete recovery.
- Antivirals (aciclovir or valacyclovir) systemically.

# complications

- Corneal dryness & scarring.
- Facial alterations: palpebral fissure may narrow, the nasolabial fold deepens and there may be leakage of saliva from the commissure.



# Bell Palsy





# Burning Mouth Syndrome



Improving the Nation's Oral Health

Dr. Abeer Ahmad Aljoujou  
PhD. Oral Medicine

# Burning Mouth Syndrome **BMS**

- A burning sensation exist in the absence of identifiable organic aetiological factors.
- May be a primary condition or secondary.

# Burning Mouth Syndrome **BMS**

- The International Association for Study of Pain define it as:

***“A distinctive nosological entity characterized by unremitting oral burning or similar pain in the absence of detectable mucosal changes”***

# incidence

- Fairly common, affecting up to 5 persons per 100,000 population.
- BMS is seen especially in middle-aged elderly patients.
- Seen especially in **women**, in ratio of about **3:1**.

# Predisposing factors & aetiology

- 1- psychogenic cause: (20% of cases)  
anxiety, depression or cancerophobia.
- 2- dental intervention.
- 3- upper respiratory tract infection.
- 4- drugs: cytotoxics, angiotensin.
- 5- hormonal changes: although there is no specific relationship.

Burning sensation may have local  
or systemic causes.

Damascus University

# Differential diagnosis

- Defined clinical conditions that must be excluded, since they can also present with burning sensation include:

1- lichen planus.

2- geographic tongue.

3- dry mouth (xerostomia)

4- candidiasis.

5- parafunction: bruxism, tongue thrusting.

6- glossitis. 7- diabetes.



- Organic problems with no detectable clinical lesions that can cause symptoms similar to BMS include:
  - 1- haematological deficiency state ( iron, folic acid, Vit B6,12).
  - 2- neuropathy: follows damage to the chorda tympani nerve.
  - 3- thyroid hypofunction.
  - 4- drugs.

- BMS is increased in frequency in Parkinson's disease, and it has been suggested that BMS is a disorder of reduced pain threshold.

# pathogenesis

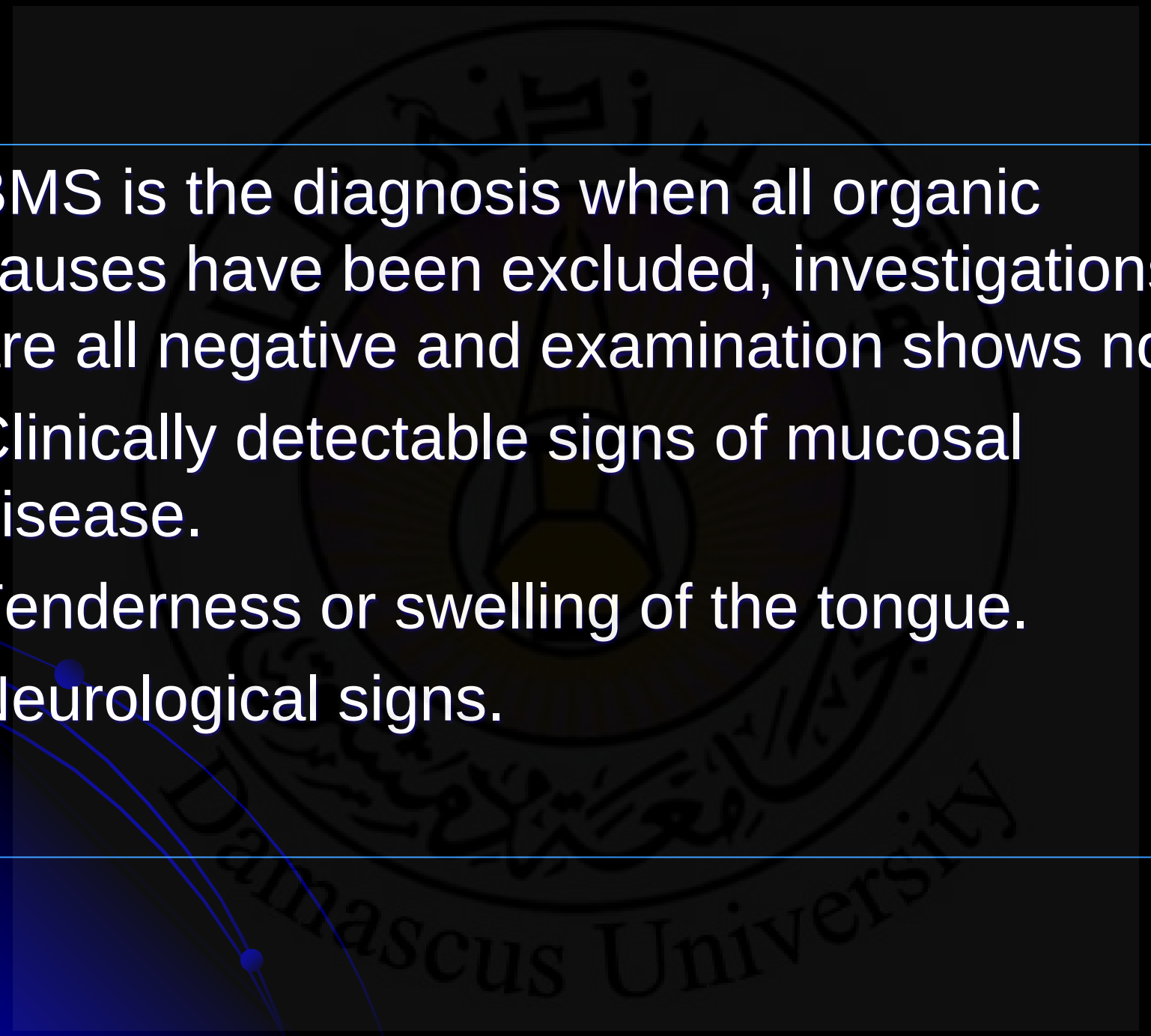
- Patients are often “super-taster” they have raised sensitivity to taste, hypotheses include that BMS is due to:
  - An oral neuropathy and/or neurological transduction interruption induced by salivary compositional alteration.
  - Trigeminal excitability.

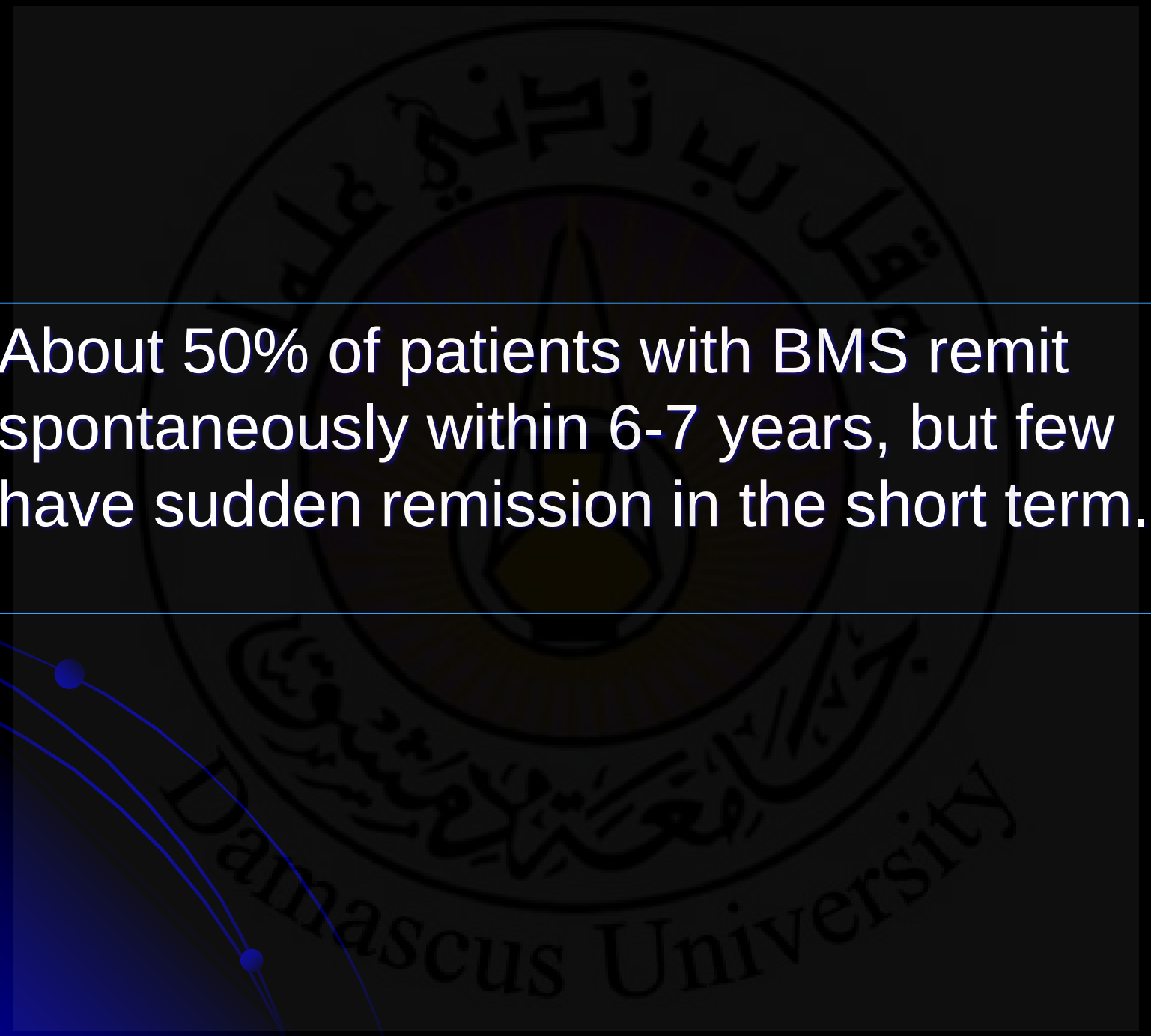
# Clinical features

- BMS most frequently affects the tongue but it can also affect the palate or less commonly the lips or lower alveolus.

# Clinical features

- Burning sensation.
- Tingling.
- Usually bilateral.
- Not worsened by eating.
- Persistent but does not disturb sleep.
- Prolonged >4 months.

- 
- A large, faint watermark of the Damascus University seal is visible in the background. The seal is circular and contains Arabic calligraphy. The text 'DAMASCUS UNIVERSITY' is written in English around the bottom half of the seal.
- BMS is the diagnosis when all organic causes have been excluded, investigations are all negative and examination shows no:
    - Clinically detectable signs of mucosal disease.
    - Tenderness or swelling of the tongue.
    - Neurological signs.

- 
- The background of the slide features a large, faint watermark of the Damascus University logo. The logo is circular, with Arabic calligraphy at the top and the English text "Damascus University" at the bottom. In the center of the logo is a stylized representation of the Kaaba.
- About 50% of patients with BMS remit spontaneously within 6-7 years, but few have sudden remission in the short term.



# management

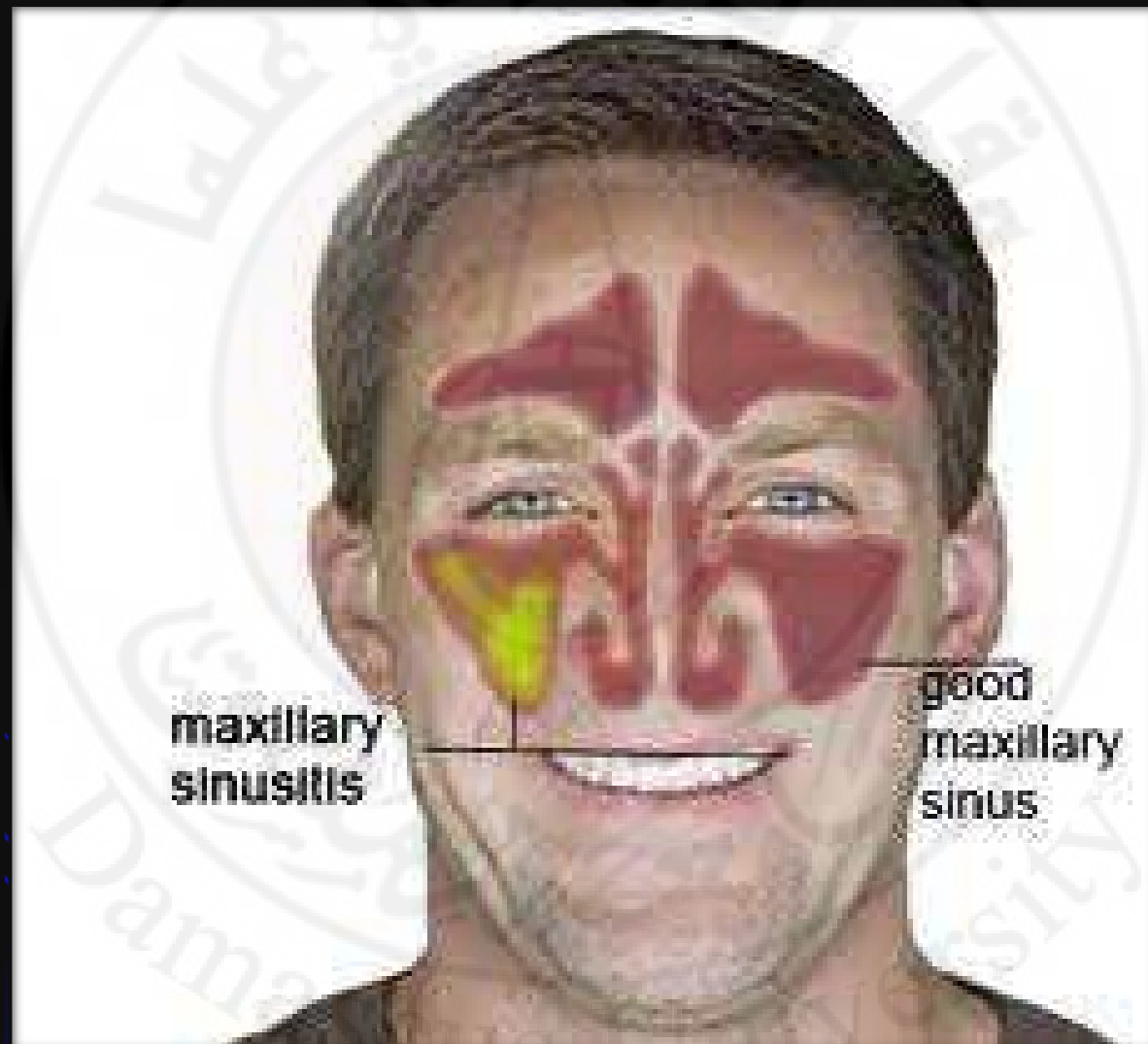
- Patient reassurance.
- cognitive behavioural therapy.
- **Antidepressants** (to treat the symptoms not depression for at least 2-3 weeks).
- Medication used includes:
  - Amitriptyline
  - Clonazepam
  - Dosulepin
  - doxepin.
  - fluoxetine.
  - gabapentin.

# Disorders of Maxillary Sinus

Dr.Abeer Ahmad Aljoujou  
PhD. Oral Medicine

Maxillary sinuses are the paired structures located in the body of maxilla, contain air and lined by mucoperiosteum, with a pseudostratified ciliated columnar epithelium.



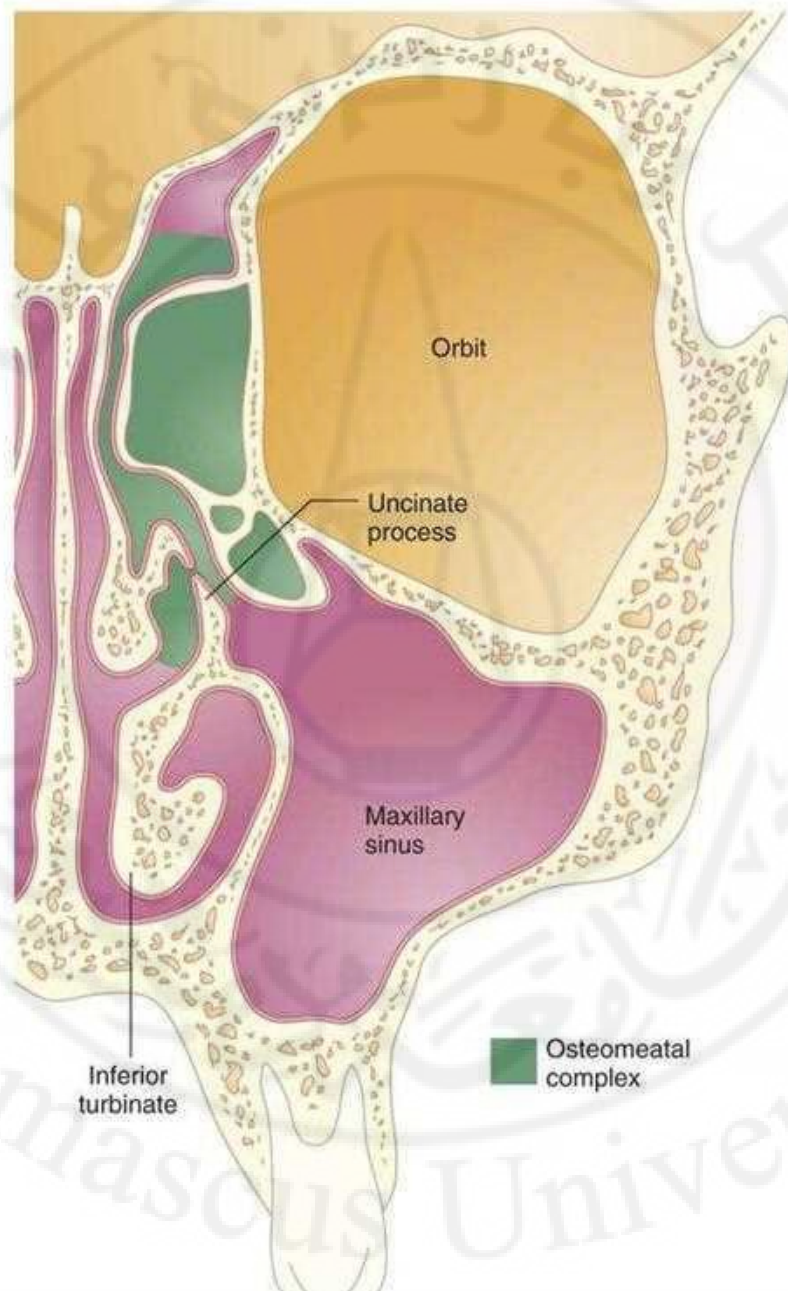




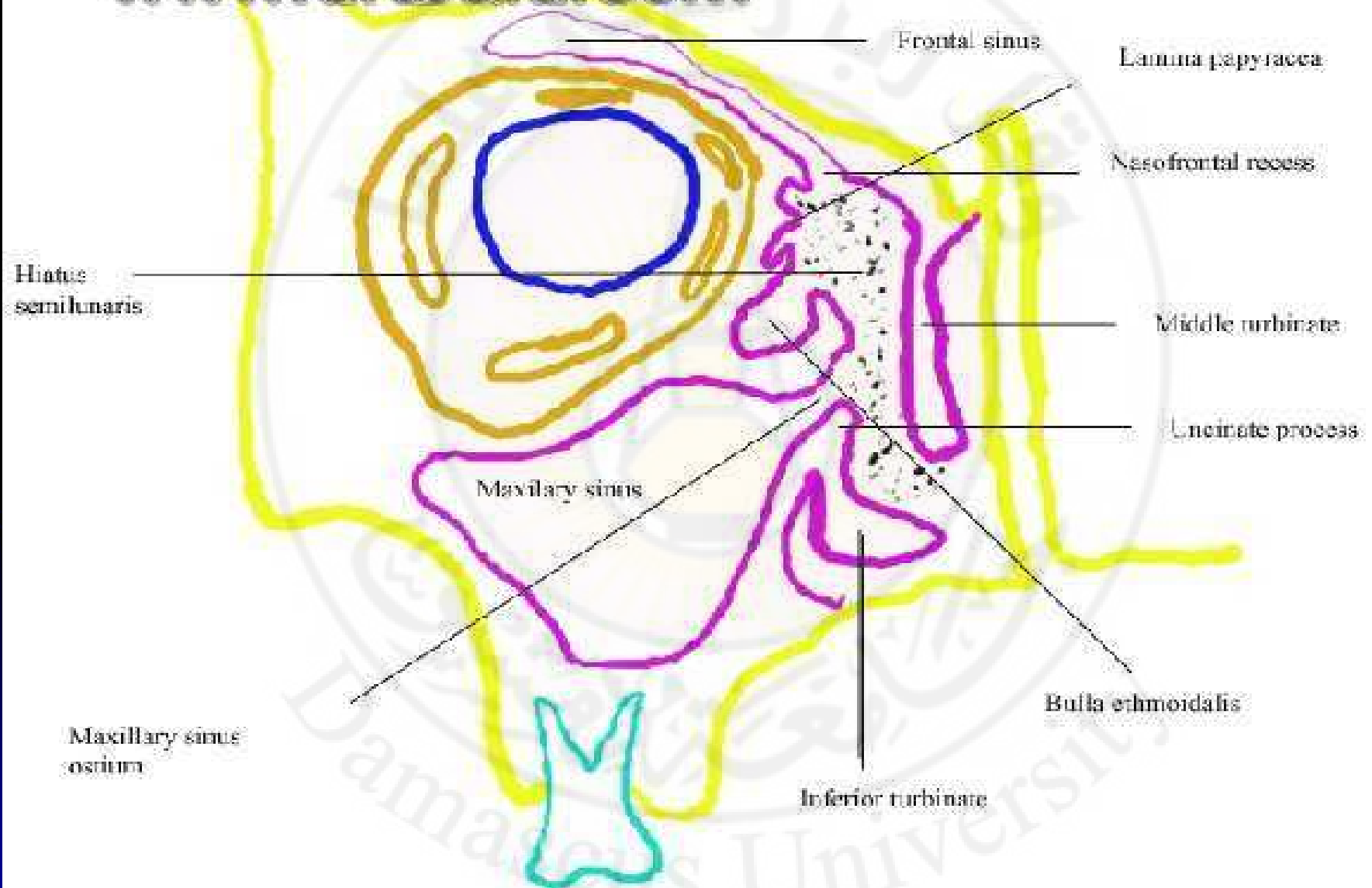


**A** Frontal Sinus      **B** Ethmoid Sinuses      **C** Maxillary Sinus      **D** Sphenoid Sinus









# Anatomy of Maxillary Sinus

- **Shape:** it is **pyramidal** in shape with its base directed towards the lateral wall of the nose, and the apex directed to the zygomatic process of the maxilla.
- **Size:** varying up to **3.2** cm in height, **2.5**cm in width and **3.2** cm anteroposteriorly.
- **Hiatus semilunaris:** it opens into the middle meatus of the nose in the lower part of the Hiatus semilunaris.

# Anatomy of Maxillary Sinus

- **Roof:** formed by the floor of the orbit, the medial part is the sloping wall of the maxillo ethmoidal sinuses, from which diseases may spread to the maxillary sinus.
- **Floor:** formed by the alveolar processes of maxilla.

# Function of maxillary sinus

- 1- reduction of weight of the facial skeleton.
- 2- phonetic resonance.
- 3- insulation the orbits from intranasal temperature variations.
- 4- air conditioning.
- 5- olfaction.

# Examination of maxillary sinus

- 1- clinical examination.
- 2- rhinoscopy.
- 3- transillumination.
- 4- bacteriology.
- 5- fiberoptic antroscopy.
- 6- radiography.

# Clinical examination of antrum

- Examination of **middle third of face**: asymmetry, deformity, swelling, erythema, ecchymosis, hematoma, epiphora, nasal obstruction, epistaxis, odor from nostril.
- Extraoral palpation: the facial wall of the sinus above the premolars.
- Intraoral examination: alveolar ulcerations, expansion, tenderness, paresthesia of the upper molars region, palatal ulceration.

# Clinical examination of antrum











# rhinoscopy

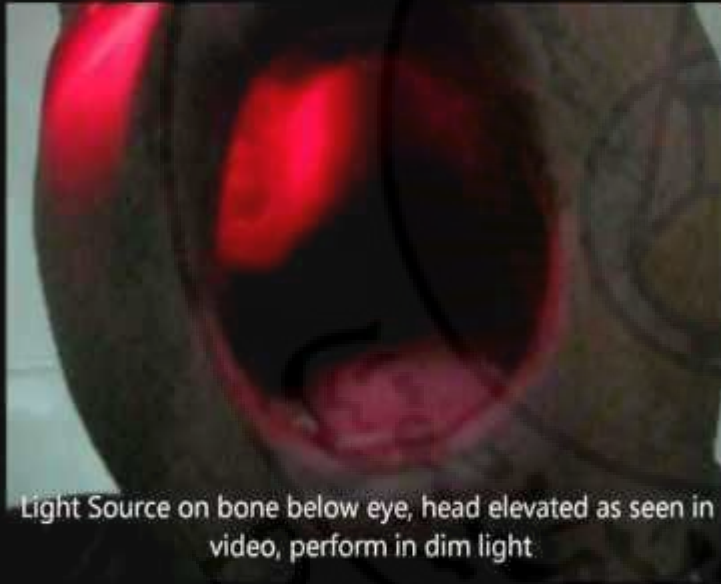




# rhinoscopy



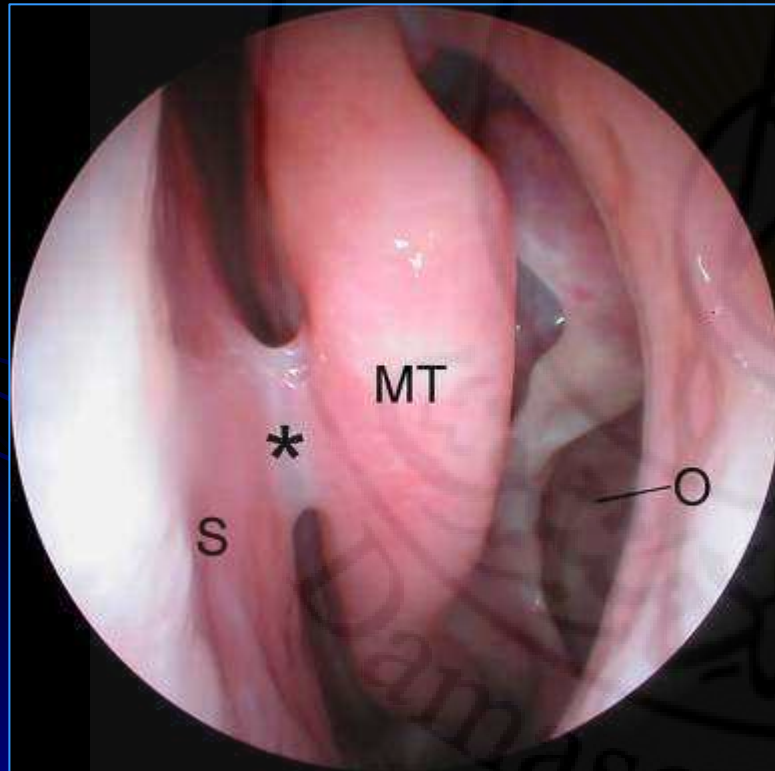
# transillumination



Light Source on bone below eye, head elevated as seen in video, perform in dim light



# fiberoptic antroscopy



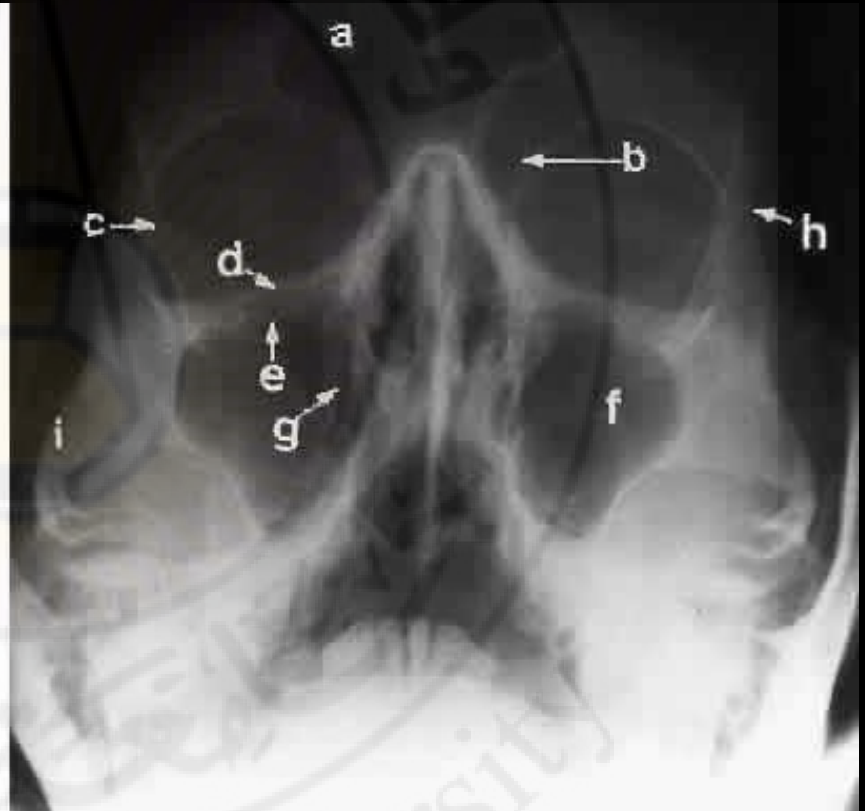
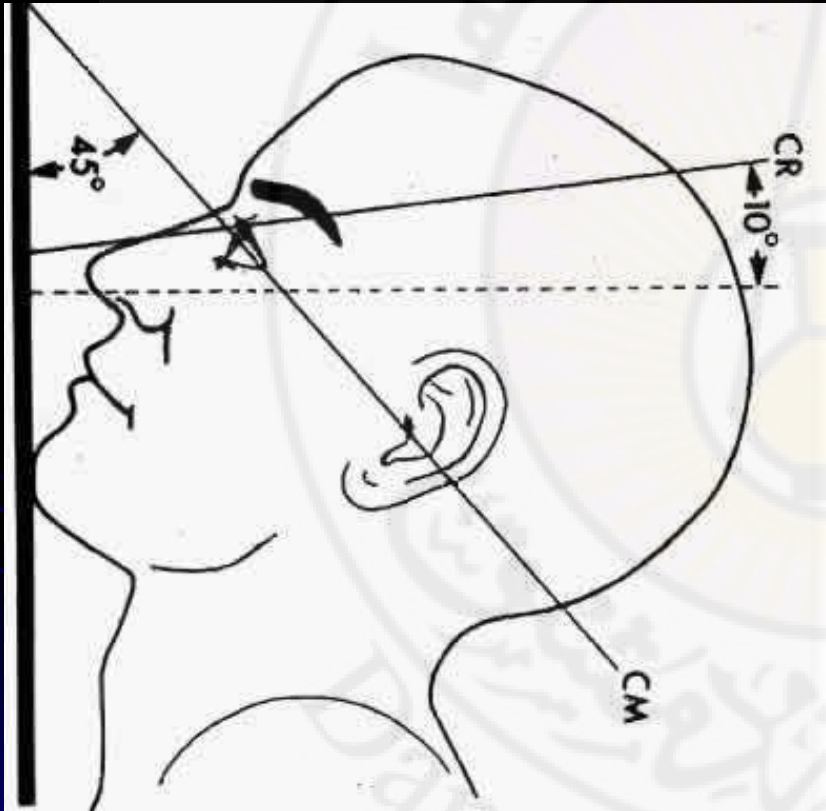


# Radiographic examination

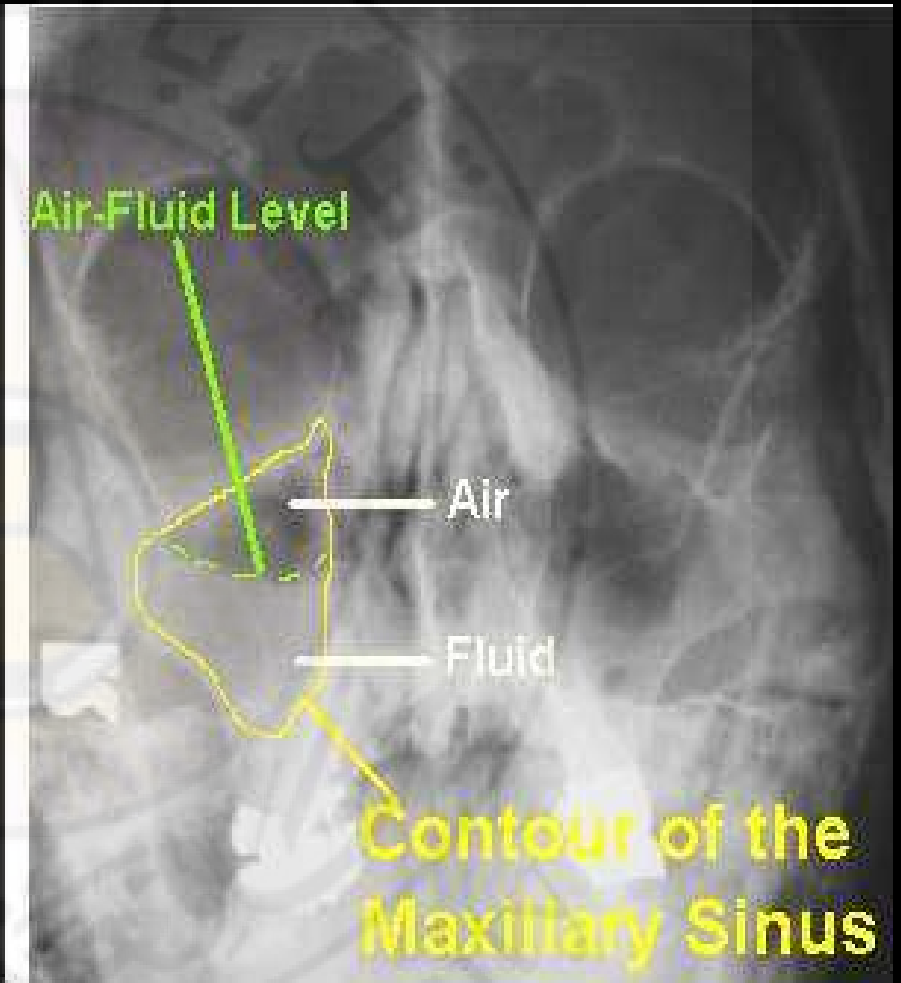
- 1- Periapical.
- 2- Caldwell posteroanterior.
- 3- Water's view.
- 4- Lateral skull view.
- 5- computed tomography.
- 7- Ultrasound.
- 8- magnetic resonance imaging MRI.

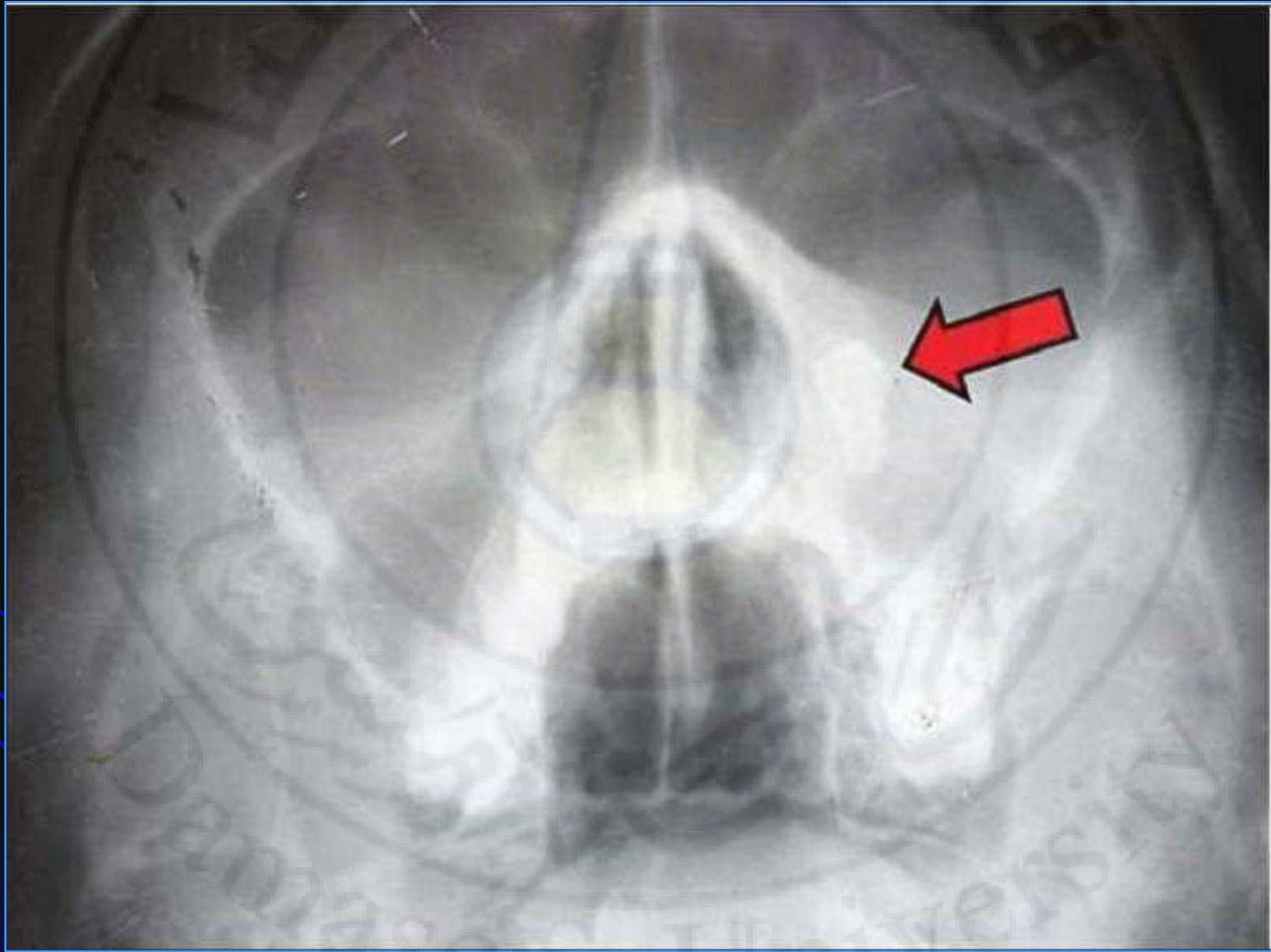


# Water's view











# Classification of MS disorders

- 1- infection/ inflammatory disorders.
- 2- traumatic.
- 3- cysts.
- 4- neoplasms.
- 5- calcification.

# Classification of MS disorders

## 1- inflammatory diseases:

- acute & chronic sinusitis.
- local hyperplasia from odontogenic infection
- antral polyp.
- osteomyelitis.

# Classification of MS disorders

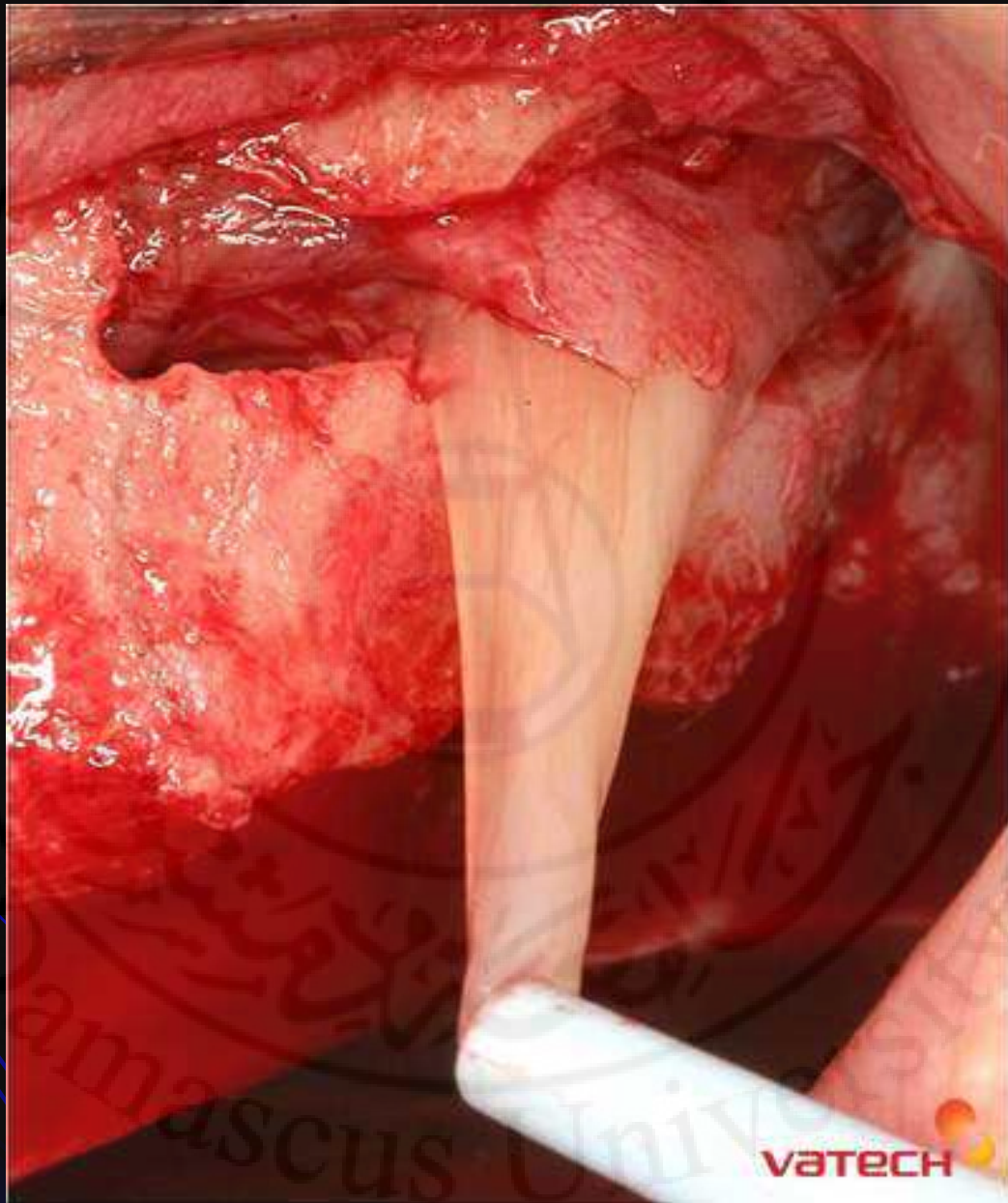
## 2- Traumatic disorders:

- fractures of maxillofacial skeleton.
- foreign bodies within the antrum.
- oroantral fistula.

# Classification of MS disorders

## 3- Cysts:

- **intrinsic**: - mucus retention cyst.
  - serous cyst.
- **extrinsic**: - odontogenic cysts:
  - \* radicular, dentigerous.
  - non- odontogenic:
    - \* mucocele.



# Classification of MS disorders

## 4- Neoplasms:

- **Benign tumors:** antral polyp, antral papiloma, osteoma, ameloblastoma.
- **Malignant tumors:** squamous cell carcinoma, metastatic carcinoma of MS, invasion of the antrum by local malignant diseases.



# Inflammatory disorders

- **Maxillary Sinusitis** : is the inflammation of antrum mucosa.
- Types:
  - acute: associated with severe pain.
  - subacute: interim stage.
  - chronic: develops as a result of neglected dental infection, the lining becomes thicker and irregular.

# Maxillary Sinusitis

- **Etiology:**

- 1- dental causes:**
  - periapical dental infections.
  - oroantral fistula.
  - periodontitis.
  - traumatic.
  - dental material in antrum.
  - dental cysts.
  - implants.

## 2- non-dental causes:

- Mechanical obstruction of ostium:
  - Common cold.
  - Allergic rhinitis.
  - Nasal polyp.
- Direct bacterial contamination:
- Immune deficiency.
- Influenza.
- Maxillary sinus benign tumors.

# Acute Maxillary Sinusitis

- **Clinical features:**
  - Severe pain (constant & localized).
  - Pain in the eye area, cheek & frontal region.
  - Pain is exacerbated by lowering the head.
  - Teeth in the involved side become sore.
  - Generalized toxemia: fever with chills, malaise and nausea.
  - Dizziness.

# Acute Maxillary Sinusitis

- Nasal discharge.
- Tenderness on palpation.
- Intraoral findings:
  - mucobuccal swelling.
  - reddening near the sinus region.

# Complications of maxillary sinusitis

- Periorbital Cellulitis.
- Cavernous sinus thrombosis
- Meningitis.
- Osteomyelitis.
- Abscesses on the brain.
- Death.



# Chronic Maxillary sinusitis

- **Symptoms:**

- Sense of tiredness.
- Low grade fever and feeling unwell.
- Stuffy sensation over the affected side.
- Nasal obstruction and discharge.
- Headache.

# Chronic Maxillary sinusitis

- **Radiographic features:**

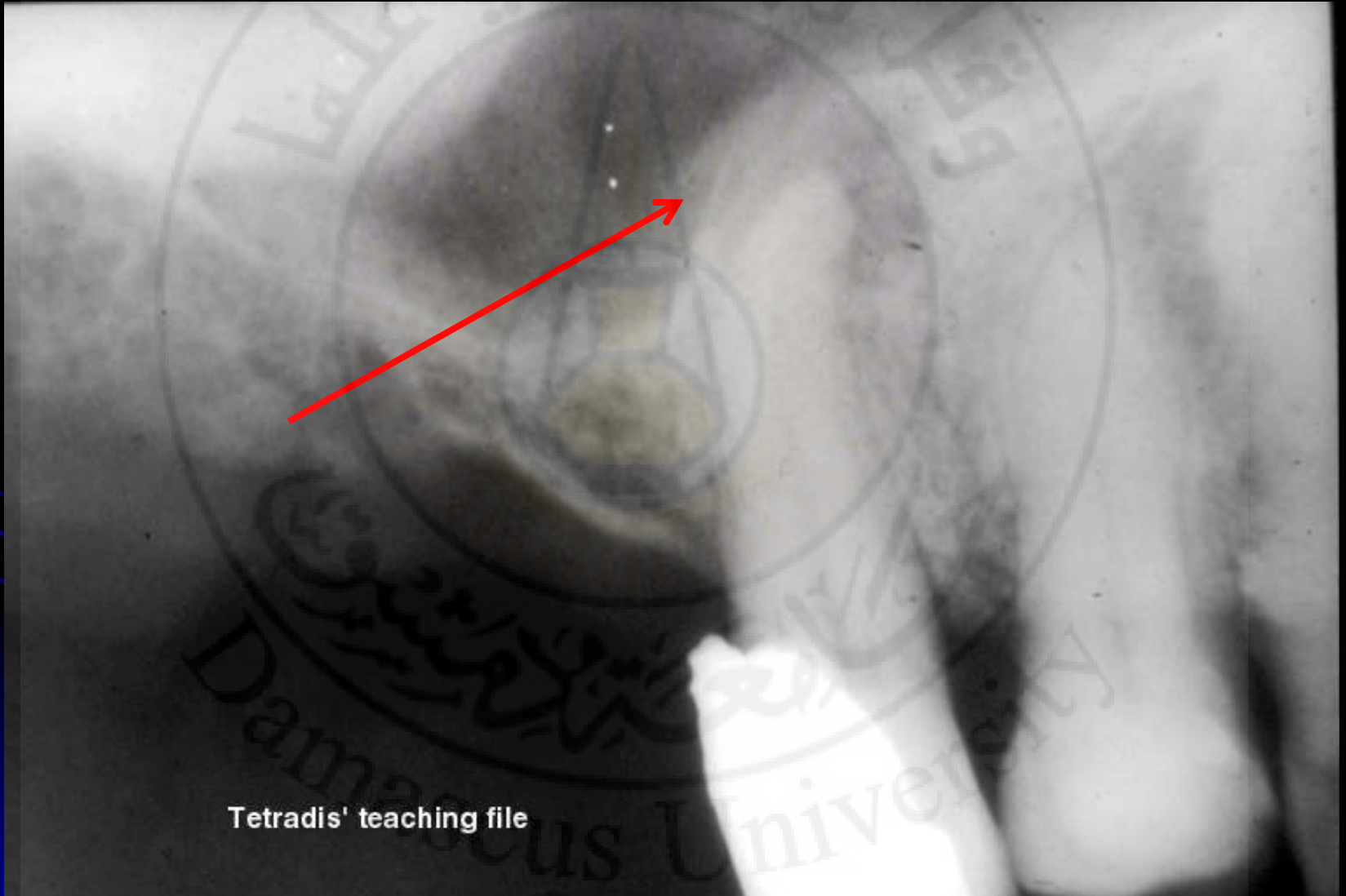
- radio density: thickening of the mucosa, accumulation of secretions.
- Localized thickening at the antrum base.
- Generalized thickening.
- Complete filling.
- Antral halo appearance.

# Mucoas thickening



Tetradis' teaching file

# Mucoas thickening



Tetradis' teaching file

# diagnosis

- 1- transillumination test.
- 2- radiographic (Water`s view).
- 3- Laboratory diagnosis: elevated leukocyte count.

# management

- 1- removal of the cause (eg: dental infection)
- 2- antibiotic :
  - doxycycline hydrochloride (1000 mg daily)
  - pencillin
  - amoxicillin.
- 3- analgesic & anti-inflammatory drugs :  
ibuprofen.
- 4- nasal decongestant: ephedrine nasal drops

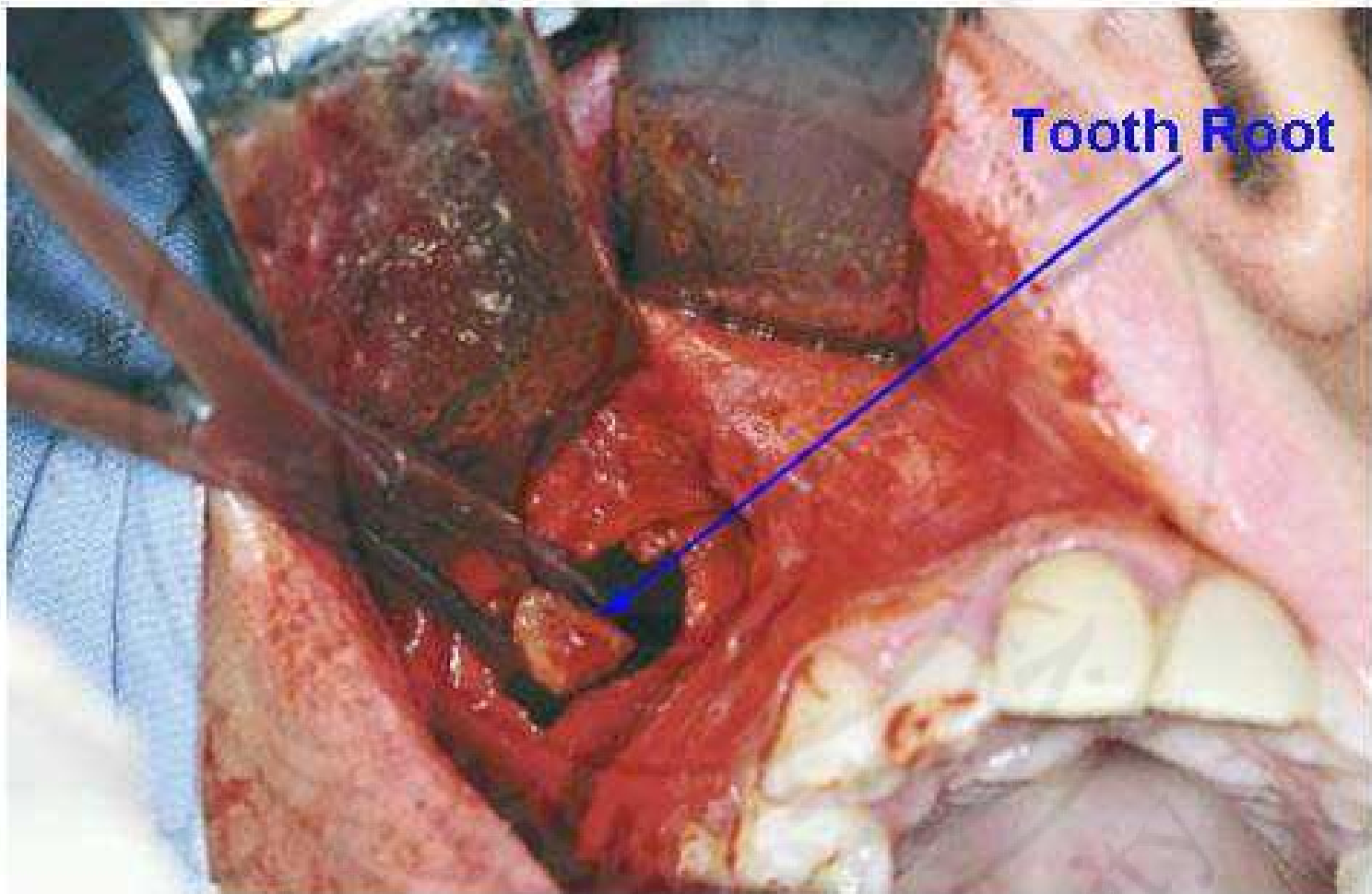


# management

- 5- steam inhalation: hydrating the mucous layer.
- 6- antral lavage: to remove pus from antrum.
- 7- antrostomy .
- 8- trans nasal endoscopic surgery.

# Traumatic injuries of antrum

- Root in antrum.
- Foreign bodies.
- Sinus contusion.
- Fractures.



Removal of a root from the maxillary sinus using the Caldwell-Luc surgical technique

# Difference between sinusitis & sinus contusion

- In sinus contusion there is bloody nasal discharge, extreme tenderness of involved sinus on pressure and rapid resolution of soft tissue changes

# Fractures Of Maxillary sinus

- 1- isolated fracture: involve single wall, the antero lateral wall is the most affected.
- 2- zygomatic complex fracture: fractured zygoma is forced into the sinus causing tearing of the lining membrane & bleeding.
- 3- fractured tuberosity.

# Oroantral fistula

- Is a pathological pathway connecting oral cavity and maxillary sinus.
- Causes:
  - 1- teeth extraction.
  - 2-surgery( removal of cystal benign tumors)
  - 3-facial trauma.
  - 4- malignant tumors.
  - 5- osteomilitis.
  - 6- periodontal problems.



# Oroantral fistula

- Clinical features:

- 1- immediate symptoms:

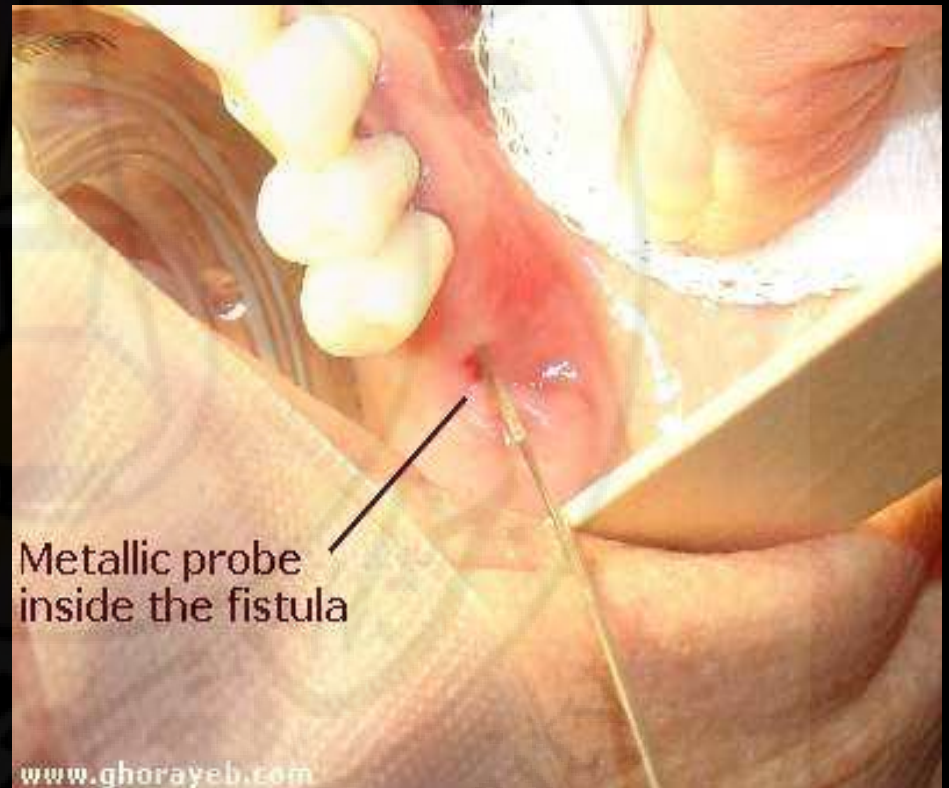
- passage of fluid from oral cavity into the nose
    - patient inability to blow out cheek & smoke.
    - unilateral epistaxis.
    - alteration in vocal resonance.

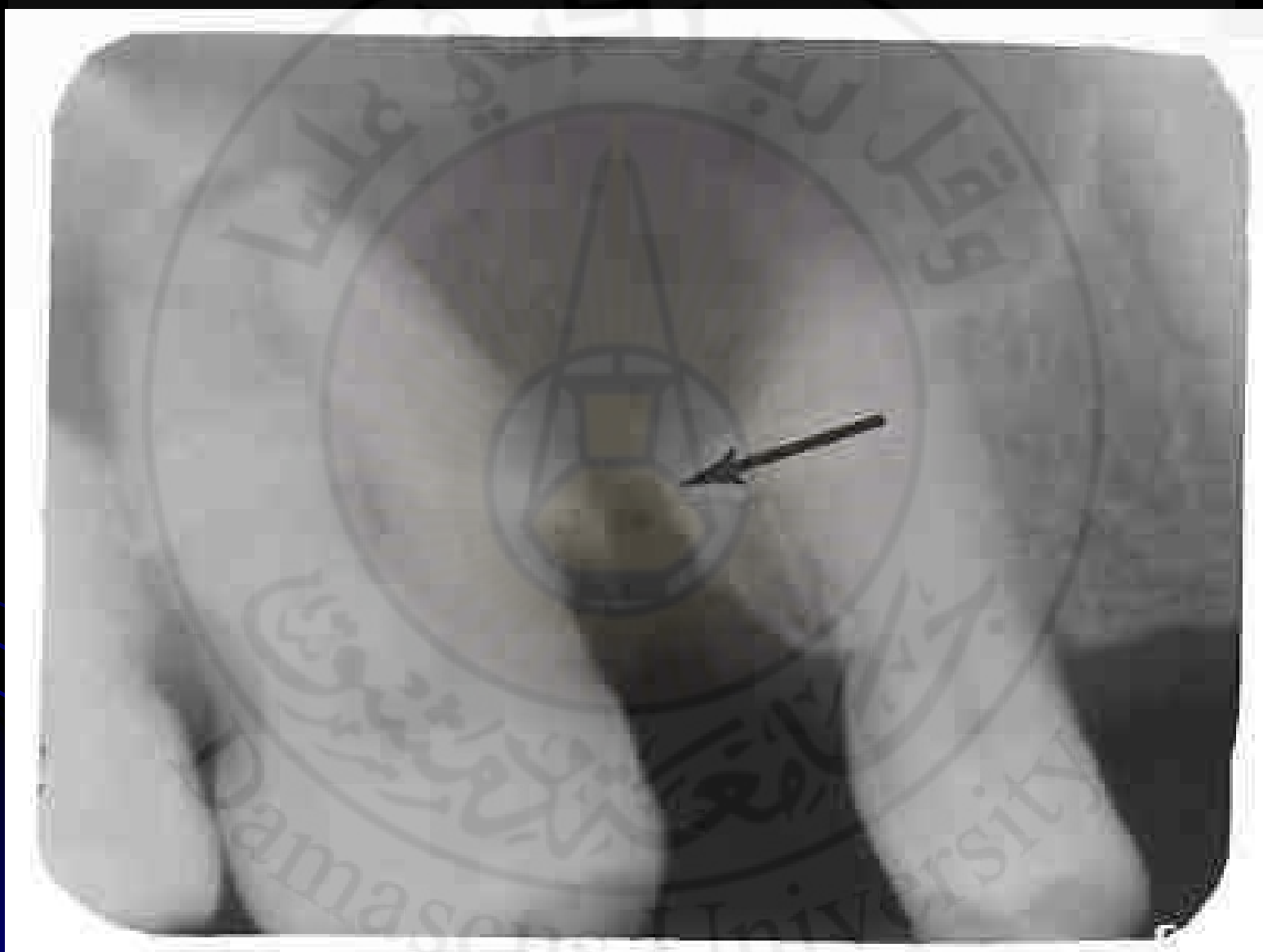
- 2- delayed symptoms: -foul taste in mouth.

- Unilateral nasal discharge.
    - Acute exacerbation.

# Diagnosis of oroantral fistula

- All extracted upper posterior teeth should be examined.
- Air blow technique.
- Probing of sinus.
- Radiological diagnosis.





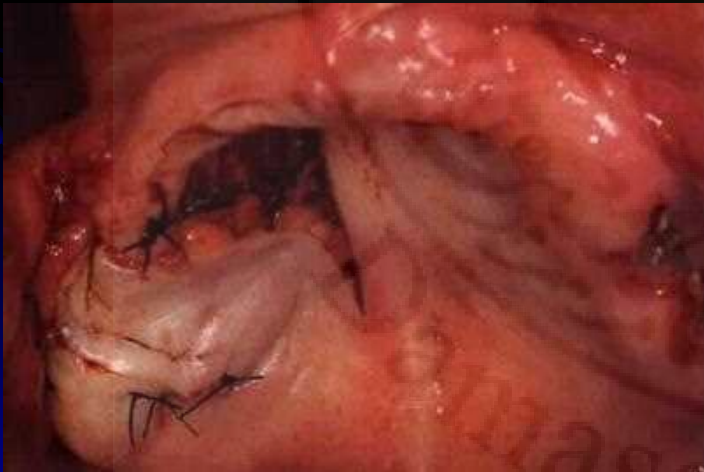
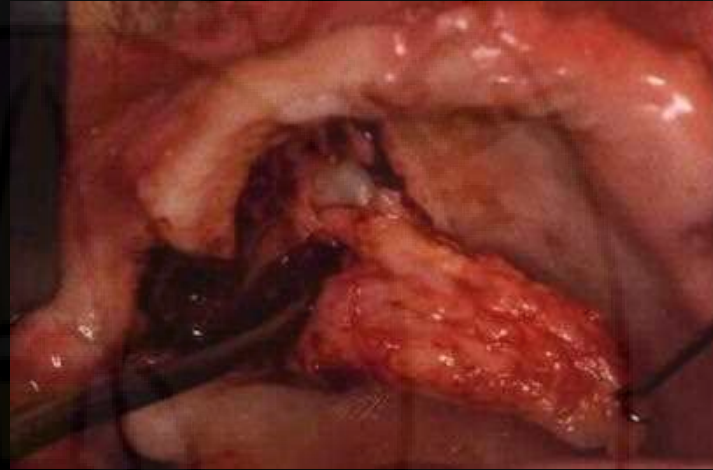
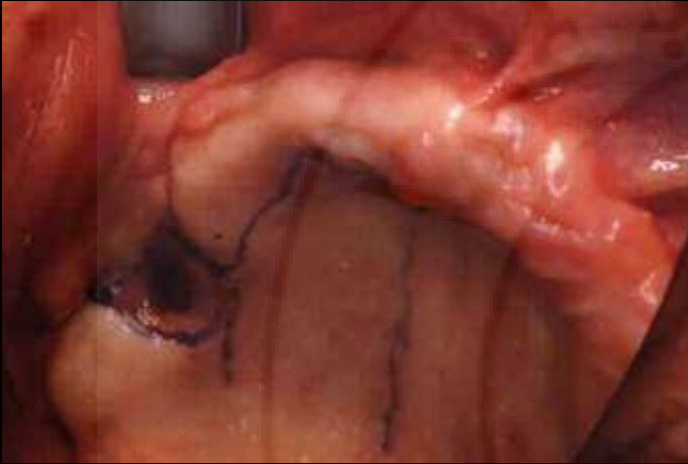
# management

- 1- drug therapy: antibiotic (amoxicillin for one week & decongestant )
- 2- drainage.
- 3- the opening is small : prevention from dislodging clot.
- 4- the opening is wide: closure of opening .



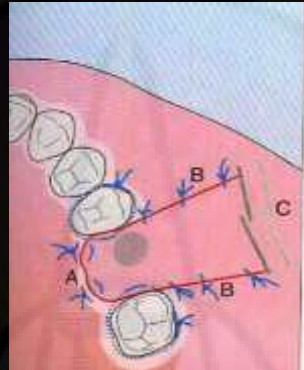
- Closure of opening (oroantral fistula):
  - Rising of mucoperiosteum flap(buccally or palataly) and reducing the alveolar ridge height.
  - Relaxing incision.
  - approximation of mucosal edges.
  - Flaps then sutured without tension.
  - Shrinkage of nasal mucosa by giving nasal drops to promote drainage.

# Palatal transposition flap



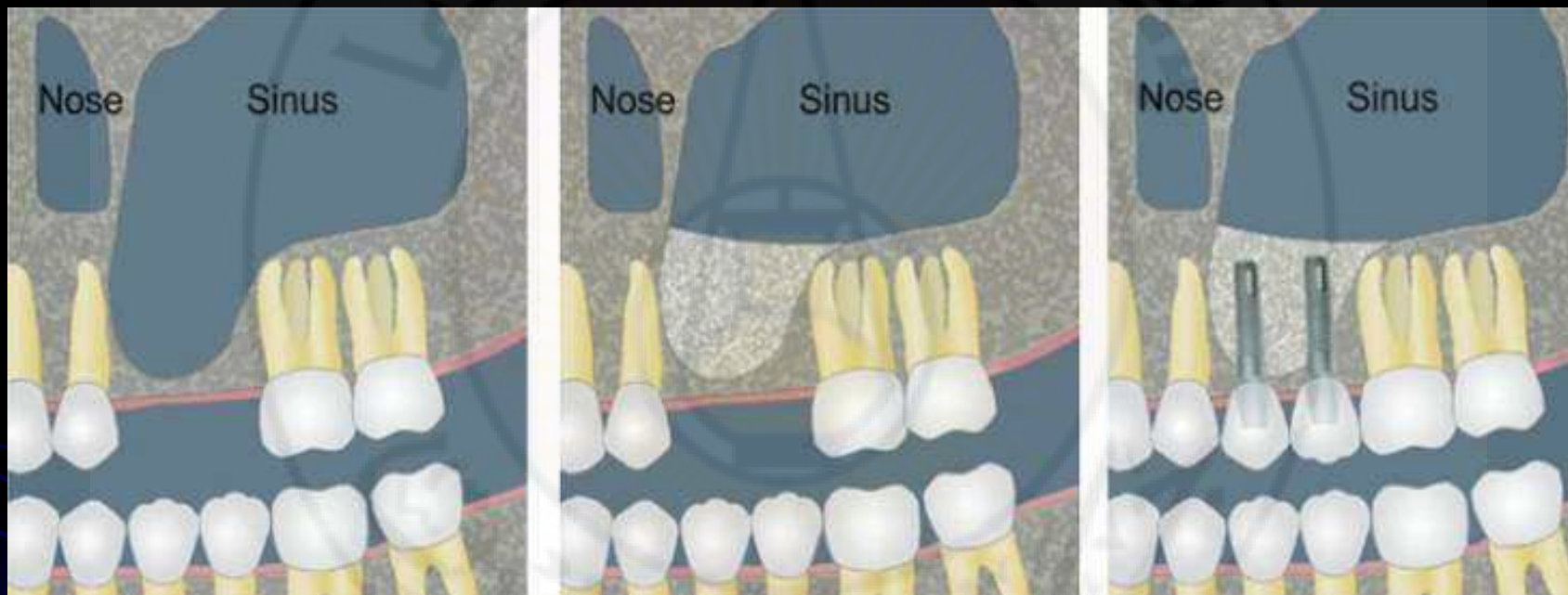


# Buccal advancement flap



# MS elevation

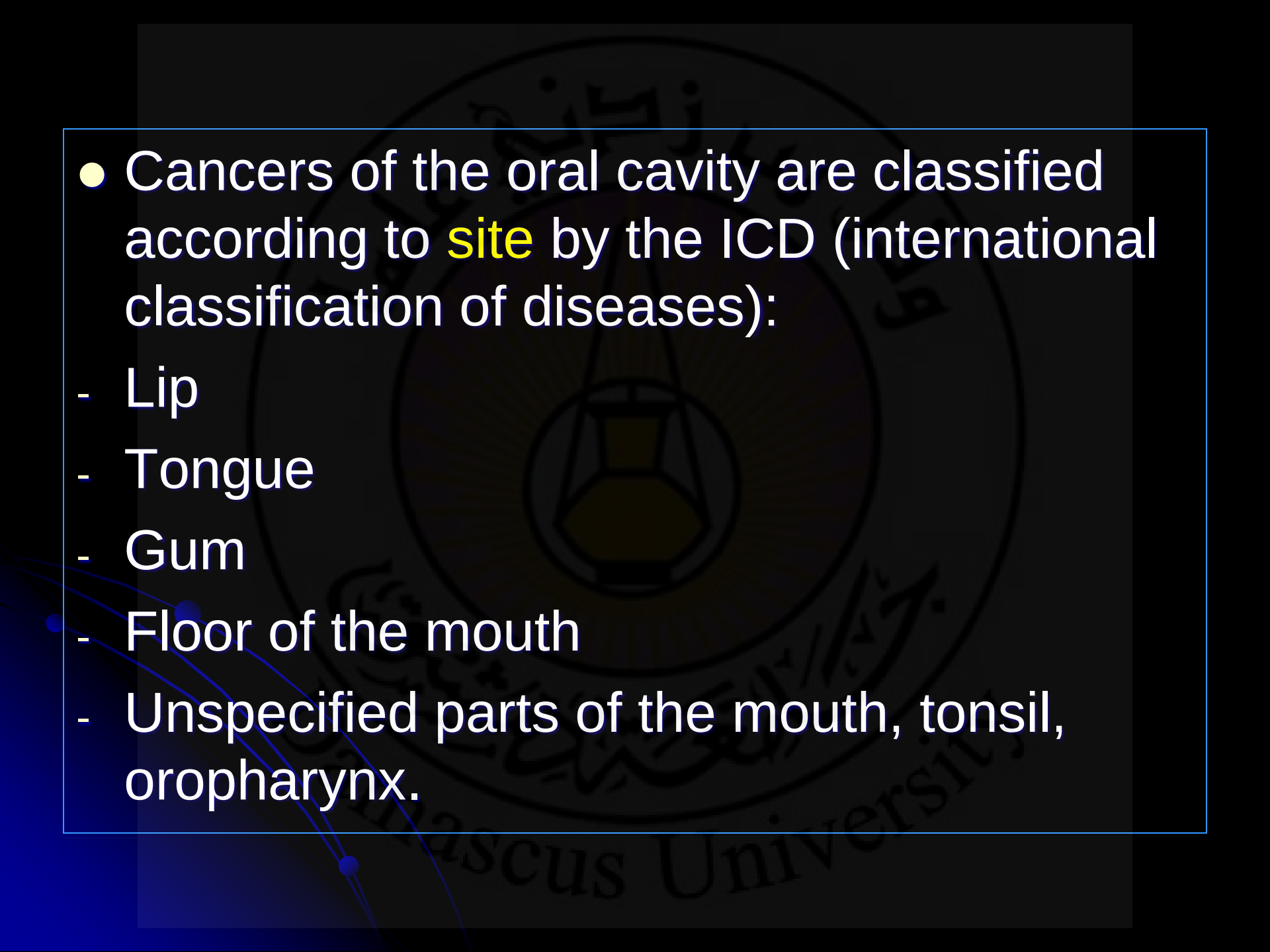




Damascus University

# Oral Cancer II

Dr.Abeer Ahmad Aljoujou  
PhD. Oral Medicine



● Cancers of the oral cavity are classified according to **site** by the ICD (international classification of diseases):

- Lip
- Tongue
- Gum
- Floor of the mouth
- Unspecified parts of the mouth, tonsil, oropharynx.

- More than 90% of oral cancer is oral squamous cell carcinoma (OSCC).
- OSCC is among the 10 most common cancers worldwide.
- It's amounting about 3% of total new cancer cases worldwide.



## **WHO** classification of tumours of the oral cavity and oropharynx:

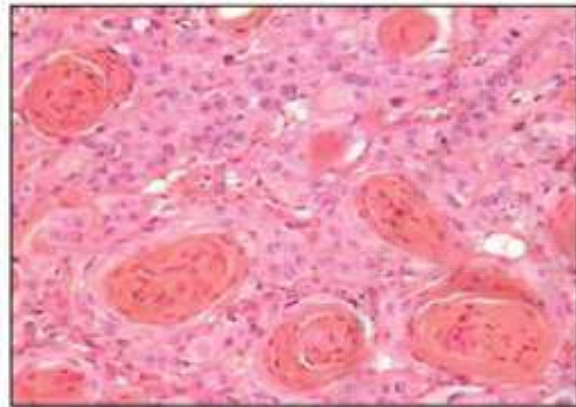
- 1- malignant epithelial tumours.**
- 2- benign epithelial tumours.**
- 3- salivary gland tumours.**
- 4- connective tissue tumours.**
- 5- haematolymphoid tumours.**
- 6- mucosal malignant melanoma.**
- 7- secondary tumours.**

# **malignant epithelial tumours**

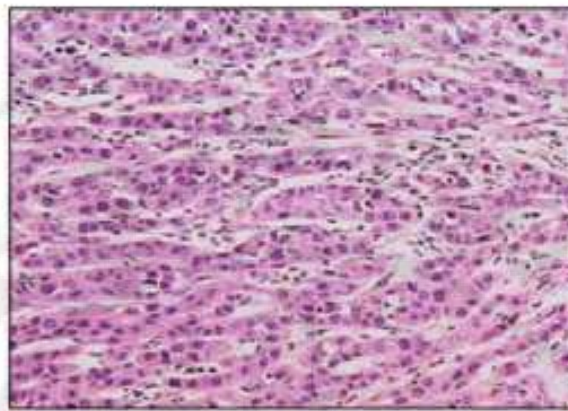
## **1- Squamous cell carcinoma:**

- Verrucous carcinoma (good prognosis).
- Basaloid squamous cell carcinoma (aggressive/ oropharynx) .
- Papillary squamous cell carcinoma(HPV).
- Spindle cell carcinoma.
- adenosquamous carcinoma (aggressive/poor prognosis).

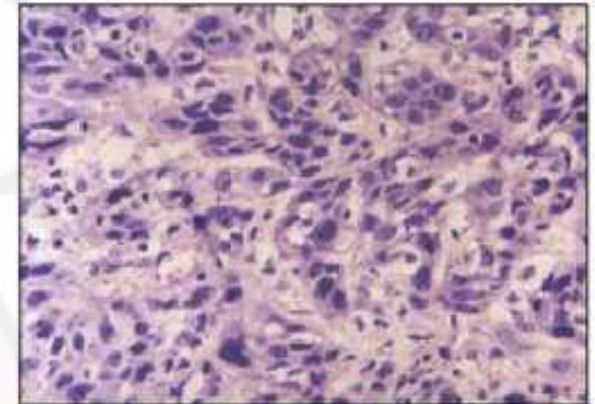
## **2- lymphoepithelial carcinoma (EBV).**



Well differentiated



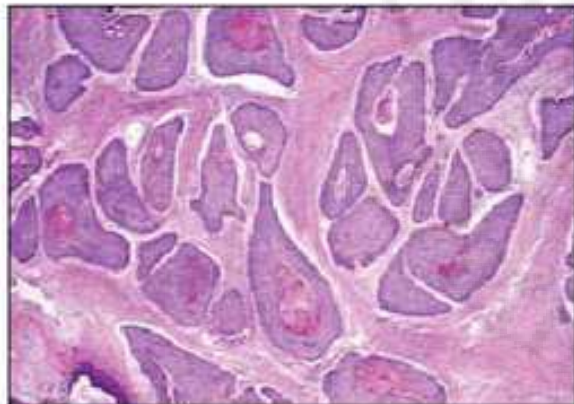
Moderately differentiated



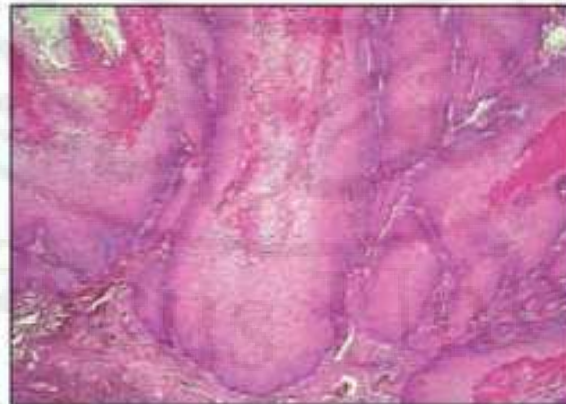
Poorly differentiated

## Squamous cell carcinoma

Basaloid squamous cell carcinoma



Verrucous carcinoma



Other variants

- Spindle cell
- Papillary
- Adenosquamous
- Acantholytic
- Cuniculatum

# Verrucous carcinoma

- Uncommon , locally aggressive (unlikely to metastasize), clinically exophytic, low- grade , slow growing and well-differentiated squamous cell carcinoma.
- Often seen in those who chew tobacco or use snuff orally (snuff dipper`s cancer).
- The most common site : buccal mucosa, mandibular alveolar crest, gingiva & tongue.



- Verrucous hyperplasia

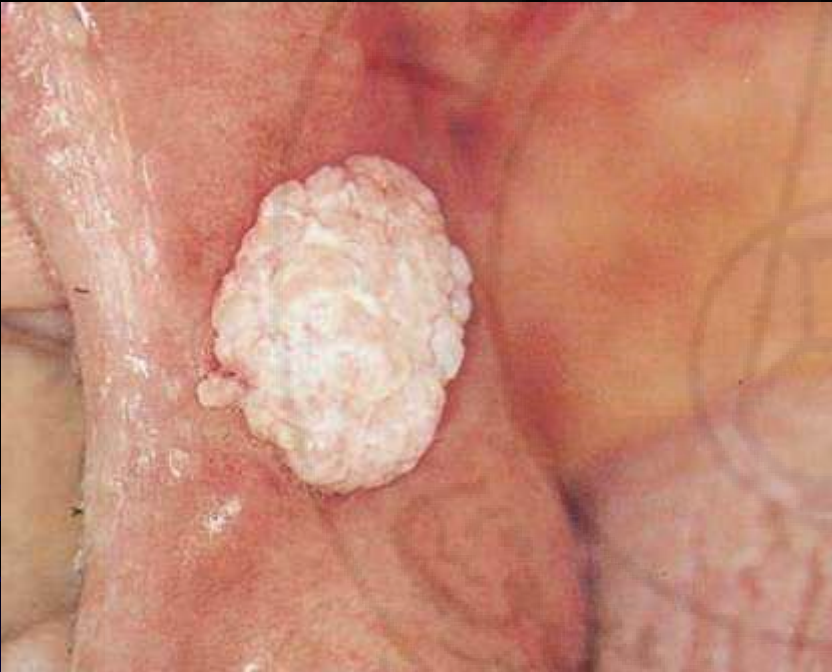
verrucous keratosis

verrucous carcinoma :

May not be distinguished clinically or may be coexist, resulting in diagnostic difficulties.

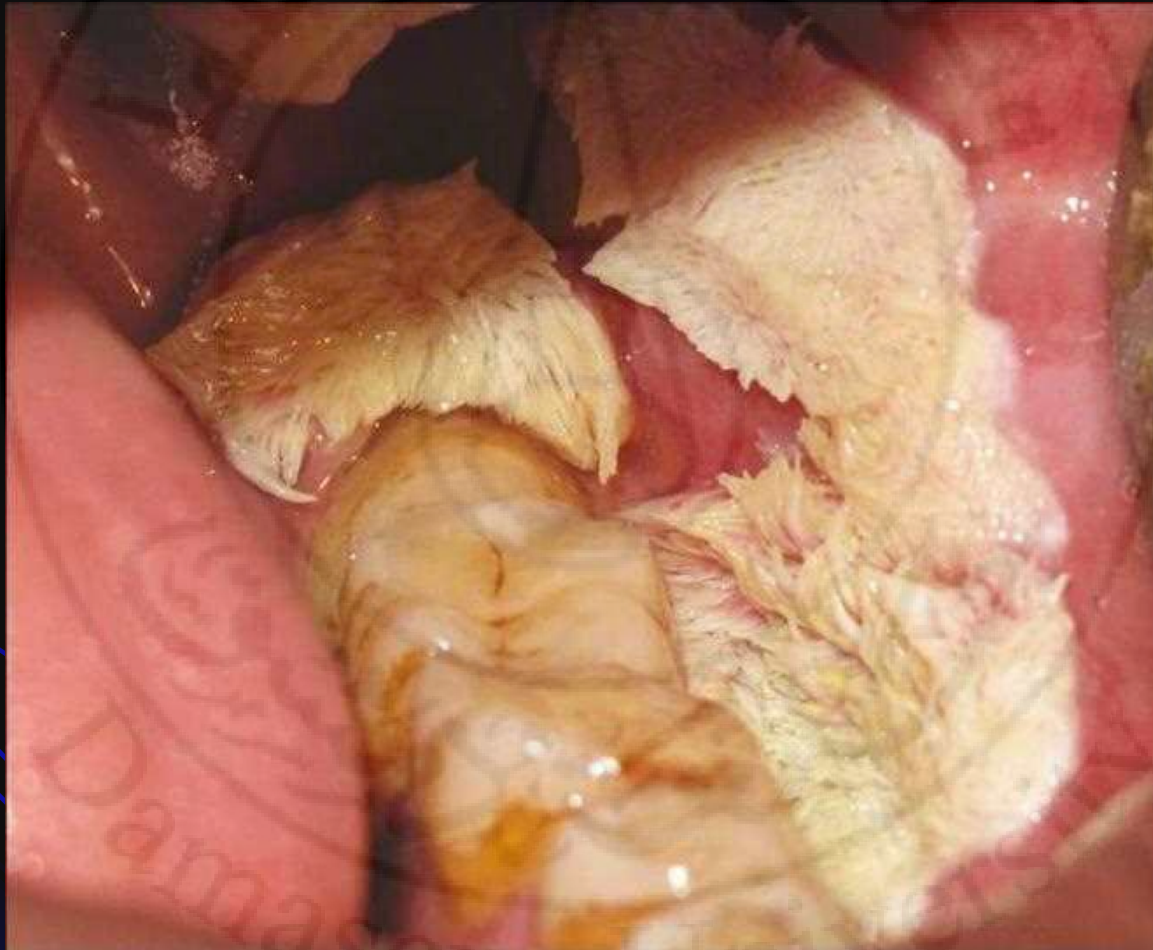
- Verrucous hyperplasia may also develop from leukoplakic lesions and it may transform into verrucous carcinoma or SCC acting as precancerous lesion.

# Verrucous carcinoma

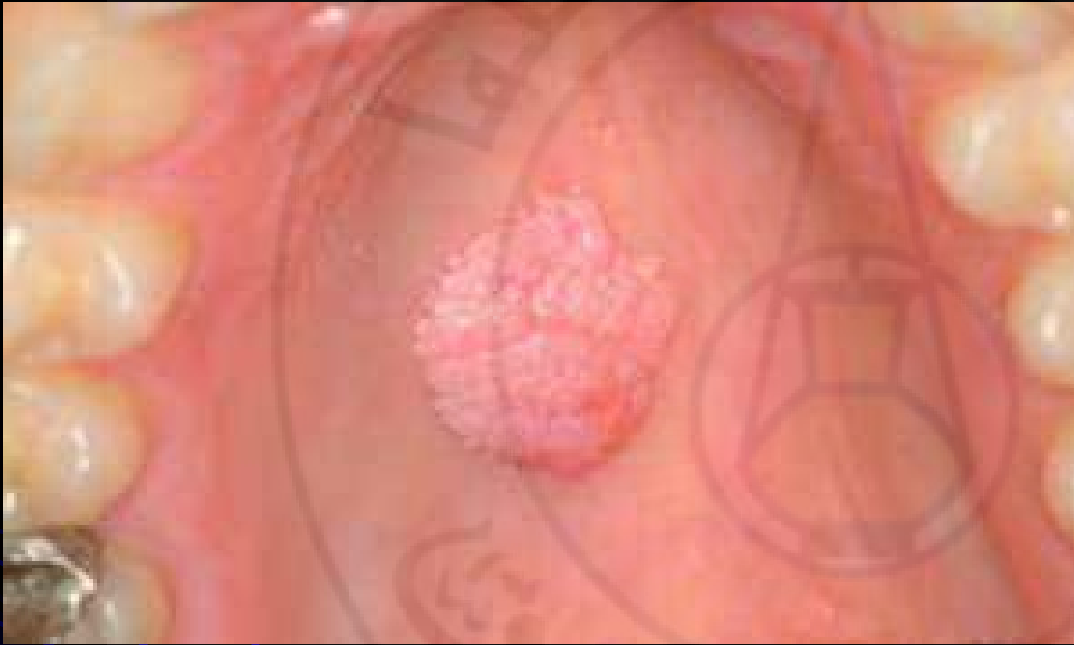




# Verrucous carcinoma

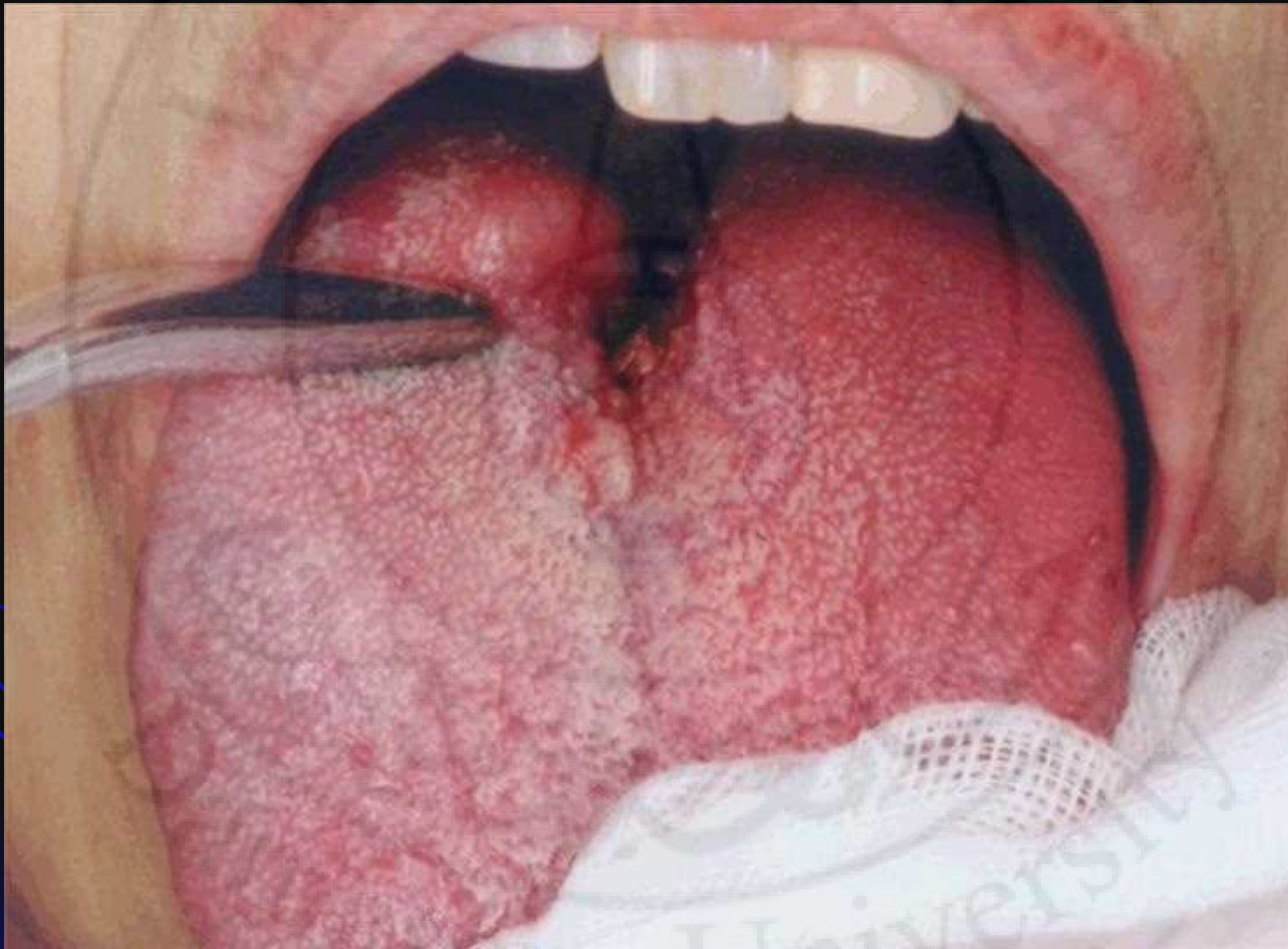


# Verrucous carcinoma



# Basaloid squamous cell carcinoma

- An aggressive, high grade variant of SCC
- Uncommon in oral cavity but slightly more common in the oropharynx, epiglottis, piriform sinuses & base of tongue.
- Composed of both basaloid & squamous cells.



# Papillary squamous cell carcinoma

- Very rare.
- Affects mainly the larynx and less the oropharynx and nasopharynx.
- Exophytic and papillary (polypoid) growth with favorable prognosis.
- Relationship has been established with **HPV** to varying degrees.

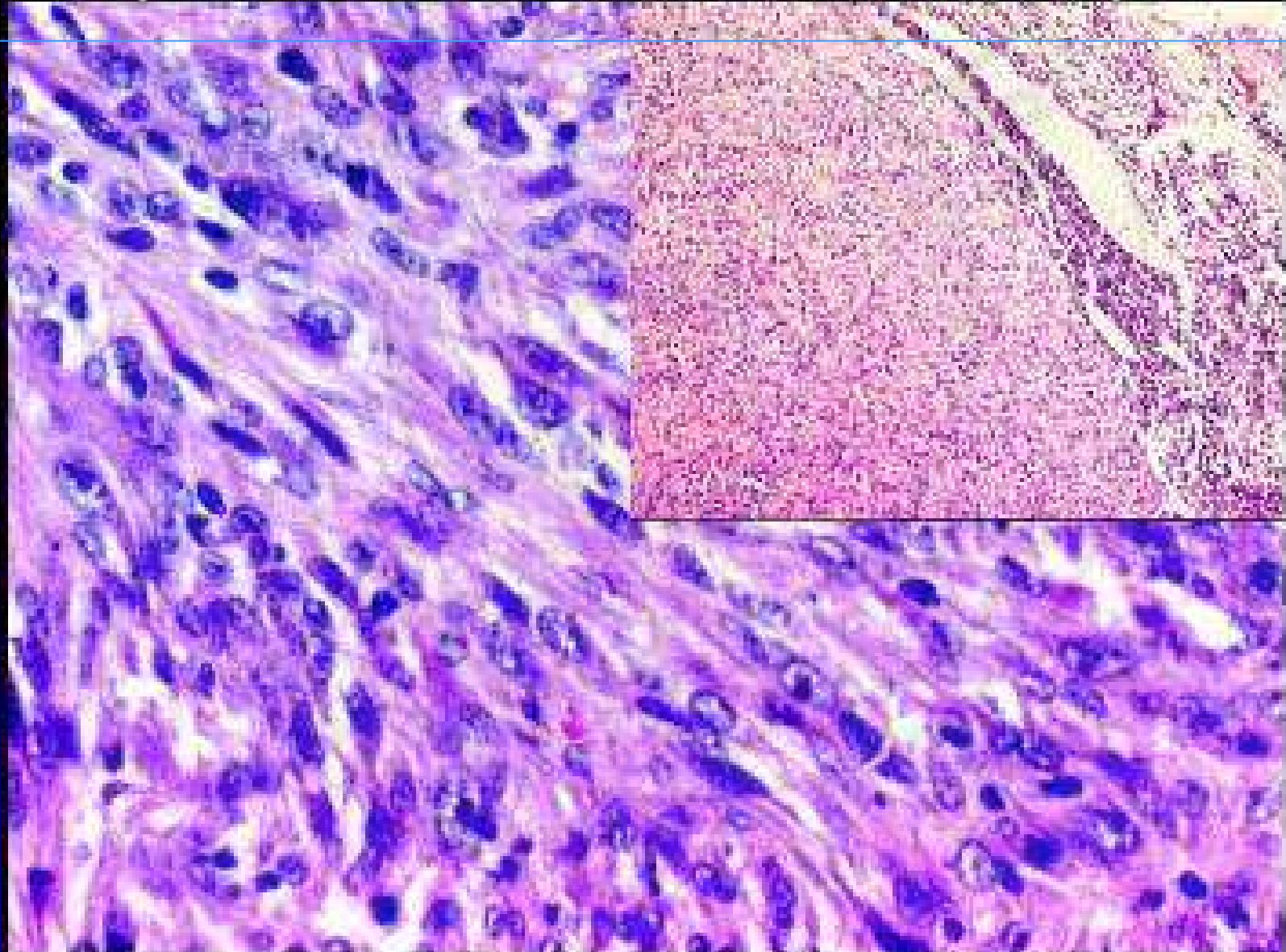


# Spindle cell carcinoma **SpCC**

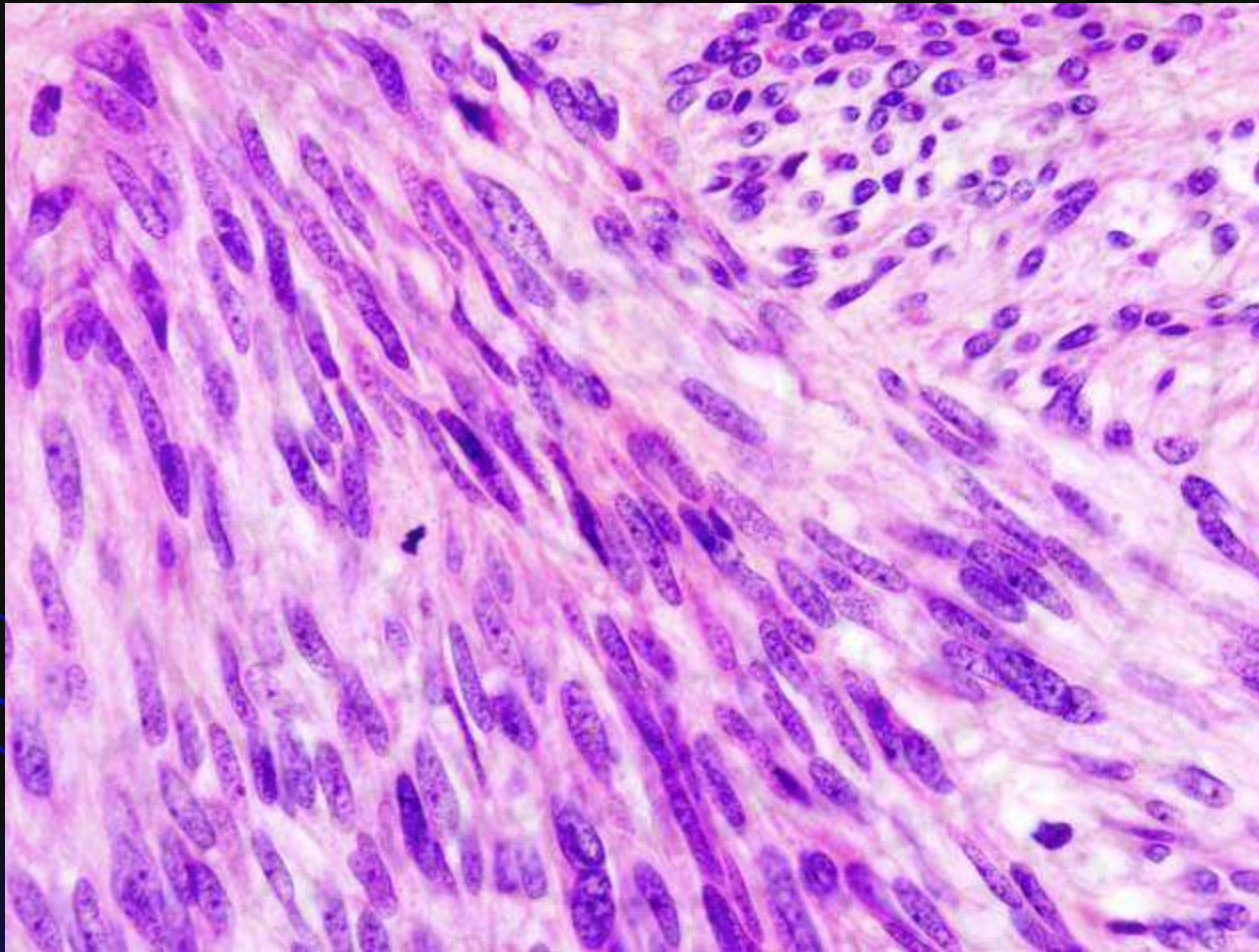
- Rare type of SCC.
- Smoking, alcohol consumption & previous irradiation are predisposing factors.
- SpCC consist of elongated (spindle) cells of epithelial origin, representing an unusual form of poorly differentiated SCC (morphologically resembles a sarcoma).
- The most common site of origin: glottis & hypopharynx ..... It could be seen rarely on the buccal mucosa.



# Spindle cell carcinoma SpCC



# Spindle cell carcinoma **SpCC**



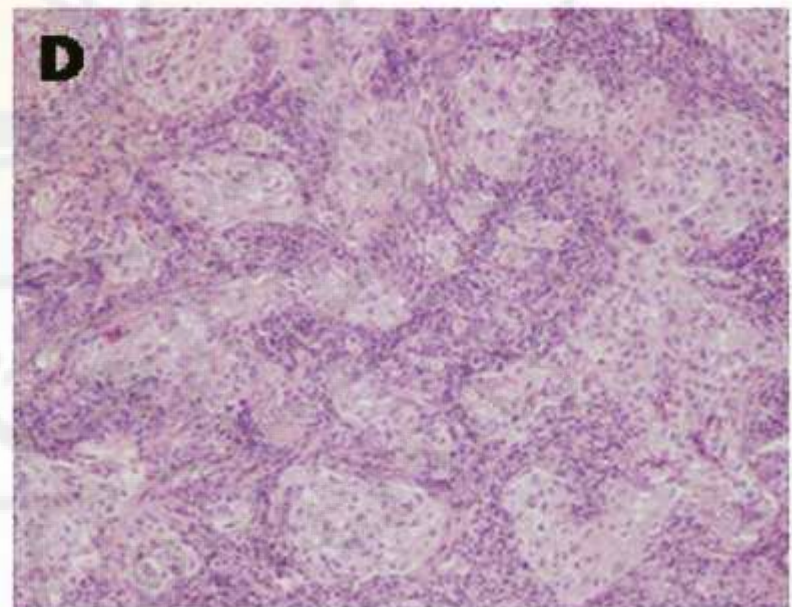
# adenosquamous carcinoma

- ASC is an aggressive rare variant of SCC with high infiltrative capacity.
- Presents with dual histomorphology : having both squamous and glandular cell components.
- Controversial tumor as it is similar to salivary gland mucoepidermoid carcinoma.
- The affected sites of oral region: palate, tonsillar pillar, floor of the mouth

# lymphoepithelial carcinoma







# Lymphoepithelial Carcinoma

- Poorly differentiated squamous cell carcinoma or histologically undifferentiated carcinoma accompanied by a prominent reactive lymphoplasmacytic infiltrate, morphologically similar to nasopharyngeal carcinoma
- Strong association with Epstein-Barr virus (EBV)



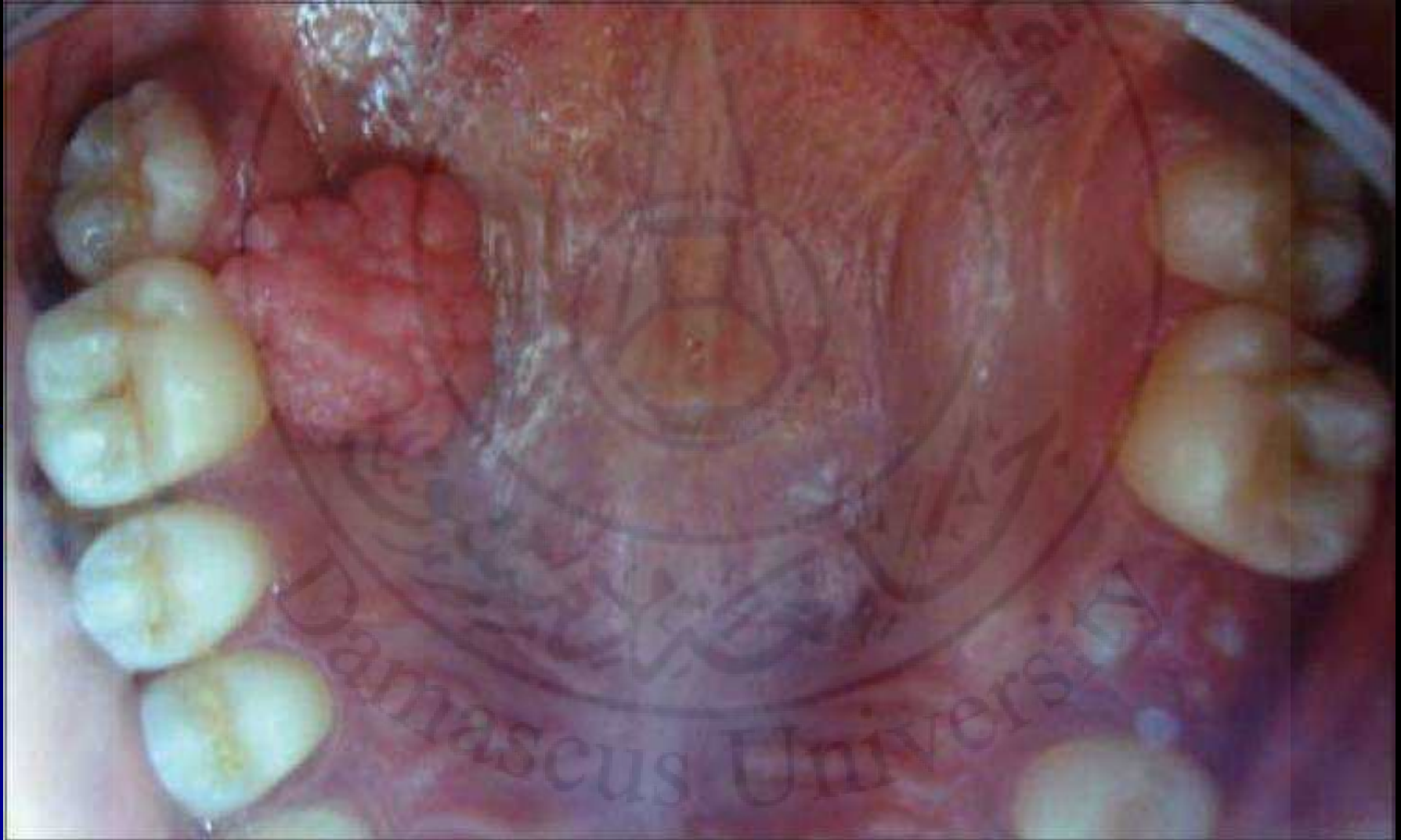
# benign epithelial tumours

- 1- papillomas:
  - squamous cell papilloma and verruca vulgaris
  - focal epithelial hyperplasia
  - condyloma accuminatum
- 2- keratoacanthoma الورم الشائك المتقرن  
(originates in the pilosebaceous glands ).

# papillomas

- Benign painless proliferating lesions induced by HPV (type 6) , occur at the age 30-50 years, and sometimes can occur before the age of 10y.
- Common site predilection for the lesion is the tongue and soft palate or any other site like uvula and lip vermillion

# squamous cell papilloma







جامعة دمشق  
Damascus University

# squamous cell papilloma





# Papillary Lesions (oral warts)

## Squamous papilloma Verruca vulgaris

### **Clinical presentation**

- Signs:
- single or multiple
  - any mucosal surface
  - sessile or pedunculated
  - small fingerlike projections
  - rough, pebbled surface
  - whitish or light pink

Symptoms: -non-painful  
(unless traumatized)

### **Etiology**

human papillomavirus

### **Diagnosis**

clinical appearance

### **Treatment**

surgical excision  
cryotherapy





# verruca vulgaris



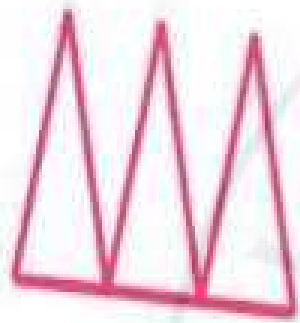


- Human papillomavirus (HPV). **Verruca vulgaris** on the lateral border of the tongue exhibits the **multiple, sharp-tipped, white, verrucous appearance**, which is **classic for this lesion in the oral cavity**. Not all verrucae are so clinically diagnostic.



- This verruca on the retromolar pad shows much less keratinization and a broader base.
- Verrucae and papillomas may be difficult to differentiate, but both are usually surgically excised.





### **Verruca**

Upside down V



### **Condyloma**

Sideways C



### **Papilloma**

Pedunculated like P

See Online DDS MS FRCDC

A mnemonic for remembering the microscopic and clinical shapes of verruciform oral lesions:

- **Verruca vulgaris** is shaped like a series of inverted V's.
- **Condyloma acuminata** are shaped like a series of C's placed on their sides.
- **Papillomas** are pedunculated like the letter P.



Univers



# condyloma accuminata

- viral induced lesion . Sexually transmitted.
- Early stage : multiple pink nodules.
- Later it grows and coalesce to become soft broad base papillary growth.

# Papillary Lesions (oral warts)

Condyloma acuminatum

Focal epithelial hyperplasia

## **Clinical presentation**

Signs: -multiple/clustered

-any mucosal surface

-sessile

-slightly grainy surface

-whitish or light pink

Symptoms: non-painful

## **Etiology/risk factors**

human papillomavirus

## **Diagnosis**

clinical appearance

## **Treatment**

surgical excision

cryotherapy

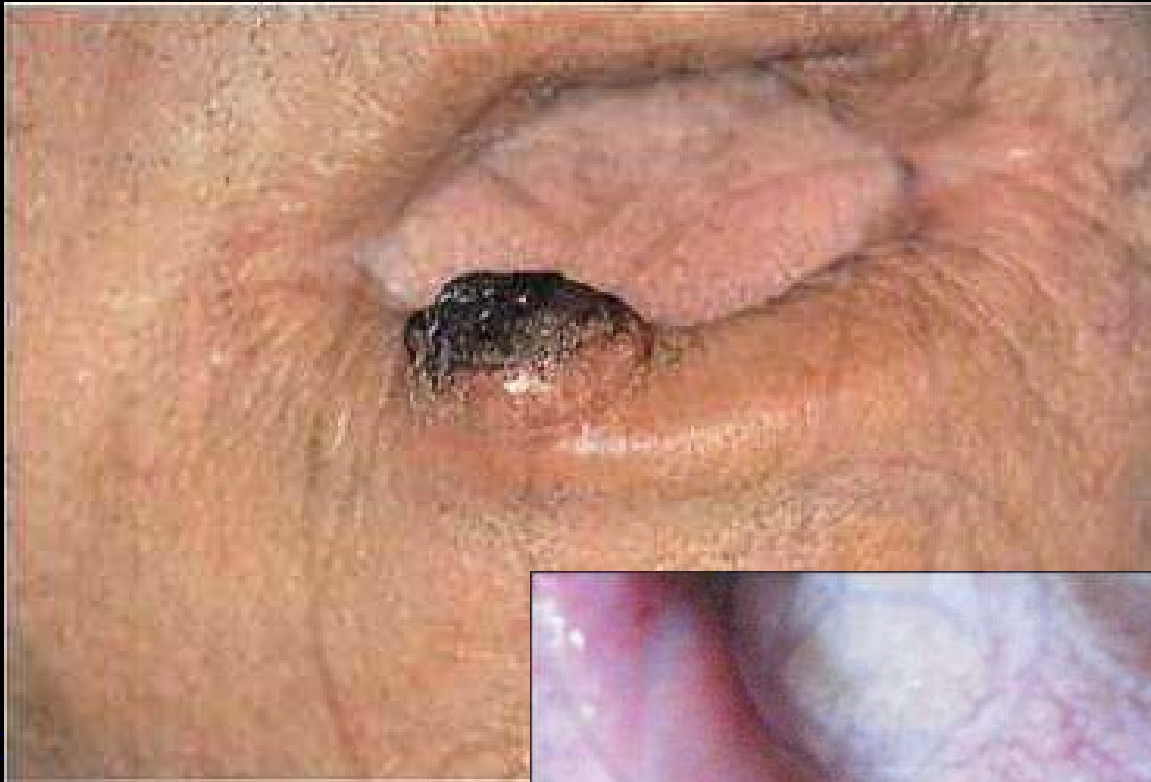


# keratoacanthoma

- Self-limited benign epithelial proliferative lesion that eventually presents with very similar clinical feature to SCC.
- Many KA appear in the vermilion border of the lips .

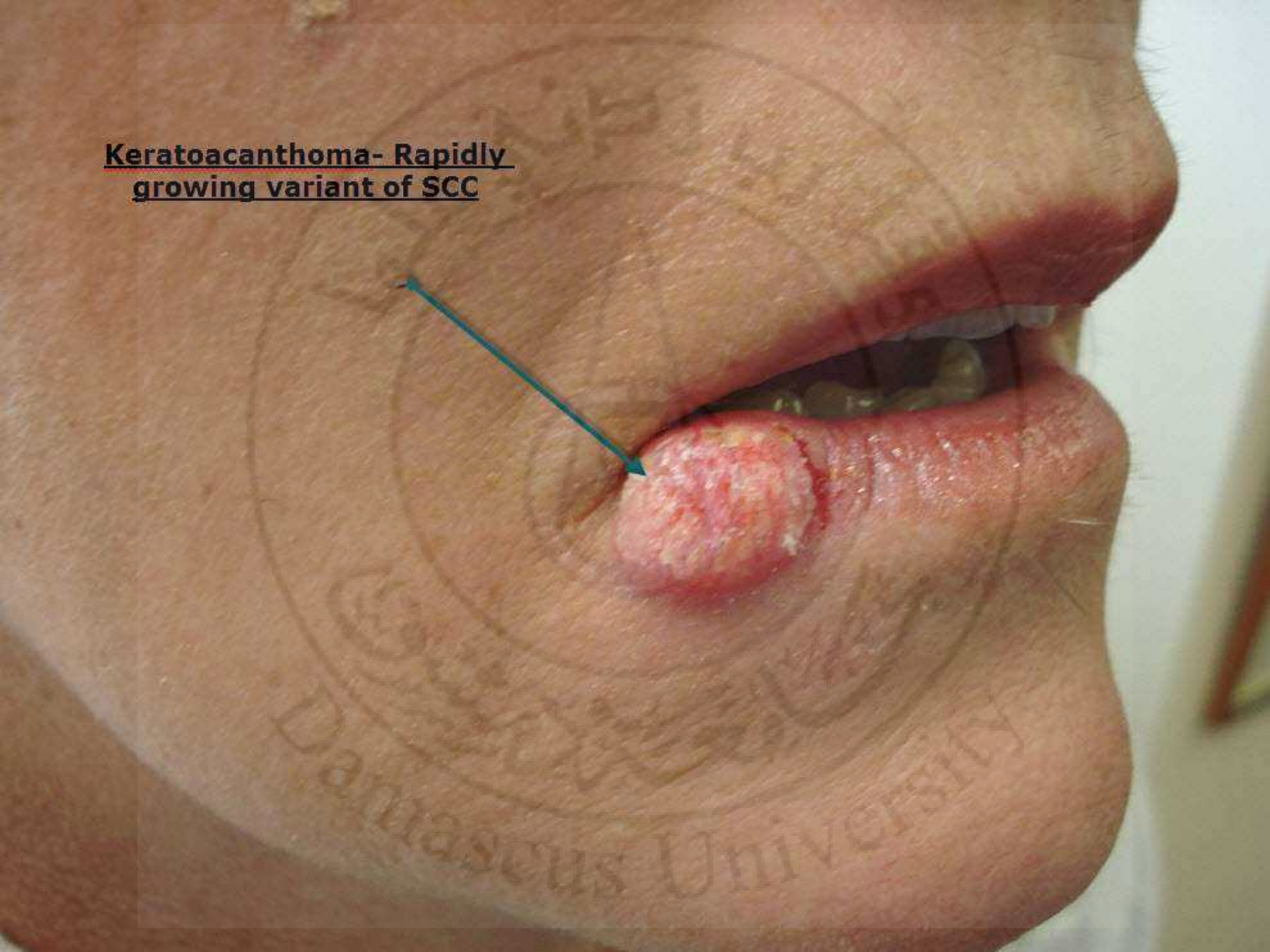








**Keratoacanthoma- Rapidly  
growing variant of SCC**



# salivary gland tumours

- 1- salivary gland carcinoma
- 2- salivary gland adenomas

## 4- connective tissue tumours

- Most benign CT tumors present as swellings and may be indistinguishable from hyperplastic lesions.

- Classification of CT neoplasms according to the tissue of origin :
  - Tumors of Fibrous tissues
  - Tumors of Adipose tissue.
  - Tumors of Vascular tissue.
  - Tumors of peripheral nerves.
  - Granular cell tumors.
  - Malignant Lymphomas.

# Tumors of fibrous tissue

- True benign neoplastic overgrowths of fibrous tissue (**true fibroma**) in the oral cavity are **rare** since clinically and histologically they can't reliably be distinguished from hyperplasia.
- The term **Fibroma** has been used
  - inappropriately to describe reactive lesions (such as **fibrous epulis** & **fibroepithelial polyp**).



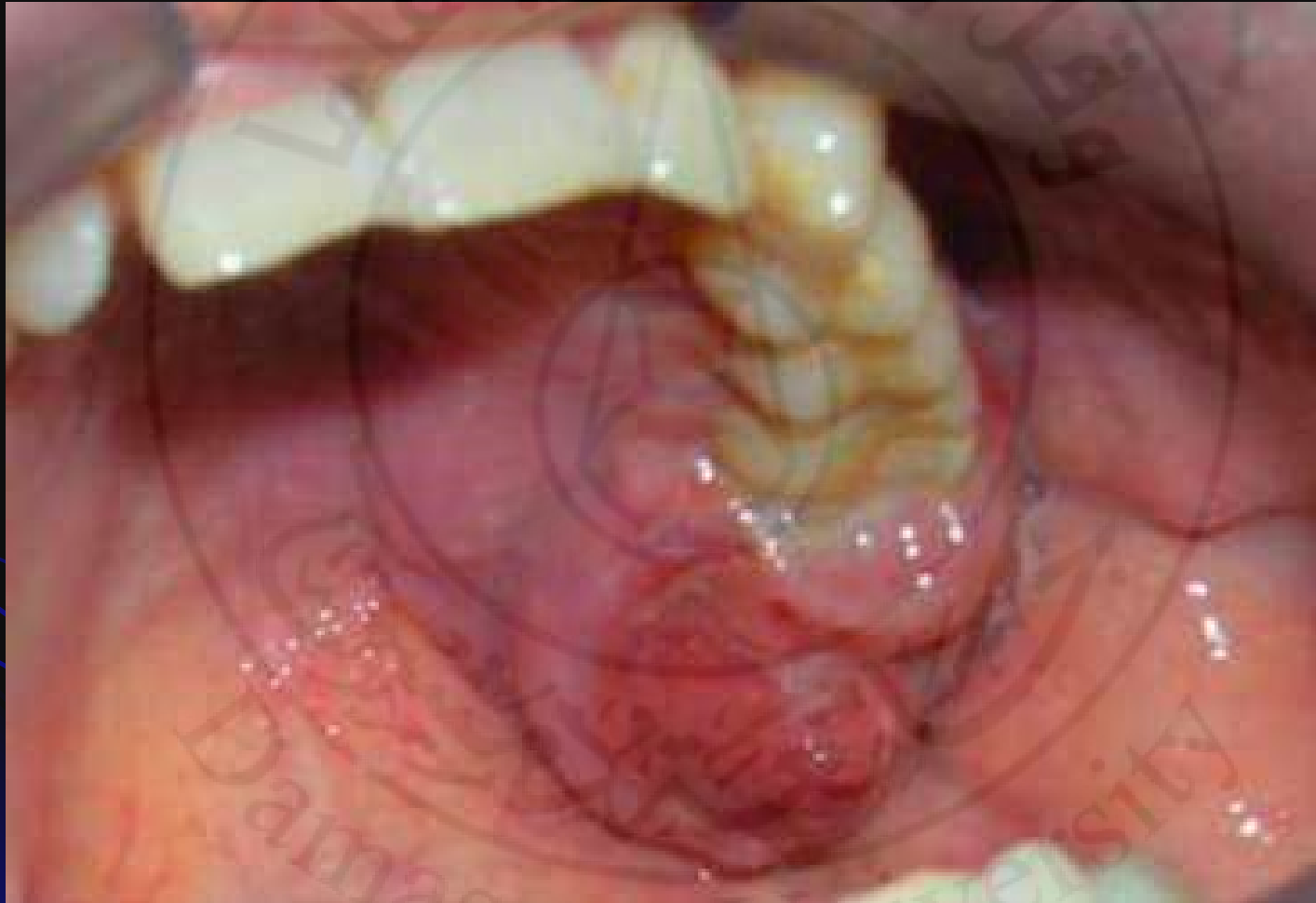
# Malignant tumors: **Fibrosarcoma**

- **Rare** in the oral cavity, have a relatively good prognosis (5 year survival rate is 70%).
- Fibrosarcoma have been classified histologically into:
  - Myxoid Fibrosarcoma
  - Sclerosing epitheloid sarcoma.

# fibrosarcoma



# fibrosarcoma





# Other lesions of fibrous tissue

- **Peripheral odontogenic fibroma:** slowly growing solid firmly attached gingival mass sometimes arising between teeth and may displace them.
- Consists of: cellular fibrous connective tissue & non-neoplastic islands of odontogenic epithelium.



# Peripheral odontogenic fibroma



- **Fibromatosis**: this term refers to a group of non-neoplastic infiltrating fibrous proliferations with a biologic behavior and microscopic appearance intermediate between those of true fibromas and fibrosarcomas.
- infiltrative growth , aggressive clinical behavior( damage nearby structures causing organ dysfunctions) with frequent local recurrence .

# Hereditary Gingival Fibromatosis

- Eg: gingival overgrowth & gingival hyperplasia
- Slowly growing non-neoplastic localized or generalized enlargement of gingiva.





# Hereditary Gingival Fibromatosis







# Hyperplastic Lesions

- Epulis ( fibrous, vascular, giant cell)
- Pyogenic granuloma
- Fibroepithelial polyps
- Denture irritation hyperplasia
- Papillary hyperplasia of the palate:  
(multiple painless fibrous papules,  
scattered across hard palate, concentrated  
in the midline).

# Tumors of Adipose tissue

- True benign neoplastic overgrowth of adipose tissue ( Lipoma).
- Soft yellowish swelling, most common in the cheek and tongue.
- Histologically:
  - fibrolipoma: lipoma and fibrous tissue stroma
  - Angiolipoma: lipoma and vascular tissue stroma
  - Myxolipoma: lipoma and connective tissue stroma

# lipoma

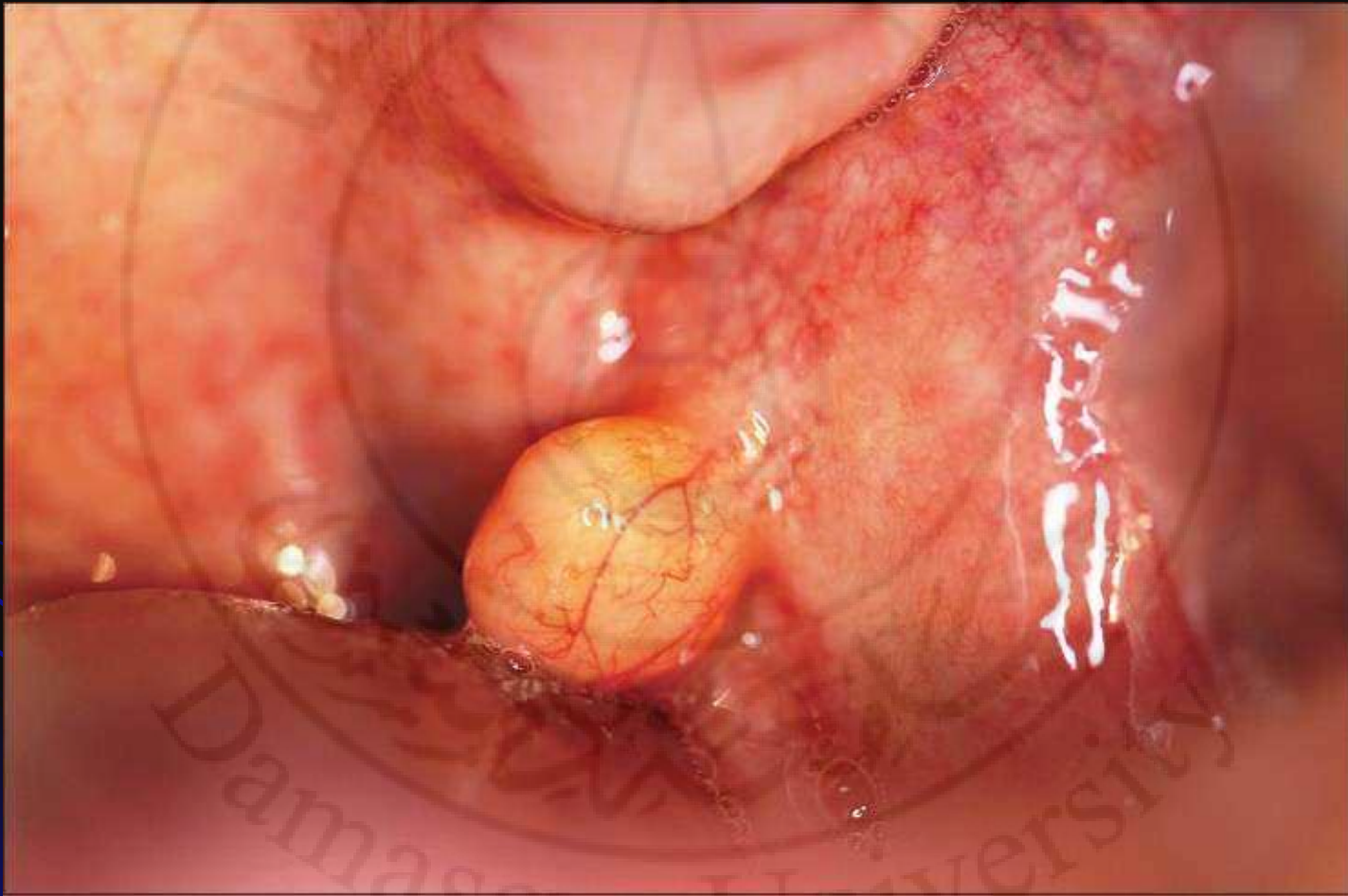


# lipoma



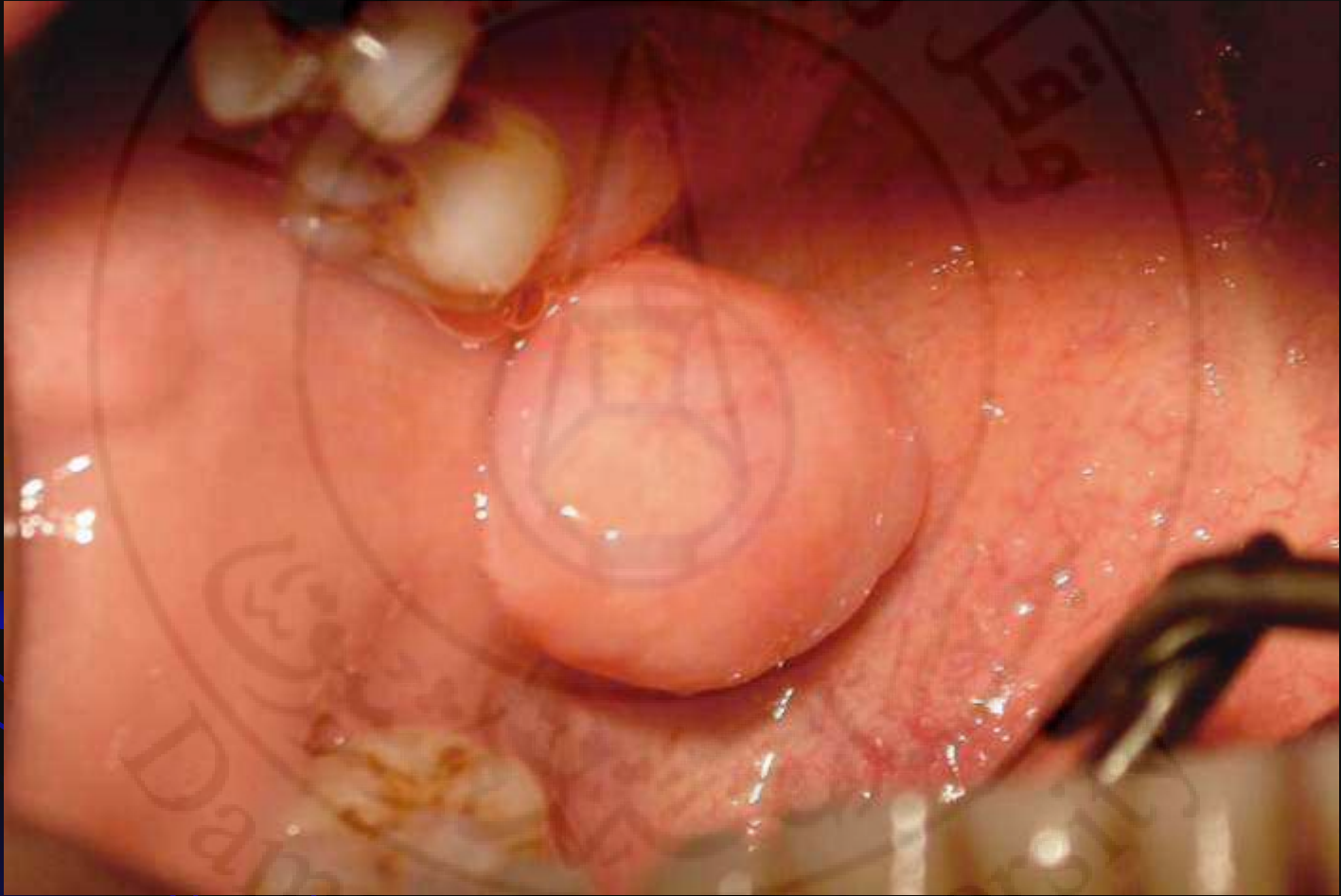


# lipoma

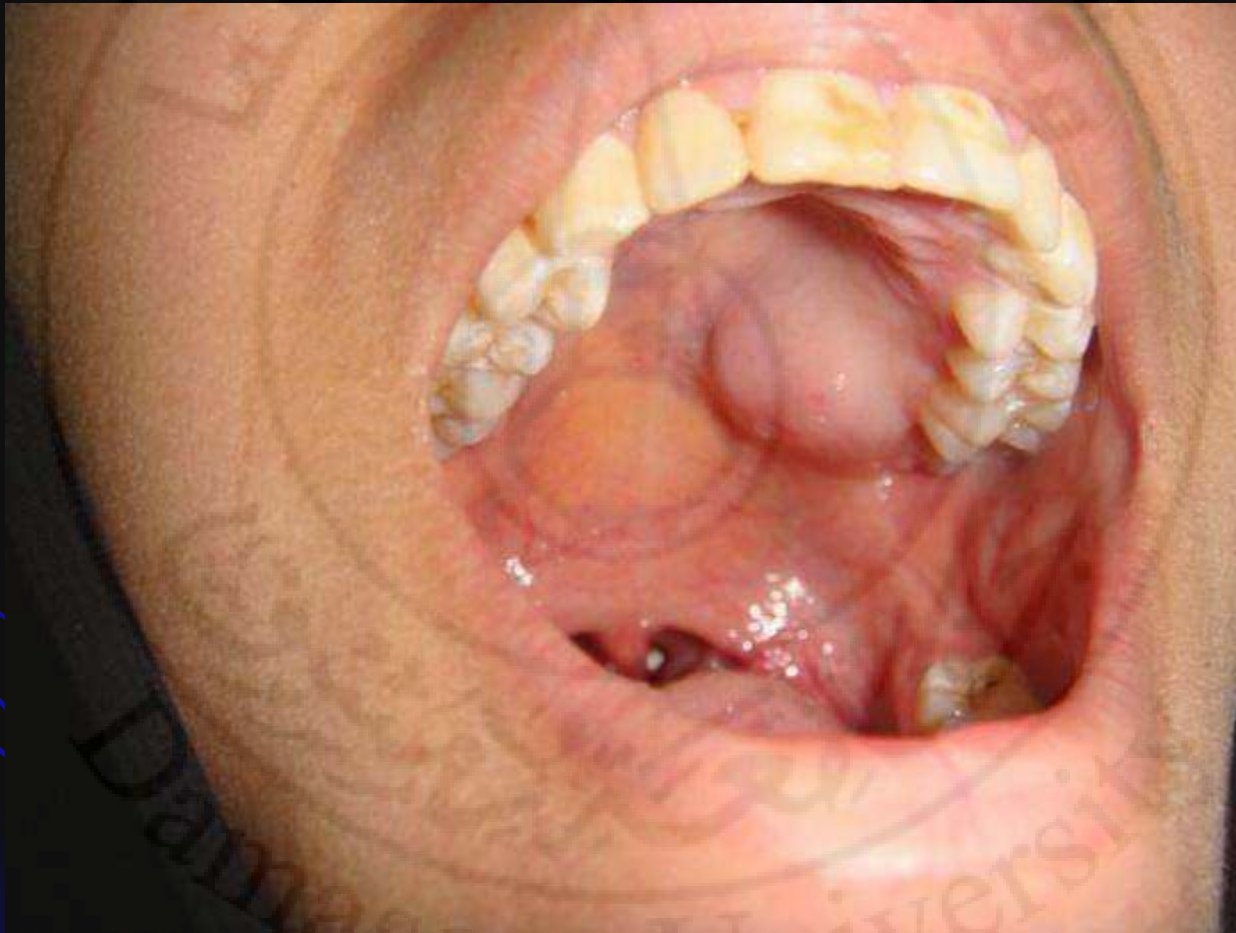




# fibrolipoma



# angiolipoma



# Liposarcoma

- Rare , most arise in cheek , floor of the mouth or the base of the tongue.
- Have good prognosis .



# Tumors of Vascular Tissue

- **Hemangioma**: benign proliferating endothelial cells.
  - common lesion, generally accepted as **hamartomatous** (benign focal malformation) rather than true neoplasia .
  - Affects mucosa , muscles, bone, and major salivary glands.
  - Dark red-purple in color.



# Hemangioma

- Elevated asymptomatic lesion that is either smooth or globular, soft or hard, varies in size.
- Most seen in lips , tongue, cheek and palate.
- Typically blanch on pressure
- Some lesions have thrombosis or calcifications ( detected radiographically).





- Solitary or multiple ( can be generalized angiomatous syndrome).
- The lesion can occur intrabony and it present as radiolucent like cyst.
- Hemangioma may be classified into:
  - Capillary (increased number of blood vessels)
  - Cavernous (increased size of blood vessels)
  - Mixed type





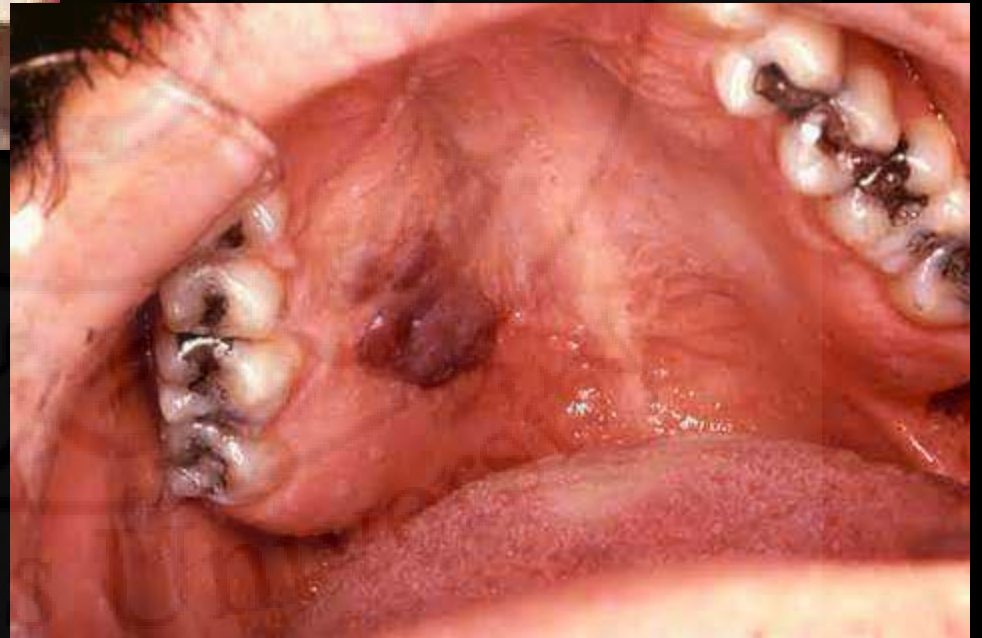


# Malignant vascular lesions

- Kaposi sarcoma(HHV-8) and angiosarcoma are rare but common in AIDS patients.
- Kaposi Sarcoma affects the mouth , nose , throat, lymph nodes, skin .....



# Caposi sarcoma



# Tumors of peripheral nerves

## 1- nerve sheath tumors:

- neurofibroma: solitary or multiple (neurofibromatosis)
- Schwannoma.

- nerve tissue origin:
  - Traumatic neuroma
  - Schwannoma
  - Neurofibroma
  - Neurofibromatosis (Von Recklinghausen's disease)
  - Multiple endocrine neoplasia (Sipple's Syndrome)

## ■ Clinical Features.

- Neurofibroma- Present in young adults as a relatively small, soft, dermal or subcutaneous nodule.
- Discrete non ulcerated nodules with normal overlying skin
- Oral lesions in 7-20% patients, site- buccal mucosa, alv. ridge, palate
- Multiple conventional neurofibromas, prompt consideration of possible NF1
- Diffuse neurofibromas, associated with NF1 in approximately 10% of cases, are usually deeply situated.
- Pain/paresthesia may present



# Multiple Neurofibromatosis





## Neurofibroma

@Tweet\_OralPath  
N. S. ALSHAALAN

The most common type of peripheral nerve neoplasm

Tongue & buccal mucosa are the most common intraoral sites



Source; Oral & Maxillofacial Pathology B Neville, D Damm, C Allen, J Bouquot W B Saunders Co, (3rd E.)

# granular cell tumour

- Uncommon benign lesions, head & neck region accounts 50% of all lesions.
- May be arise from the cells that surround and insulate the nerve cells (schwann cells)
- Non encapsulated.
- Composed of large cells with granular eosinophilic cytoplas, the surface epithelium commonly shows pseudoepitheliomatous hyperplasia, may casue local invasion to the nearby muscles.

# granular cell tumour



# Other connective tissue tumours

2- lymphangioma

3- focal oral mucinosis

4- congenital granular cell epulis.

# lymphangioma





# Tumors of muscles

- Leiomyoma (smooth muscles)
- Rhabdomyoma (skeletal muscles).

# Muscle Lesions

## ❖ Rhabdomyoma:

- Predilection for the soft tissues of the head and neck
  - Floor of the mouth, soft palate, tongue & buccal mucosa
- Mean age: 50 years (children to older adults)
- Asymptomatic
- Well defined submucosal mass
- The neoplastic cells mimic their normal counterpart (adult)



Well demarcated but unencapsulated →



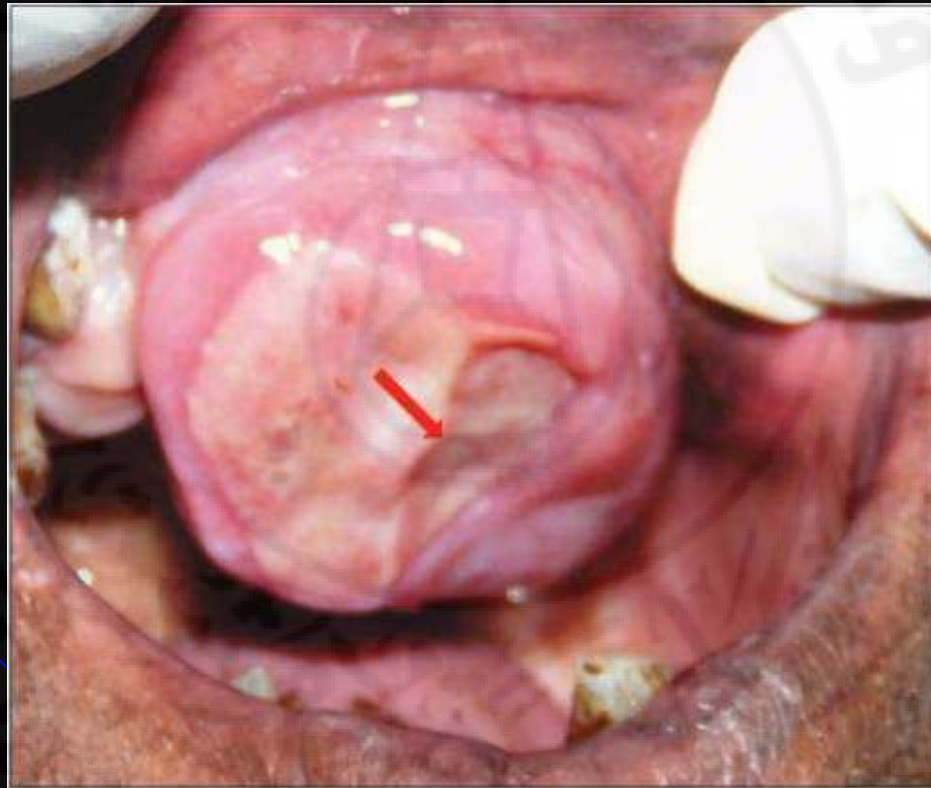
↑  
Large eosinophilic granular cell with peripheral nuclei

# Malignant Lymphmas

- Neoplastic proliferation of the cells of the lymphoreticular system.
- The cervical lymph nodes are most often affected followed by Waldeyer's ring.
- Classified into:
  - 1- Hodgkin's lymphoma (Reed Sternberg cells)
  - 2- Non Hodgkin's lymphoma (B cell type, T and NK cell types)

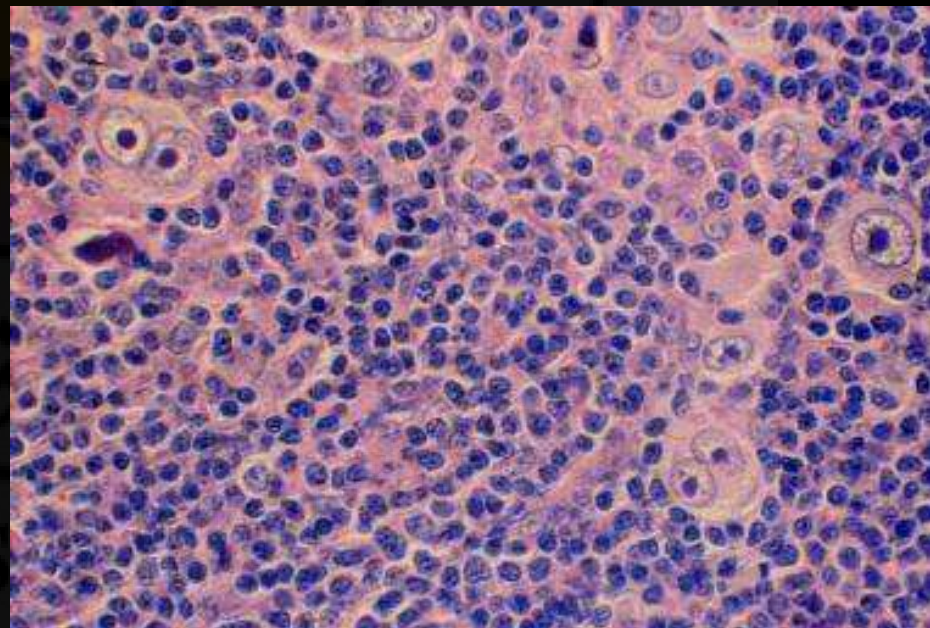
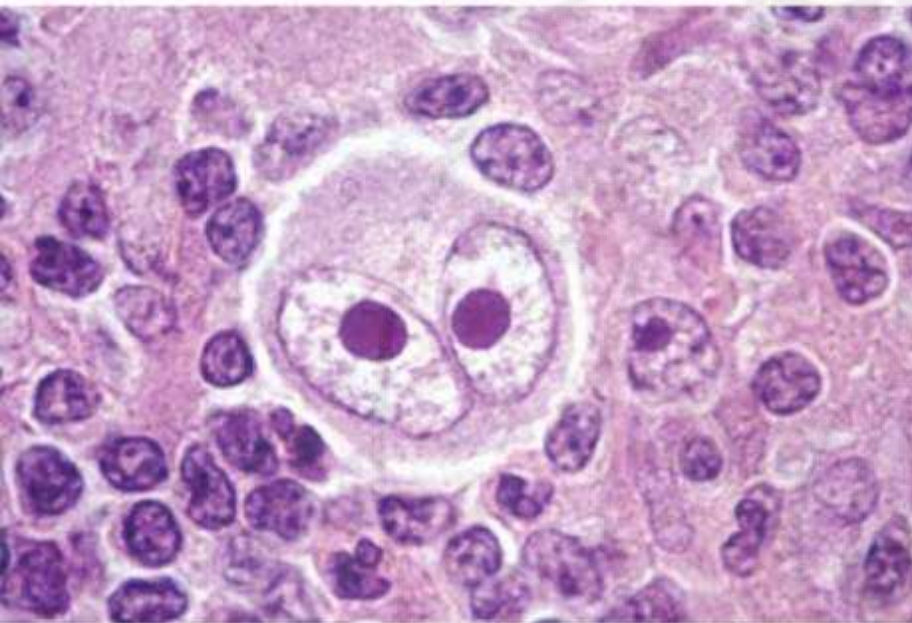
# Hodgkin`s lymphoma

- Affects young age group
- Cervical lymph nodes.
- Etiology: genetic and EBV.





## REED-STERNBERG CELL



# Non Hodgkin`s Lymphoma

- Less common, extra nodal lymphomas, increased incidence in AIDS patients, divided into :
  - B cell malignant lymphoma
  - T/NK cell lymphoma

# Non-Hodgkin's Lymphoma



**Clinical features** - Firm, rubbery, pink, reddish or purple swelling, with or without ulceration.

- Predilection for the gingival palatal mucosa.

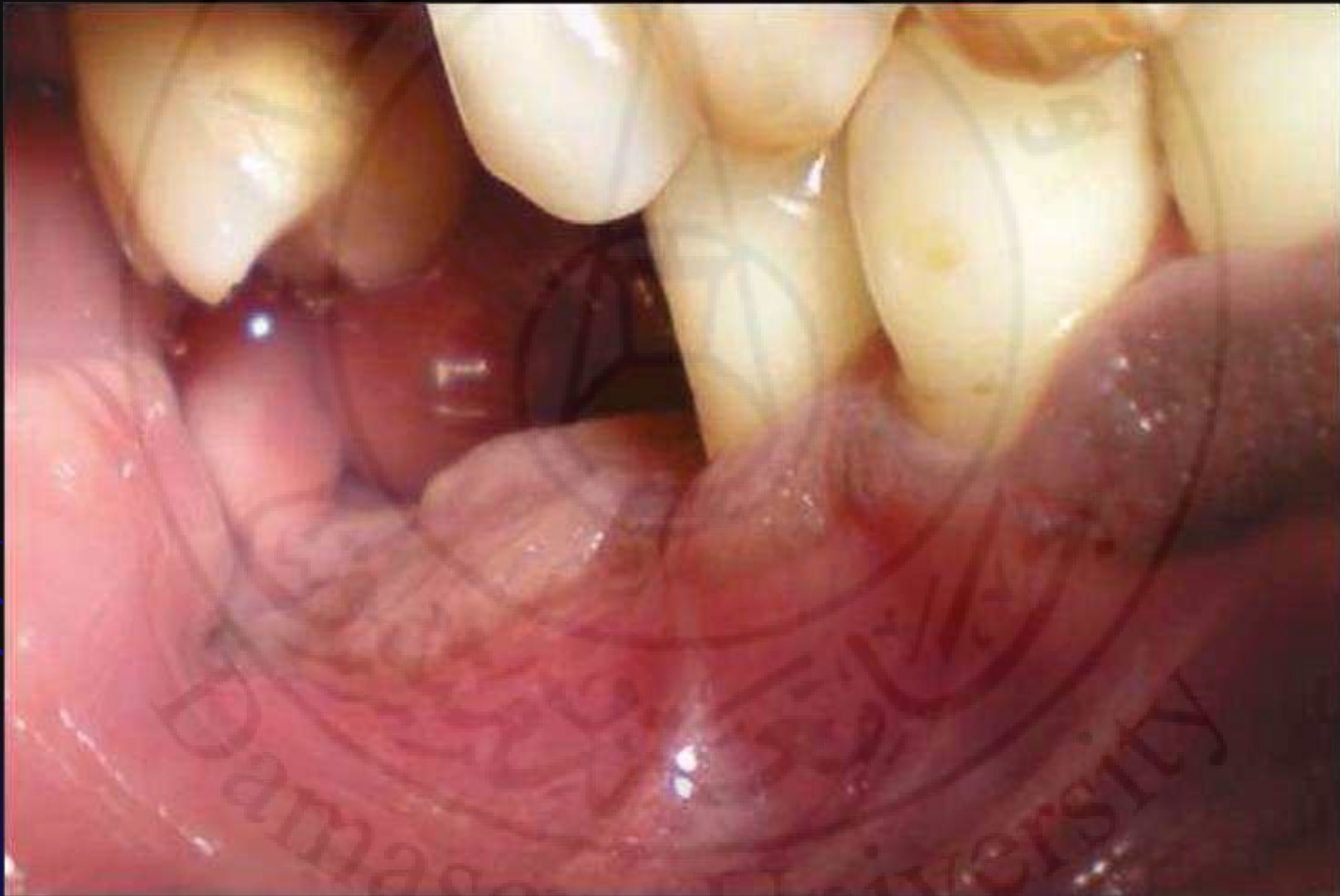
**Defenitive diagnosis- Biopsy**

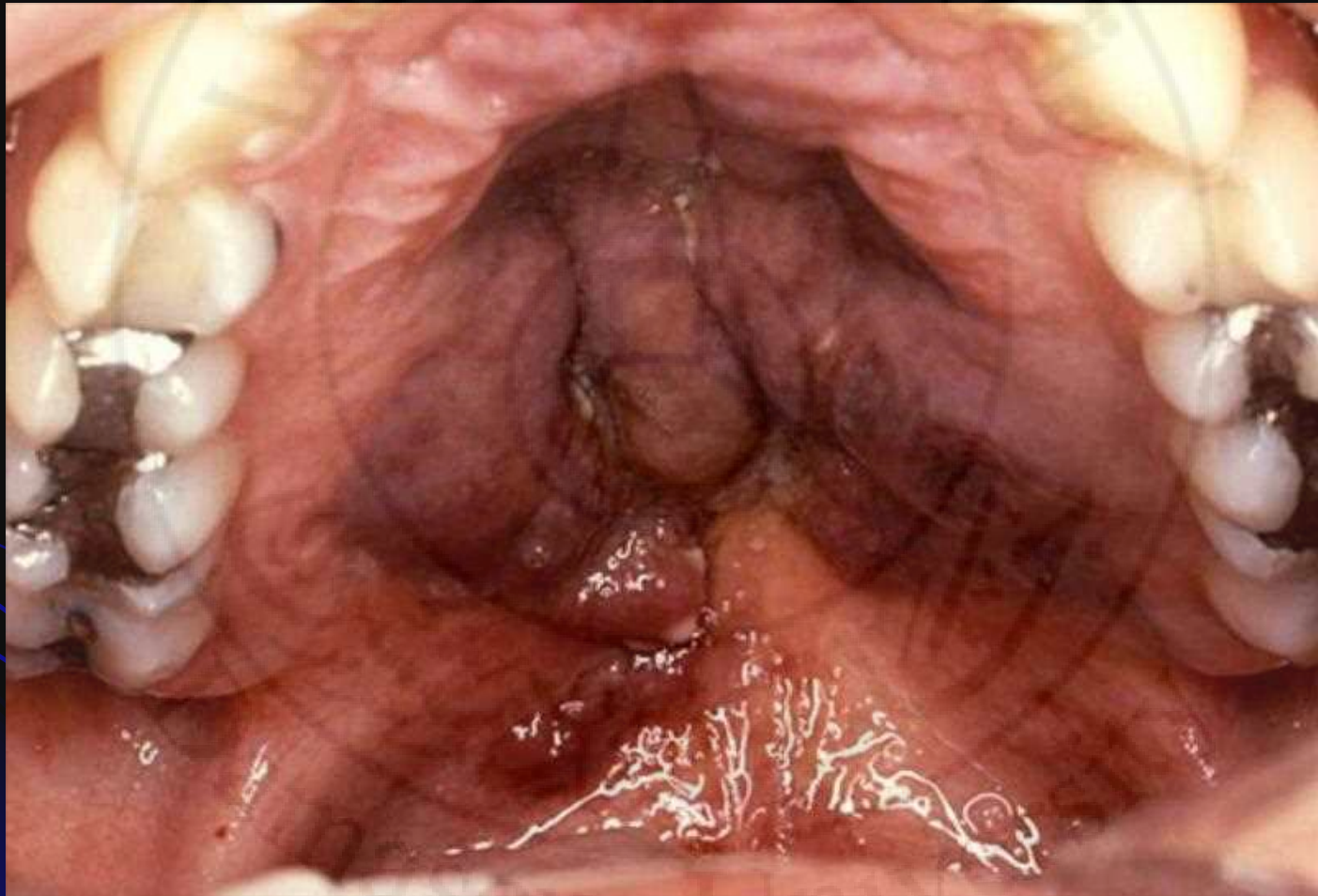
- Appropriate immunocytochemical or molecular biological investigations





# Non Hodgkin`s Lymphoma







# Degrees of epithelial dysplasia and carcinoma

- 1- **mild dysplasia**: atypical and immature basal cells extend above the basal layer into the lower third of the epithelium.
- 2- **moderate dysplasia** atypical and immature basal cells extend above the basal layer into the middle third of the epithelium.
- 3- **severe dysplasia**: atypical and immature basal cell extend throughout the epithelium.
- 4- **carcinoma**: atypical and immature basal cells extend throughout the epithelium with invasion of lamina propria.

# Clinical features?

- 1- granular ulcer.
- 2- red & white lesions.
- 3- mixed red & white lesions.
- 4- lump/ lump- ulcer.
- 5- non- healing extraction socket.
- 6- lymph node enlargement ( hardness- fixation).



# Oro-facial Manifestations of endocrine disorders

Dr.Abeer Ahmad Aljoujou  
PhD. Oral Medicine

- The endocrine system is responsible for **hormonal secretion** and is closely related to the central nervous system, as it controls its functions through the hypothalamus and pituitary glands. It controls physiology of human body and maintains its homeostasis. The neuroendocrine system is responsible for adaptation to environmental changes.
- Therefore, it is important for every dentist to be aware of the **oral manifestations of endocrine disorders**, to avoid the resulting complications.
- This lecture reviews the important oral manifestations of endocrine disorders which help dental surgeons to diagnose and treat the patients appropriately.



- Endocrine disorders, apart from diabetes mellitus and thyroid diseases are uncommon. They are rare causes of oral disease, but occasionally oral changes can lead to their **diagnosis**.

# Hyper pituitarism فرط نشاط النخامي

- Excess hormone production by the anterior pituitary gland
  - Caused most often by a benign tumor (pituitary adenoma) that produces growth hormone
  - **Giantism** العملاقة: results if it occurs before the closure of long bones.
  - **Acromegaly** ضخامة النهايات: results when hypersecretion occurs during adult life.

# المظاهر الفموية الوجهية لفرط نشاط النخامى

- قبل التهام الدروز واكتمال نمو العظام الطويلة تحدث العملاقة :
  - ضخامة الفك السفلي
  - اللسان العرطل
  - جذور أسنان طويلة وضخامات ملاطية تظهر شعاعياً.



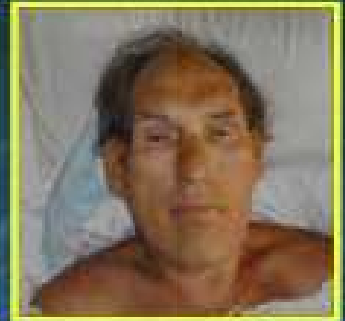
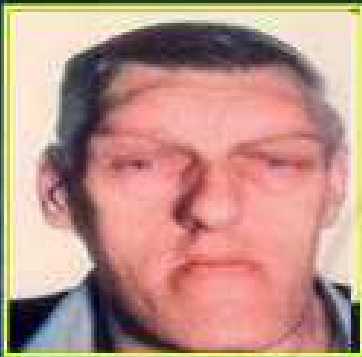




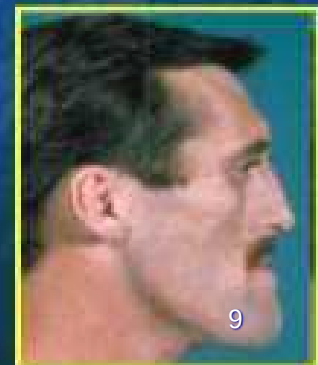


# فرط نشاط النخامى عند البالغين

- - بعد التحام الدروز واكتمال تطور العظام الطويلة:
- ضخامة في الفك السفلي والعلوي وسوء إطباق صنف ثالث.
- اللسان العرطل
- ضخامة وثخانة الشفاه.
- بروز جبهي وضخامة العظام الأنفية (تغير الصوت).



Separation of the teeth  
on the lower jaw



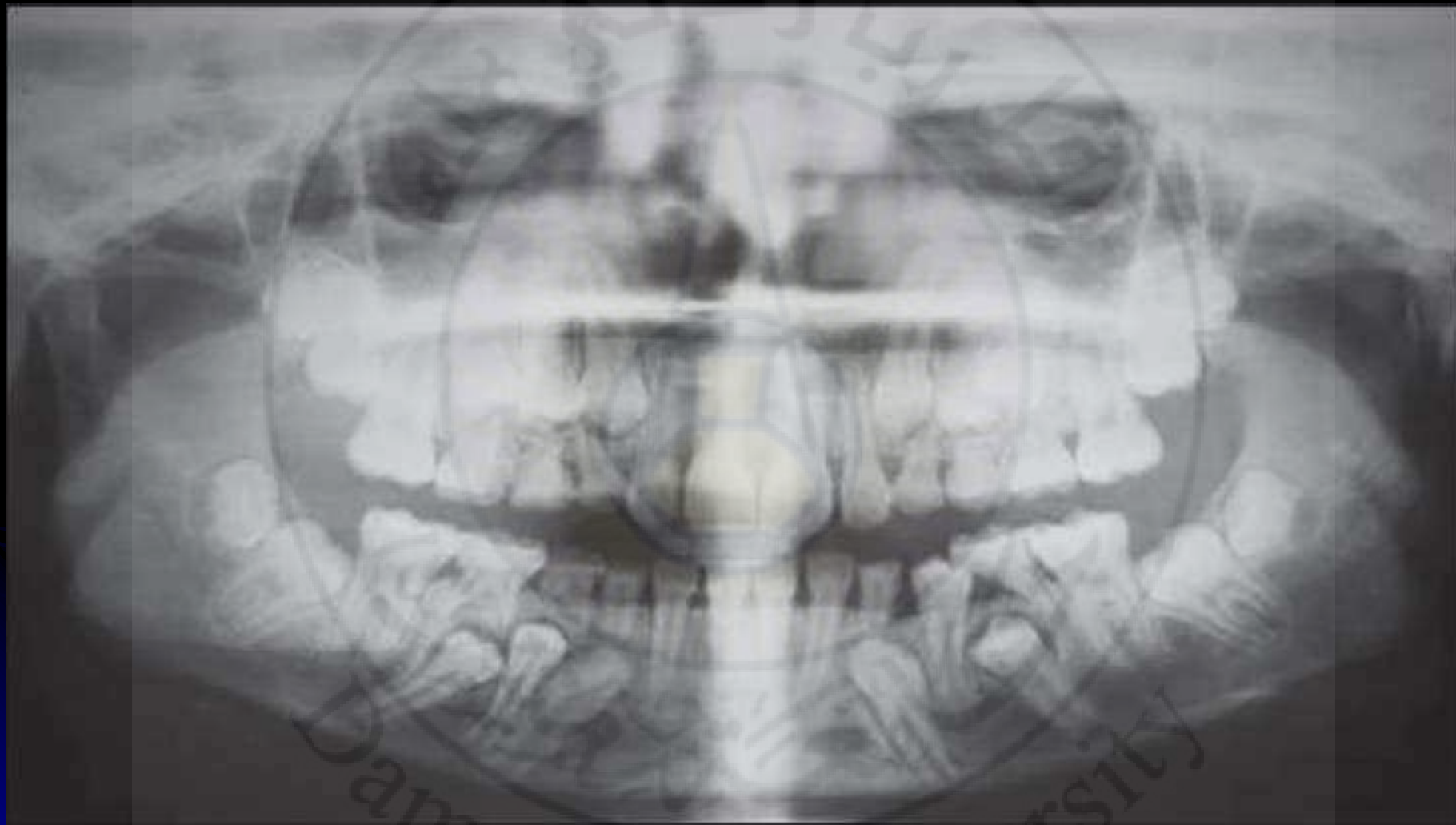
# المظاهر الفموية الوجهية لقصور النخامى

- سقوط متأخر للأسنان المؤقتة ( بقاء مديد).
- تأخر بزوغ الأسنان الدائمة.
- ازدحام وتراكب الأسنان الدائمة وسوء توضعها
- نقص في نمو وتطور الفكين العلوي والسفلي مع سوء اطباق
- أسنان صغيرة الحجم والجذور.



B

Dr.Abeer A Aljoujou





## **Oral manifestation includes –**

**altered tooth eruption pattern**

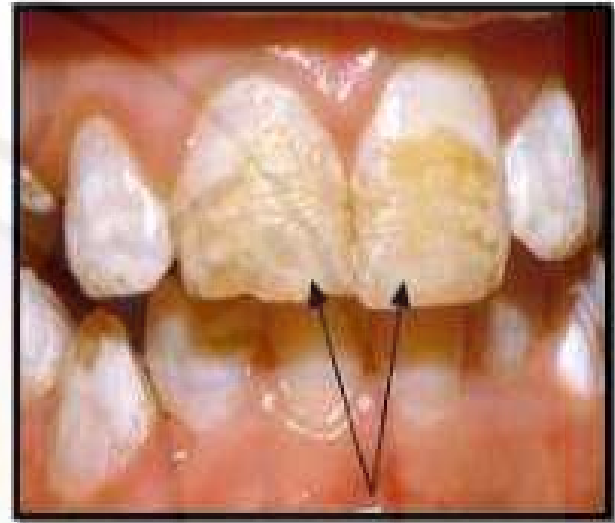
**short blunted roots**

**enamel hypoplasia**

**dentin dysplasia**

**impacted teeth**

**partial anodontia**



**Enamel hypoplasia**





Dr.Abeer A Aljoujou

A

# Oral Manifestations of Hyperthyroidism

- سقوط مبكر للأسنان المؤقتة.
- وبزوغ سريع مبكر للأسنان الدائمة.
- هشاشة العظام في الفكين.
- نخور سنية وتطور سريع للمرض حول السني.
- حس حرق في اللسان.

# Hypothyroidism قصور الدرق

- Oral manifestations
  - In infants
    - Thickened lips, enlarged tongue (edema) , and delayed eruption of teeth
  - In adults
    - Enlarged tongue
    - Myxedema : tongue, lips and eyelids.

## Hypothyroidism

- Salivary gland enlargement
- Compromised periodontal health
  - delayed bone resorption
- Macroglossia
- Glossitis
- Dysgeusia
- Delayed dental eruption
- Enamel hypoplasia in both dentitions, (being less intense in the permanent dentition)
- Anterior open bite
- Micrognathia
- Thick lips
- Mouth breathing

## Hyperthyroidism

- Increased susceptibility to caries
- Increased susceptibility to periodontal disease
- Enlargement of extraglandular thyroid tissue
- Burning mouth syndrome
- Accelerated dental eruption
- Maxillary and mandibular osteoporosis
- Development of connective tissue diseases like Sjogren's syndrome or Systemic lupus erythematosus



# Hypothyroidism

- lethargy, dry and coarse skin
- swelling of the face and extremities
- huskiness of the voice, constipation, weakness, and fatigue
- **Bradycardia**
- **Hypothermia**







# Hypothyroidism

- Oral & Dental manifestations
  - Delayed eruption
  - Enamel hypoplasia in both dentitions (being less intense in the permanent dentition)
  - Anterior open bite
  - Macroglossia
  - Micrognathia
  - Thick lips
  - Dysgeusia
  - Mouth breathing



# Hyperparathyroidism

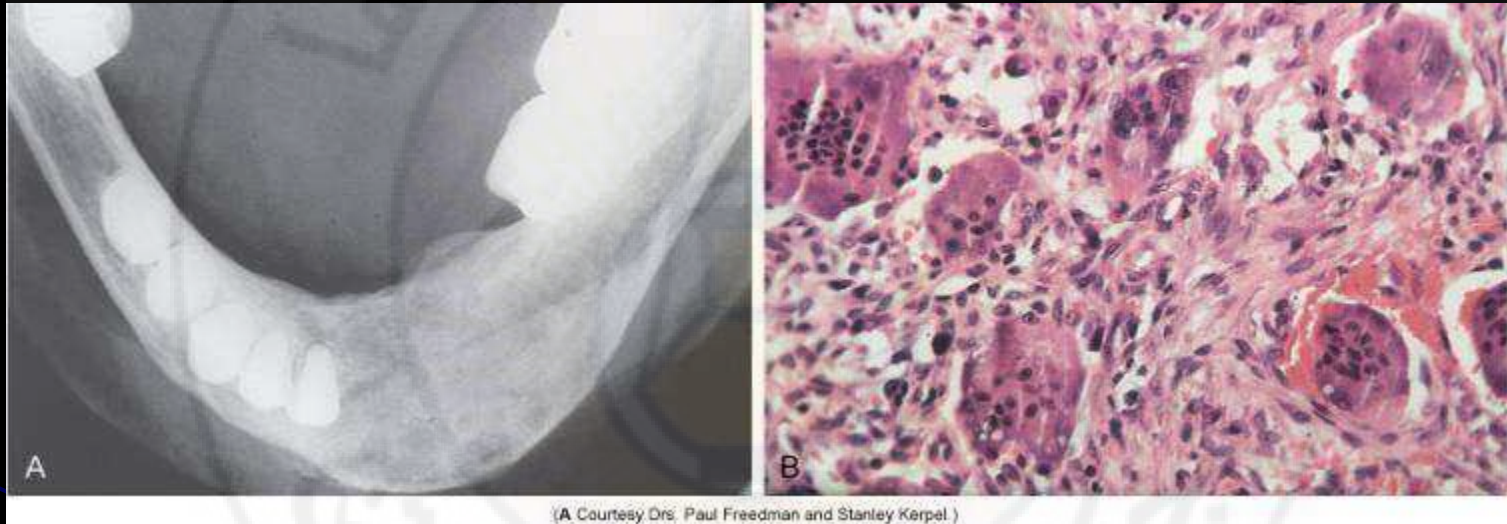
- Due to excessive secretion of parathyroid hormone from the parathyroid glands
  - The four parathyroid glands are located near the thyroid gland.
- Parathyroid hormone plays a role in calcium and phosphorous metabolism.
  - Hyperparathyroidism is characterized by elevated blood levels of calcium (hypercalcemia) and low levels of blood phosphorous (hypophosphatemia).



# Oral Manifestations of Hyperparathyroidism

- Well-defined unilocular or multilocular radiolucencies
  - Microscopically, they appear to be CGCG (central giant cell granulomas).
  - Bone may have a mottled appearance.

# Hyperparathyroidism (cont.)





# المظاهر الفموية لقصور جارات الدرق

- سوء تصنع وتكلس المينا
- اضطراب في مواعيد وترتيب بزوغ الأسنان
- سوء تكون العاج
- انطمار الأسنان
- نقص في عدد الأسنان hypodontia
- جذور قصيرة.









# Periodontal Disease and Dental Caries among children and Adolescents Suffering from Endocrine Disorders – A Literature Review

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## Abstract

**Background:** Dental caries and periodontal disease are the most common oral diseases. Their link to disorders of endocrine system is of high interest. Most of the available data relates to the adult population, though its importance among children and adolescents is paramount.

**Objective:** To review the existing evidence examining the link between these clinical conditions among children and adolescents.

**Data sources:** Electronic bibliographic databases and hand searches of relevant publications, based on prepared list of relevant key-words was performed.

**Results:** Paucity of existing data leaves the question of association between most endocrine disorders of the youth with dental caries and periodontal disease, inconclusive, apart from obesity and diabetes mellitus, where it seems to be elucidated.

**Conclusion:** A profound research should be done in order to amend our understanding to what extent, if at all, exists the link between these oral maladies and different pediatric endocrine disorders.

**Ref:** Ped. Endocrinol. Rev. 2017;15(1):000-000

**doi:**

**Key words:** Dental caries, Periodontal disease, Children, Adolescents, Endocrine disorders

## Introduction

The two most prevalent oral diseases of human, are Dental Caries and Periodontal Disease. While the first appears as decay of hard dental tissues, the later manifests as inflammation and possible destruction of their supporting apparatus, in both primary and permanent dentitions. If left untreated, these both oral maladies may lead to tooth loss, reduced masticatory function, poorer nutritional status, low self-esteem and quality of life, negative general health impacts. An association with higher all-cause mortality was also reported (1).

Dental caries involves interactions between the tooth structure, the biofilm formed on the tooth surface, sugars and salivary and genetic factors (2). It is caused by the gram-positive group of microorganisms - mutans streptococci (ms) (3), as well as other cariogenic bacteria (4,5). Though being prevalent at all ages there are peaks of untreated cavitated dental caries at 6, 26 and 70 years (6,7). In the Global Burden of Diseases 2010 Study, untreated cavitated caries in the permanent dentition was found to be the most prevalent condition. Its prevalence amounted to 35% for all ages combined (8).

Periodontal disease develops as a result of imbalance, or so-called 'dysbiosis' between a health-associated biofilm and a host immune inflammatory response. Usually this happens



## Review Article

# Oral manifestations in growth hormone disorders

Atreja Gaurav, Atreja Shikha Handa<sup>1</sup>, Jain Nitul<sup>2</sup>, Sukhija Urvashi

Departments of Prosthodontics and <sup>1</sup>Pediatric Dentistry, MMCDSP, Mullana, Haryana, <sup>2</sup>Department of Oral Pathology, EDOH, Kotputli, Rajasthan, India

### ABSTRACT

Growth hormone is of vital importance for normal growth and development. Individuals with growth hormone deficiency develop pituitary dwarfism with disproportionate delayed growth of skull and facial skeleton giving them a small facial appearance for their age. Both hyper and hypopituitarism have a marked effect on development of oro-facial structures including eruption and shedding patterns of teeth, thus giving an opportunity to treating dental professionals to first see the signs and symptoms of these growth disorders and correctly diagnose the serious underlying disease.

**Key words:** Acromegaly, dwarfism, gigantism, growth hormone

### INTRODUCTION

Growth hormone (GH) hypersecretion results in gigantism or acromegaly, a condition associated with significant morbidity and mortality, while GH deficiency results in dwarfism, growth retardation in children, and the GH-deficiency syndrome in adults.

This article aims at reviewing the various oro-facial and dental manifestations seen in pituitary gland disorder and highlights the need to diagnose such changes as earlier as possible so as to avoid associated medical complications and to reduce mortality and morbidity.

Table 1 highlights the important oro-facial and dental changes as observed in pituitary dwarfism, gigantism, and acromegaly.

### HYPOPITUITARISM

The most striking feature of pituitary dwarfism is short stature of the affected patient and the low growth velocity

**Table 1: Summary of oral manifestations of hypo- and hyperpituitarism**

| Hypopituitarism                                                      | Gigantism                                                     | Acromegaly                                                                             |
|----------------------------------------------------------------------|---------------------------------------------------------------|----------------------------------------------------------------------------------------|
| Delayed eruption rate as well as delayed shedding of deciduous teeth | Teeth size are proportional to generalized enlarged body size | Thick and negroid lips                                                                 |
| Smaller clinical crown of teeth                                      | Interdental spacing                                           | Enlarged tongue (macroglossia) with indentations on lateral borders                    |
| Smaller roots with retarded growth of supporting apparatus           | Dental malocclusion                                           | Enlarged prognathic mandible (lantern jaw appearance)                                  |
| Smaller dental arches                                                | Hypercementosis of roots                                      | Class III type of malocclusion                                                         |
| Crowding and malocclusion                                            |                                                               | Teeth are tipped to outside labial or buccal surface due to pressure exerted by tongue |
| Retarded growth of mandible                                          |                                                               | Increased periosteal bone formation                                                    |
| Fine wrinkles around mouth and eyes                                  |                                                               | Major salivary gland enlargement                                                       |
|                                                                      |                                                               | Thickening and coarsening of facial skin                                               |
|                                                                      |                                                               | Spacing in the teeth                                                                   |
|                                                                      |                                                               | Enlarged nasal sinuses                                                                 |
|                                                                      |                                                               | Anterior open bite                                                                     |

for age. The maxilla and mandible of affected patients are smaller than the normal and the face appears smaller<sup>[1-4]</sup> with the permanent teeth showing a delayed pattern of eruption.<sup>[1,3]</sup> Often the shedding pattern of deciduous teeth

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# Diabetes mellitus

- Periodontitis( accelerated).
- xerostomia.
- Dental caries.
- Candidiasis.
- Lichen planus.
- Oral cancer( rare).



# Diabetes mellitus



*angular stomatitis*



*glossitis*



*candidal infection*



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Dr.Abeer A Aljoujou





# Oral Manifestations of Systemic Diseases

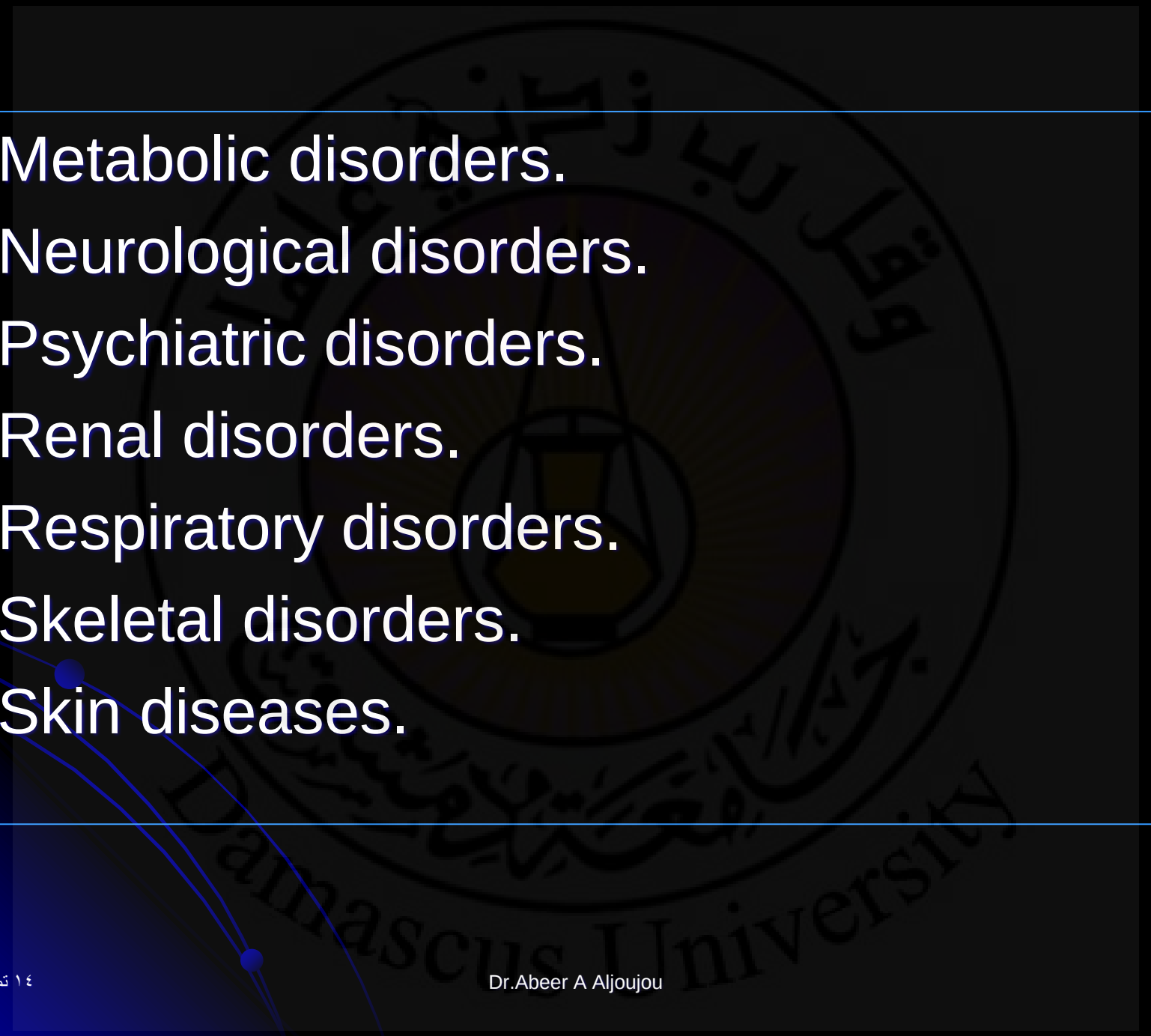
Dr.Abeer Ahmad Aljoujou  
PhD. Oral Medicine

● All the following diseases (disorders) have orofacial manifestations:

- Cardiovascular diseases.
- Connective tissue diseases.
- Endocrine conditions.
- Gastrointestinal disorders.
- Haematological disorders.
- Immunological disorders.
- Infectious diseases.

● Liver disorders.



- 
- Metabolic disorders.
  - Neurological disorders.
  - Psychiatric disorders.
  - Renal disorders.
  - Respiratory disorders.
  - Skeletal disorders.
  - Skin diseases.



- Many systemic diseases are reflected in the oral mucosa, maxilla, and mandible.
  - Mucosal changes may include ulceration or mucosal bleeding.
  - Immunodeficiency can lead to opportunistic diseases such as infection and neoplasia.
  - Bone disease can affect the maxilla and mandible.
  - Systemic disease can cause dental and periodontal changes.
  - Drugs prescribed for a systemic disease can affect oral tissue.

- Careful examination of the oral cavity may reveal findings indicative of an underlying systemic condition, and allow for early diagnosis and treatment. Examination should include evaluation for mucosal changes, periodontal inflammation and bleeding, and general condition of the teeth.

- Oral manifestations may be:
  - 1) the first, only or most severe feature of systemic disease.
  - 2) the principle focus of therapy.
  - and/or 3) the dominant cause of a lessening of the affected person's quality of life.

# 1- Cardiovascular Diseases

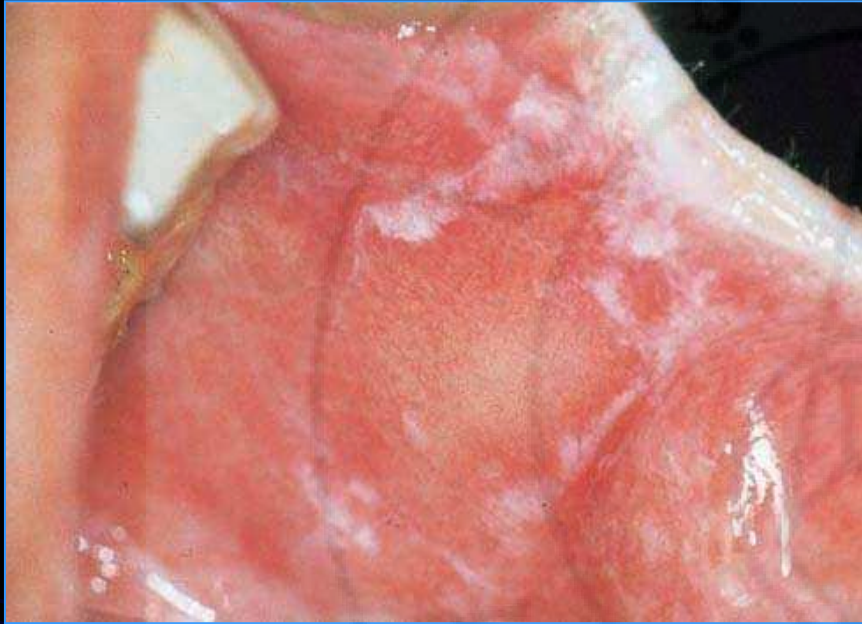
- 1- Angina pectoris: pain referred to lower jaw.
- 2- hypertension( problems caused by some antihypertensive agents):
  - Dry mouth and/or salivary gland swelling or pain.
  - Gingival swelling( nifedipine)
  - Lichenoid lesions( methyldopa)
  - Angioedema.
  - Burning mouth, taste sense alteration(dysgeusia).
  - Paresthesia. – erythema multiforme.

# angioedema





# Lichenoid lesions



# Connective tissue Diseases

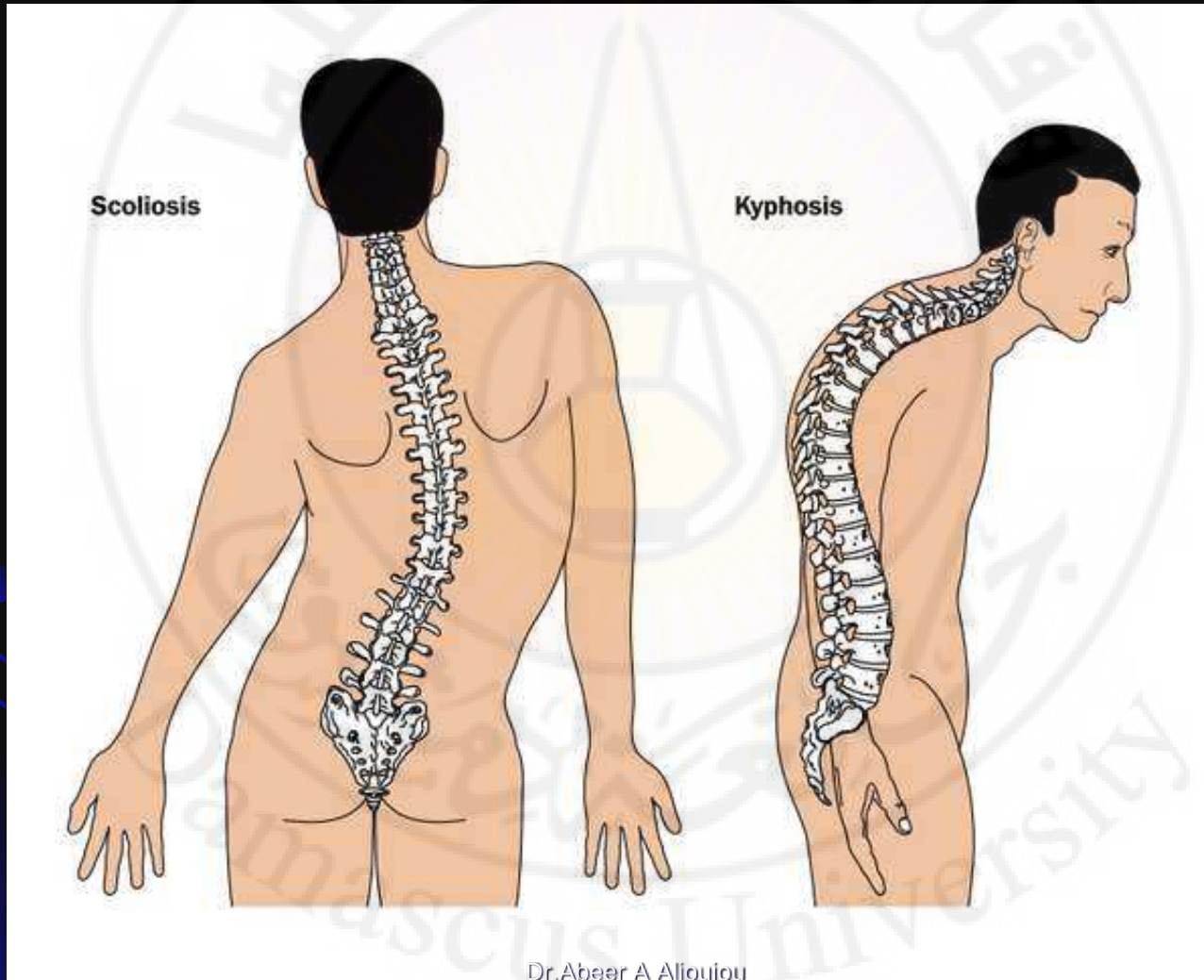
- Group of disorders involving the protein rich tissue that supports the organs and tissues.
- Ex; bone, cartilage, fat...
- These disorders often involve the joints, muscles, skin and organs of systems like the eye, heart, lungs, kidneys, blood vessels and gastrointestinal tract.

# Connective Tissue Disease

- Classified into:
  - 1- inherited disorders of connective tissue.
  - 2- Autoimmune Diseases.

- **Ehlers-Danlos Syndrome EDS:**
  - One of the inherited diseases, characterized by over- flexible joints, stretchy skin and abnormal growth of scar tissue.
  - Symptoms range from mild to disabling.
  - Other symptoms may include:
    - Curved spine.
    - Weak blood vessels
    - **Bleeding gums**
    - Problems with lungs ,heart valves, or digestion.

# Ehlers-Danlos Syndrome EDS







# Connective Tissue Disease

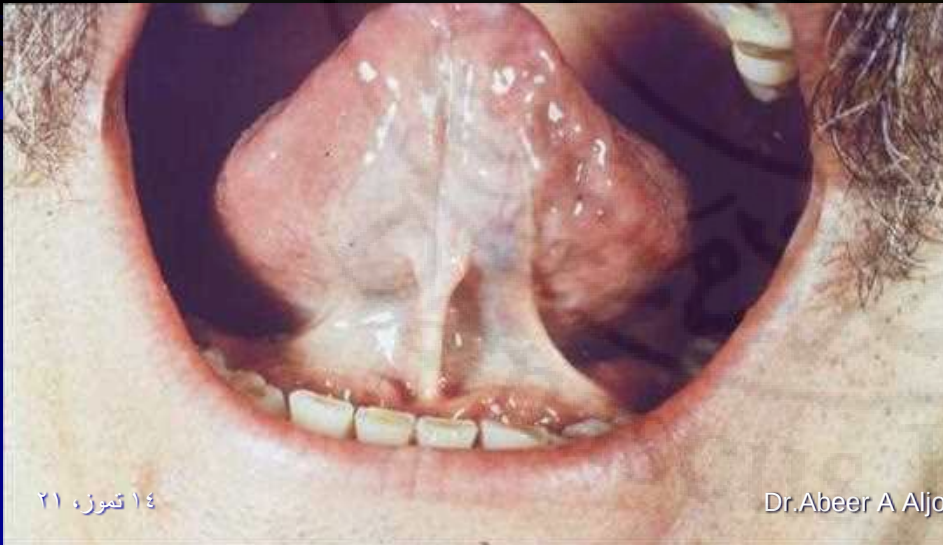
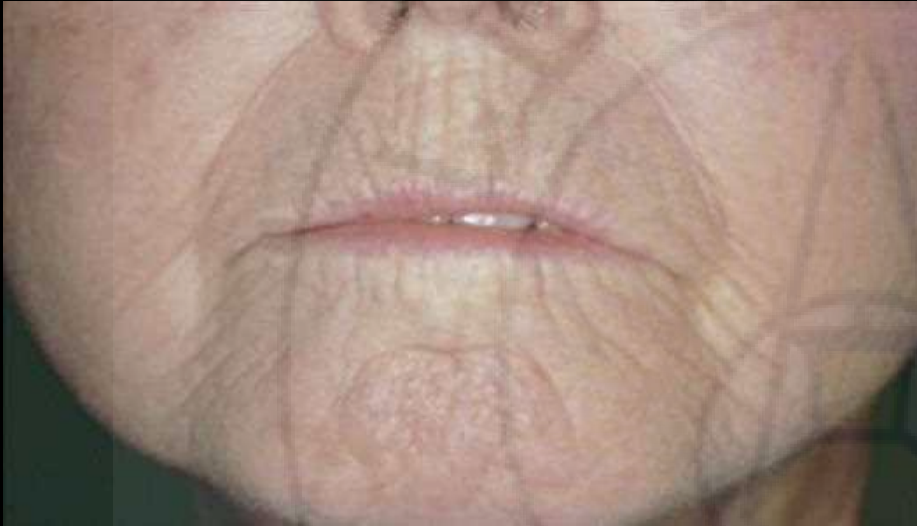
- In general any connective tissue disease has the following manifestations:
  - Sjogren syndrome.
  - Lymph node enlargement.
  - Facial sensory loss.

# Connective Tissue Disease

- systemic sclerosis:
  - Stiffness of lips, tongue, etc
  - Trismus.
  - Sjogren Syndrome.
  - Periodontal ligament widened.
  - Mandibular resorption.
  - Oral cancer.



# Systemic sclerosis manifestations



# scleroderma





# gastrointestinal disorders

- 1- Peutz-jeghers syndrome( small intestinal polyps) : **melanosis**.
- 2- malabsorption syndrome:
  - ulcers.
  - Glossitis.
  - Angular stomatitis.

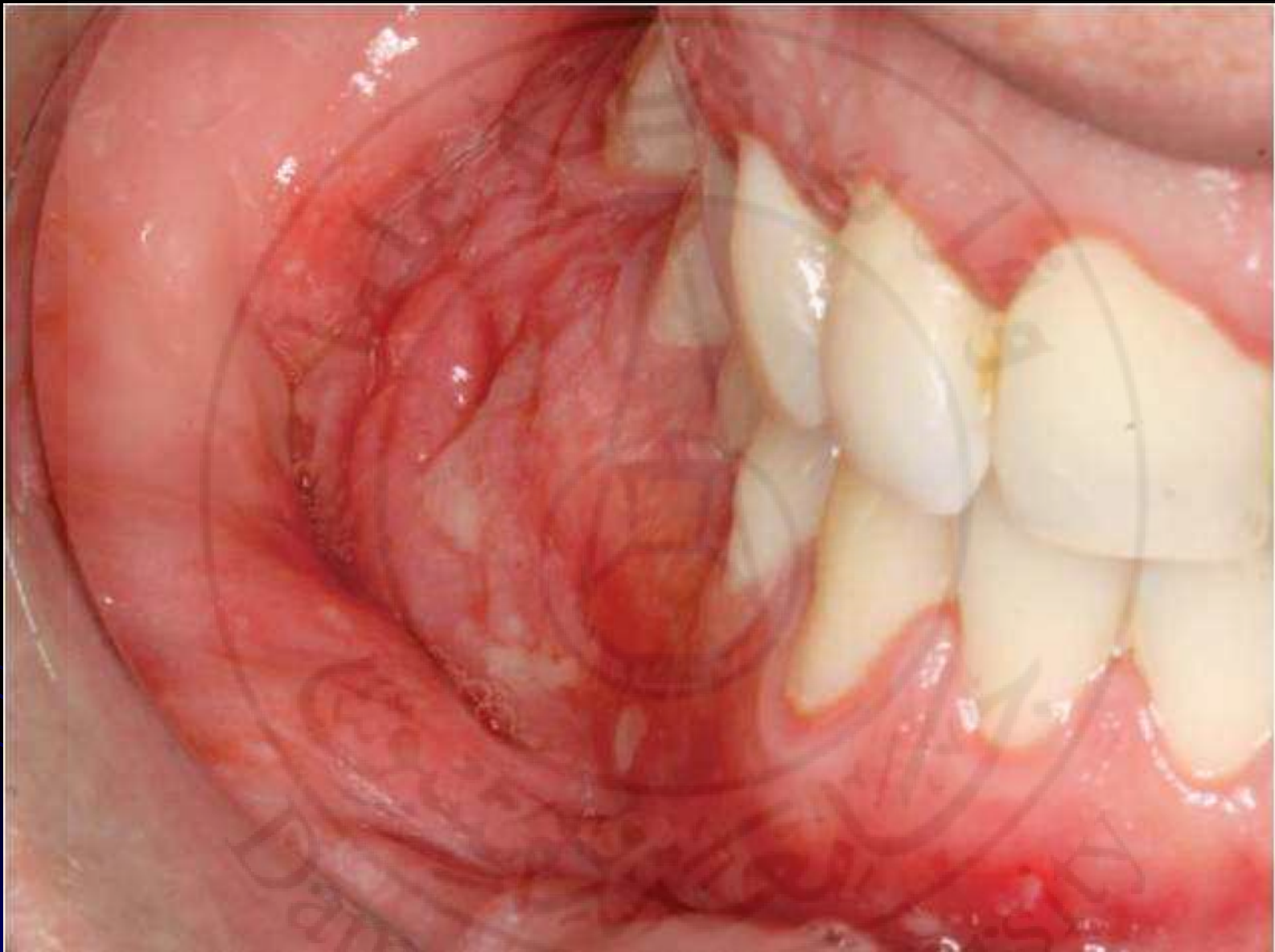
# Peutz-jeghers syndrome



# gastrointestinal disorders

## 3- Crohn`s disease:

- Facial or lip swelling.
- Gingival hyperplasia.
- Oral Ulcerations.
- Glossitis & Angular stomatitis.
- cobblestone appearance of the mucosa, deep linear ulcerations, and mucosal tags.
- Deeply corrugated buccal mucosa.



# Crohn`s disease











# haematological disorders

## 1- haematinic- iron, folic acid or Vit B12 deficiency:

- mucosal pallor
- Burning mouth sensation.
- atrophic glossitis.
- Oral ulcers.
- Angular cheilitis.
- Candidiasis.

# Blood Disorders

- **The complete blood count CBC** examines red blood cells, white blood cells, and platelets.
  - It provides information about the number of each type of cell, the ratio of types, and the appearance of the cells.



# haematological disorders

## 2- leukaemia:

- infections.
- Ulcers.
- Bleeding tendency :bleeding gums, petechiae and ecchymosis.
- Gingival swelling.
- Cervical lymph node enlargement.
- Labial sensory loss.

# leukaemia



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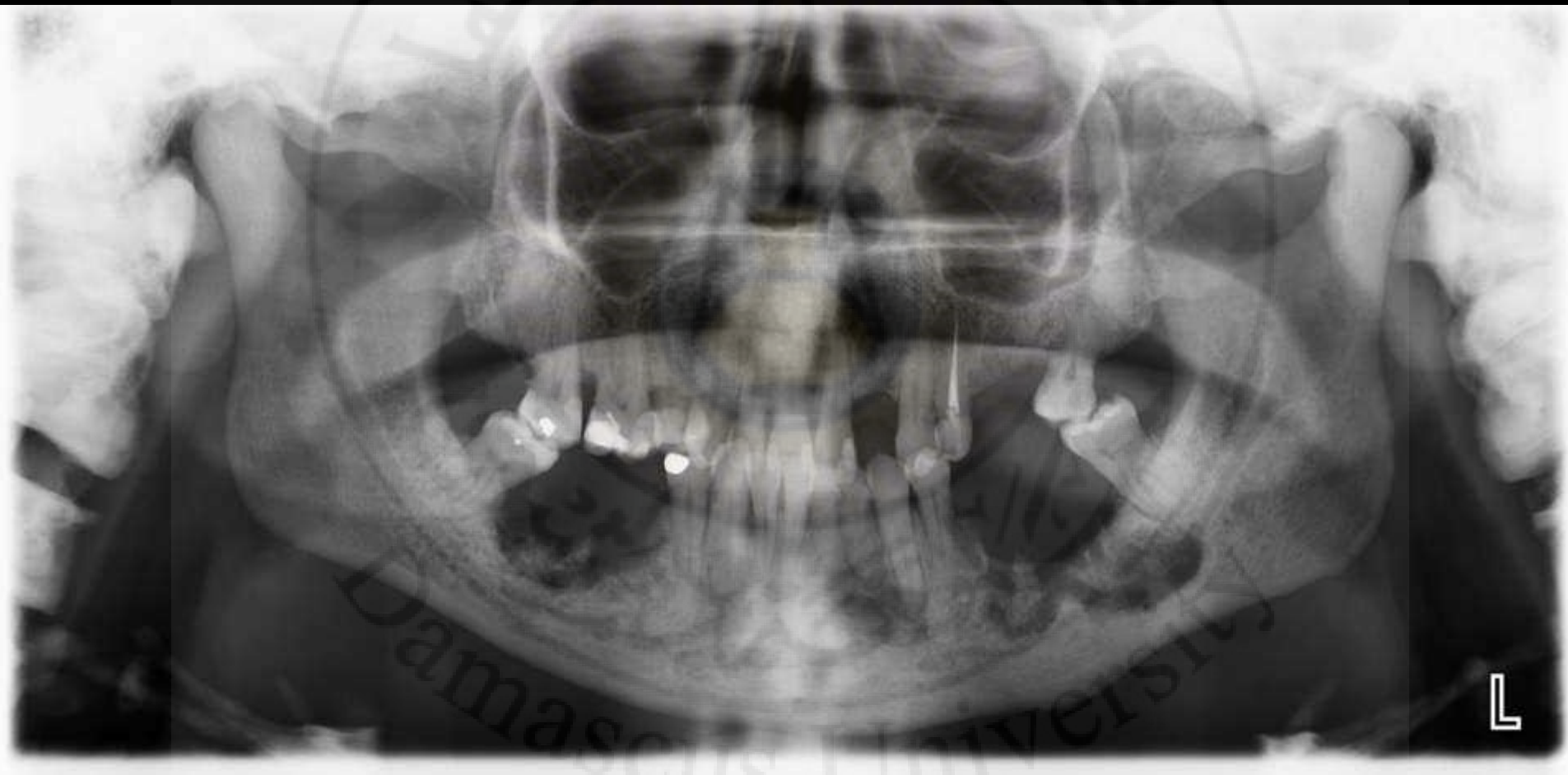














# haematological disorders

## 3- sickle cell anaemia:

- Jaw deformities caused by marrow expansion.
- Osteomyelitis (rare).

## 4- thalassaemia (Cooley Anemia) :

- Jaw deformities caused by marrow expansion.

# Clinical Features and Oral Manifestations of Thalassemia

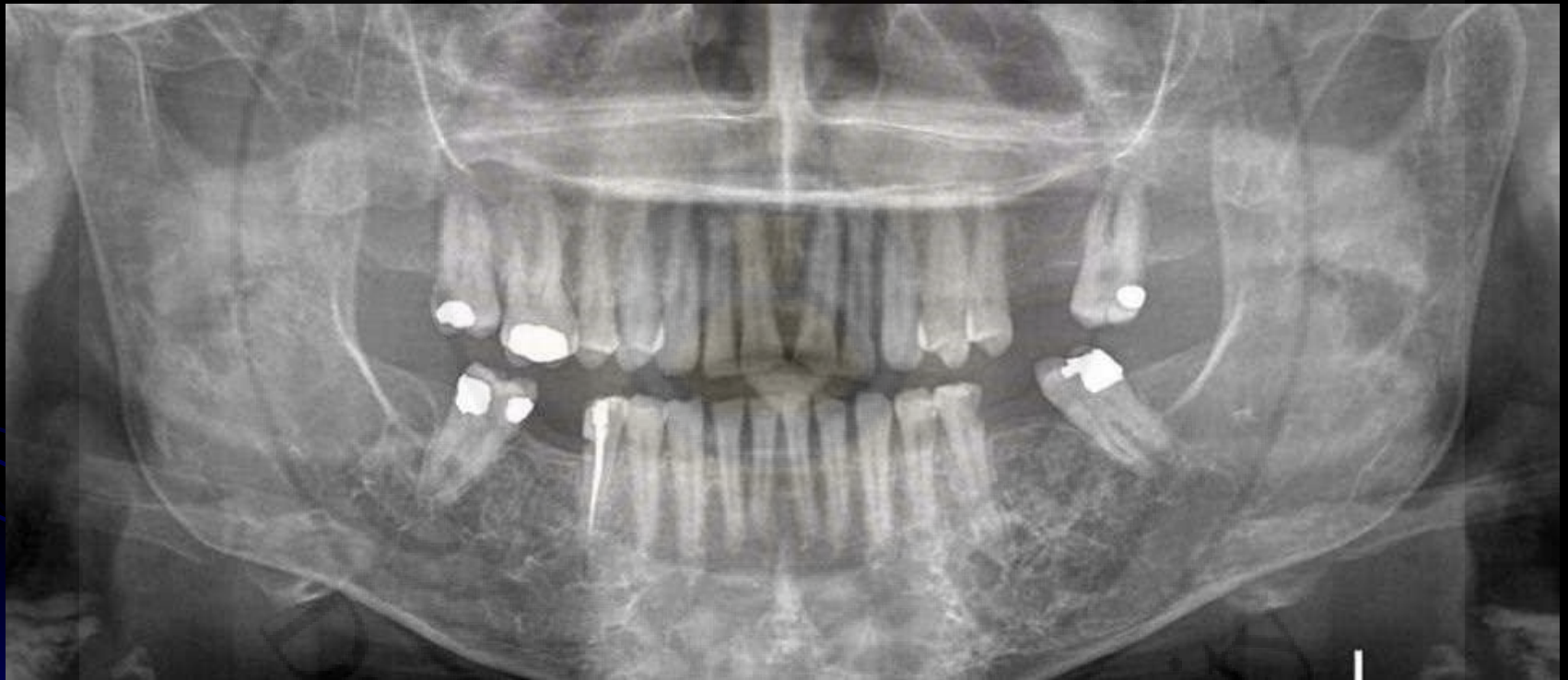
- Yellow skin pallor, fever, malaise, and weakness
- The face includes prominent cheekbones, depression of the bridge of the nose, a prominent maxilla, and protrusion of maxillary anterior teeth.
- Radiographs may show a “salt and pepper” pattern.
- Some trabeculae are prominent, and others are blurred.



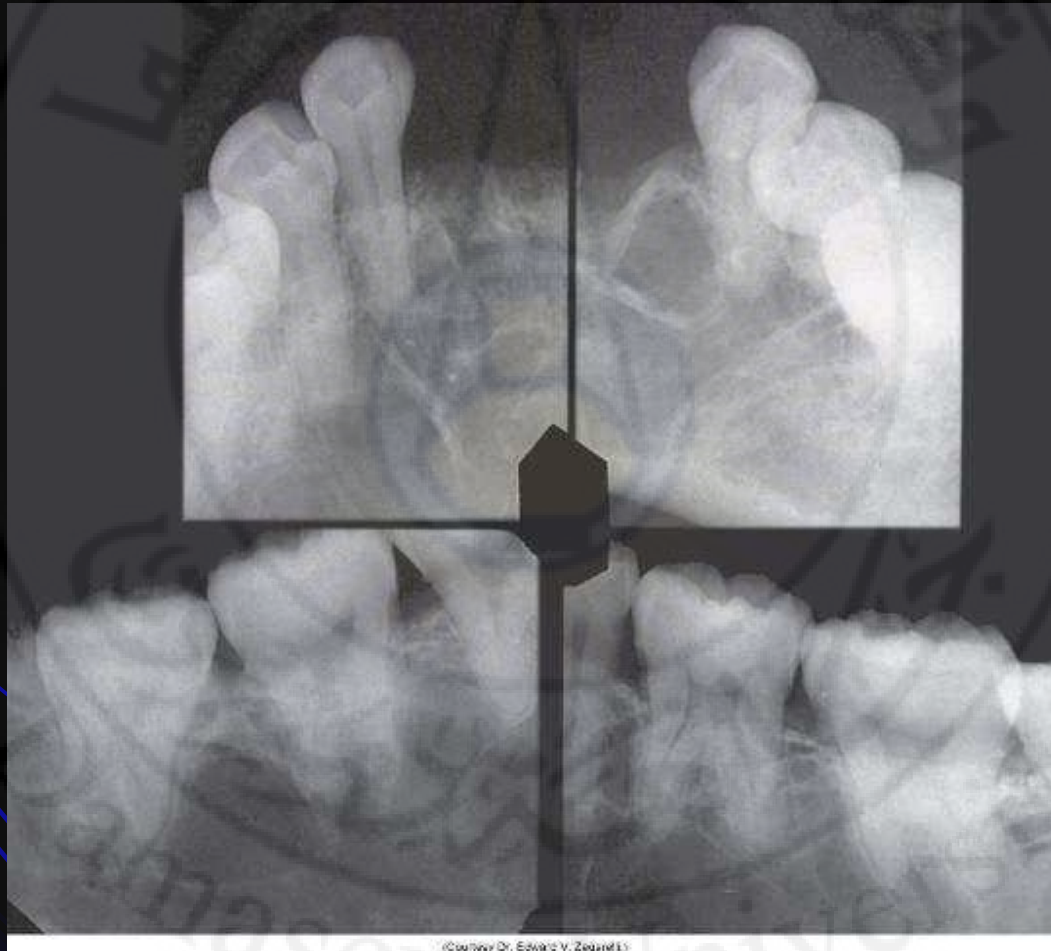


Thalassemia face

## Jaw Deformities in thalassemia patients



# sickle cell anaemia



# haematological disorders

## 5- severe combined immunodeficiency:

- candidiasis.
- Viral infections.
- Ulcerations.
- Recurrent sinusitis.
- Cancers.



# Kaposi Sarcoma





# immunological disorders

## 1- Sarcoidosis:

- xerostomia.
- Salivary gland swelling.
- Facial palsy.
- Oral swelling.

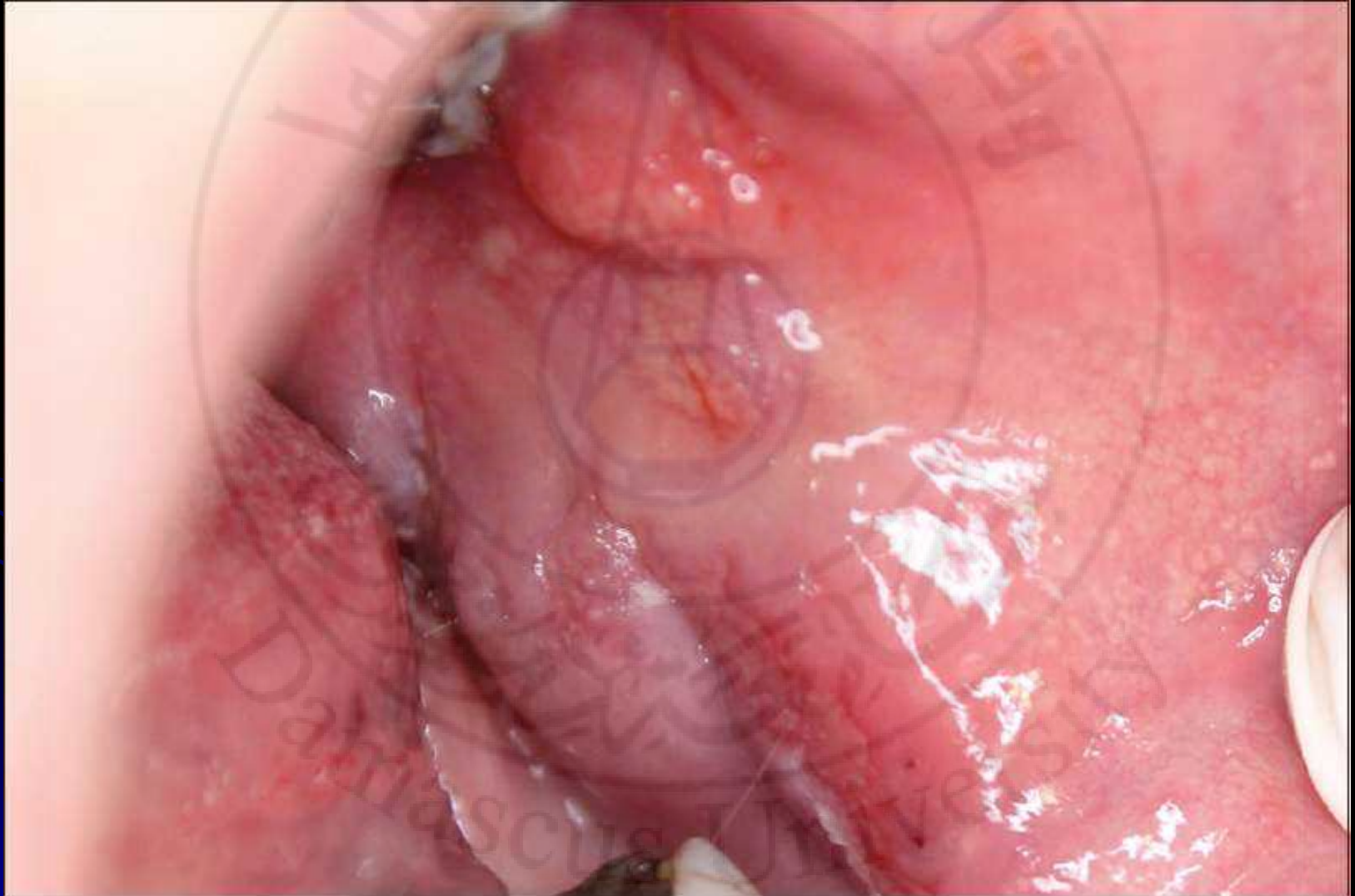
# السااركوييد







# الساركوما



# infectious diseases

## 1- candidiasis:

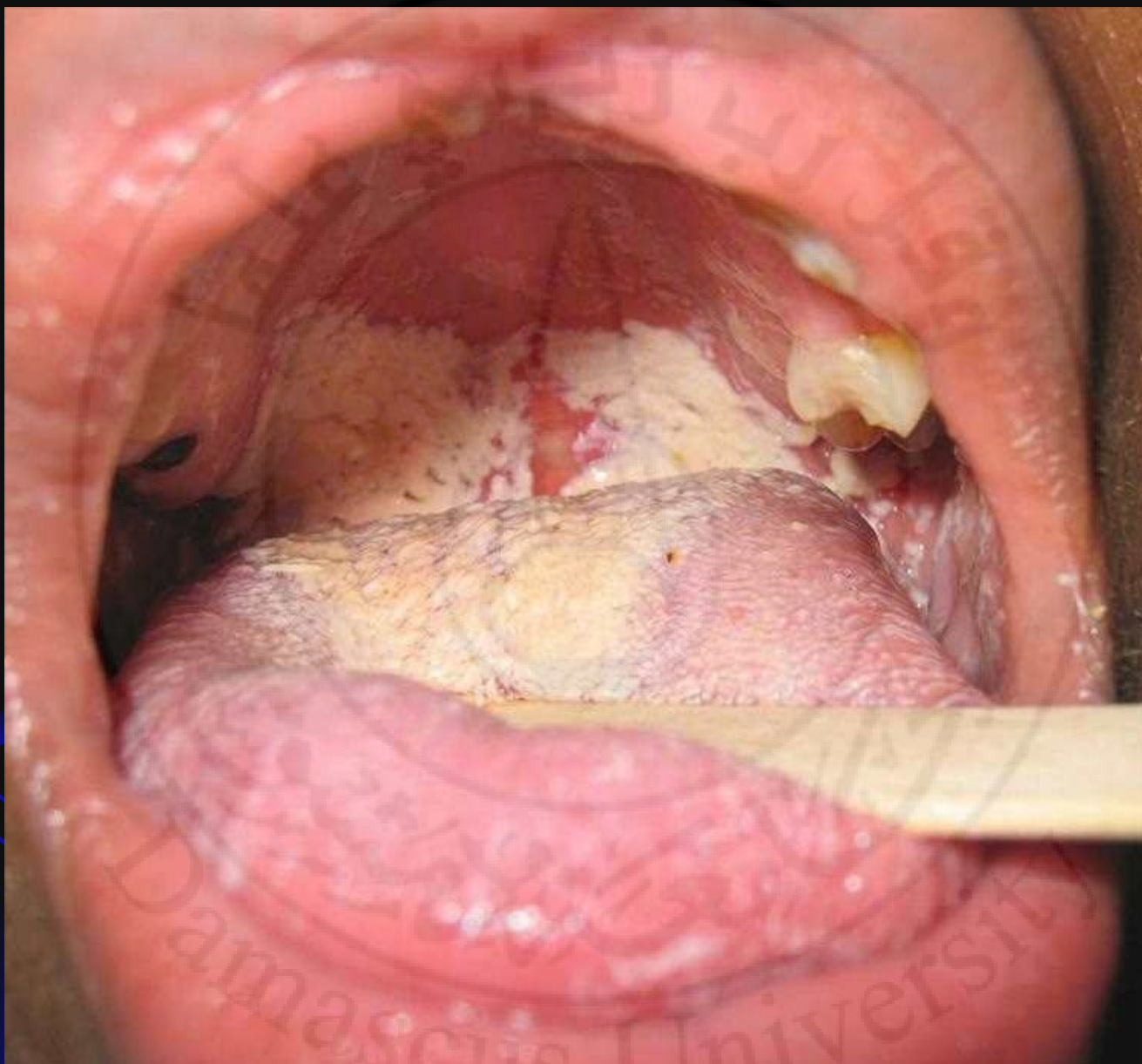
- White lesions.
- Red lesions.
- Angular stomatitis.



**FIGURE 5-16** A patient with a history of chronic iron deficiency anemia developed red, raw, and painful areas of the mucosa, diagnosed as acute atrophic candidiasis.







# candidiasis



# infectious diseases

## 2- herpes simplex:

- Ulcers in primary infection.
- Gingivitis in primary infection.
- Vesicles on lips in recurrence.
- Lymph node enlargement.
- Facial palsy.
- Erythema multiforme.

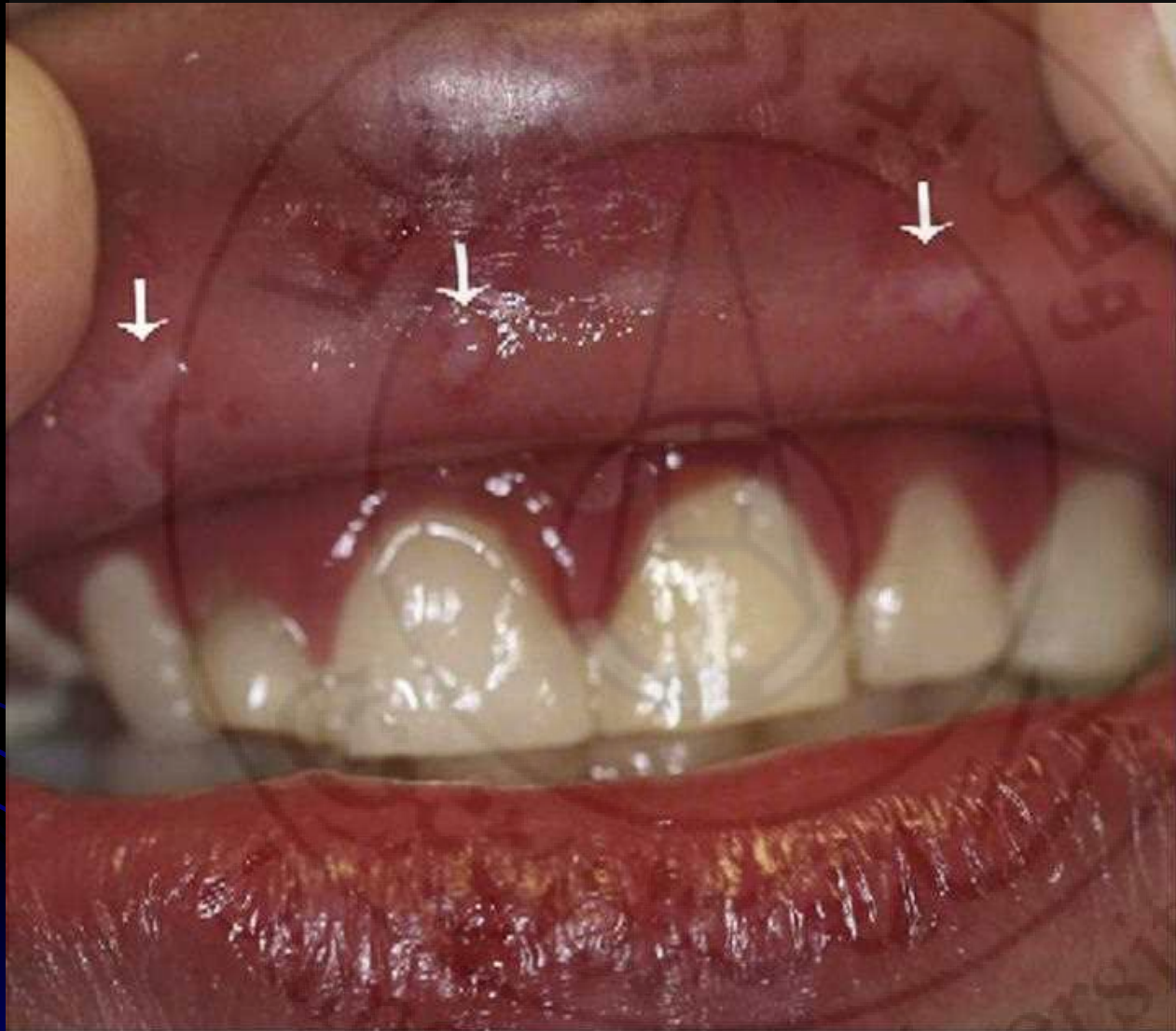


# herpes simplex









# infectious diseases

3- Human herpesvirus-8: Kaposi sarcoma.

4- **syphilis**:

- Mucous patches.
- Ulcers.
- Pain.
- Leukoplakia.
- Lymph node enlargement.
- Hutchinson's teeth in congenital syphilis.

# syphilis



Dr.Abeer A Aljoujou

syphilis

syphilis





# syphilis





# liver disorders

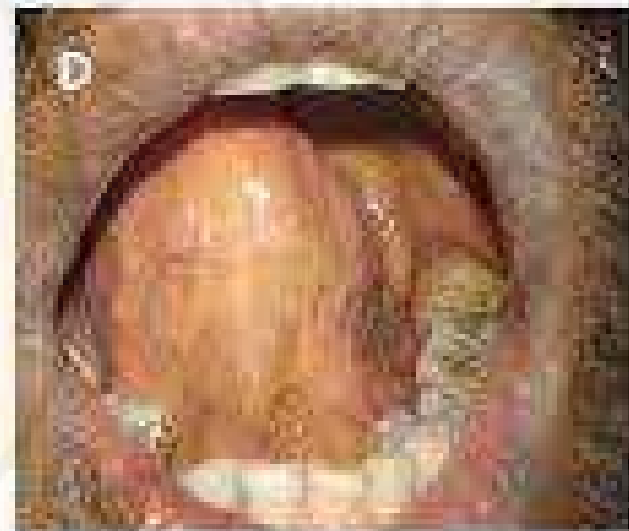
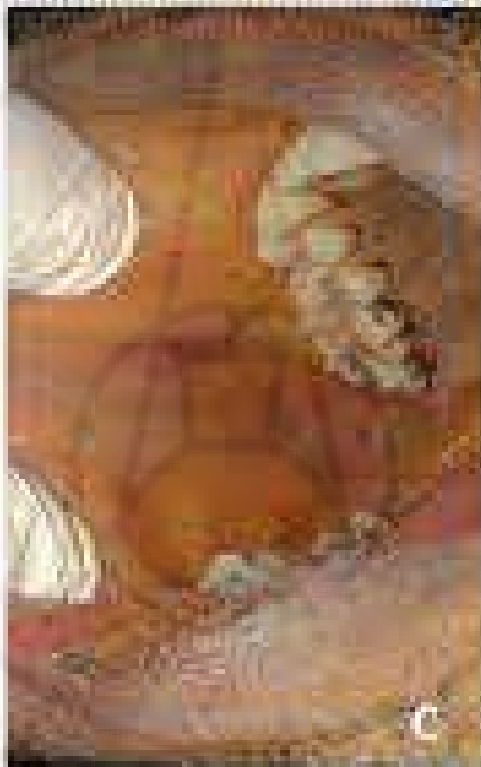
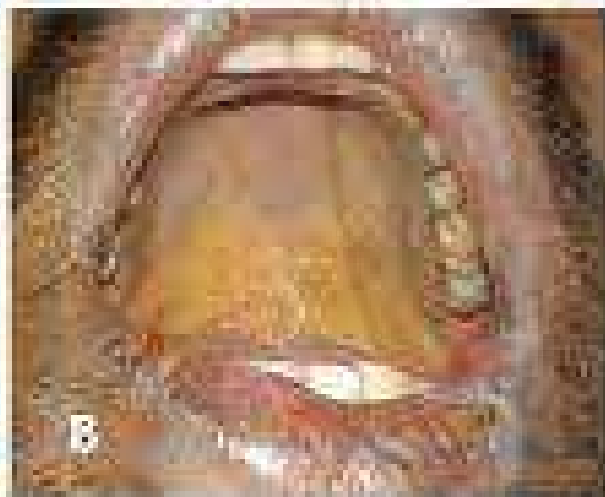
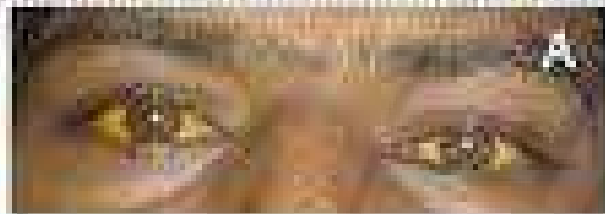
1- chronic active hepatitis: lichen planus.

2- hepatitis C:

- Salivary glands swelling.
- Xerostomia.
- Lichen planus.

3- jaundice:

- Bleeding tendency.
- Jaundice.



# Down syndrome:

- Delayed tooth eruption.
- Macroglossia.
- Scrotal tongue.
- Maxillary hypoplasia.
- Anterior open bite.
- Hypodontia.
- Periodontal disease. – cheilitis.

# Down syndrome



# neurological disorders

- epilepsy:
- Trauma to teeth, jaws & mucosa.
- Gingival swelling.





# psychiatric disorders

## 1- depression and various psychoses:

- Dry mouth.
- Disturbed taste.
- Disturbed sensation.
- Pain.
- Bruxism.
- Exfoliative cheilitis.

# Renal disorders

## 1- chronic renal failure:

- Xerostomia & Halitosis/ taste disturbance.
- Leukoplakia.
- Bleeding tendency.
- Uremic stomatitis.

## 2- dialysis:

- xerostomia.
- Sialadenitis.

## Uremic stomatitis



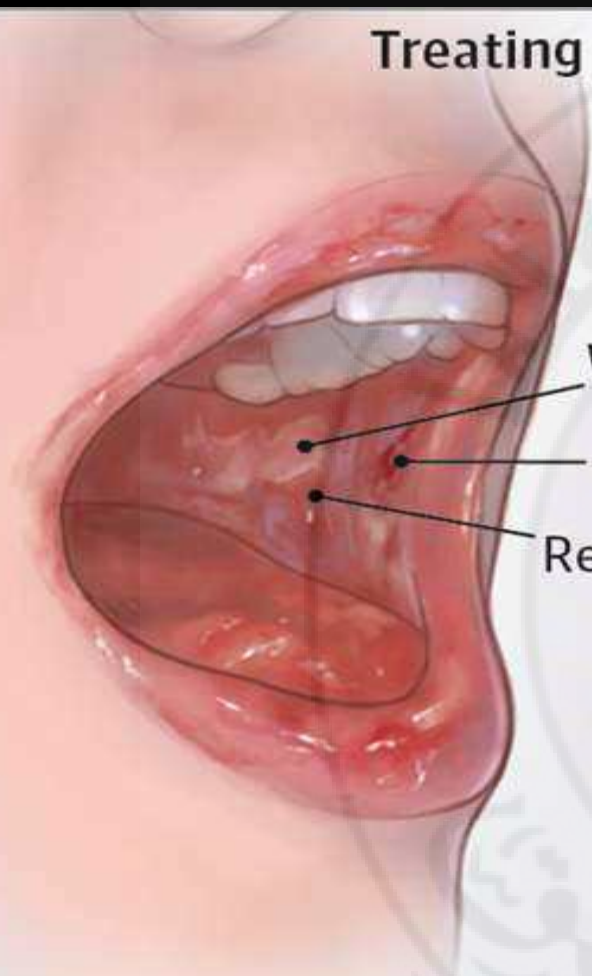
**Figure 1 -** Adherent white patch on ventral surface of tongue and floor of the mouth.

# نمشات وكدمات تحت مخاطية / قصور كلية





## Treating mild to moderate oral mucositis



White patches

Ulcer

Redness

### Pain control

Suck on ice chips or ice pops.  
Use pain medicines as advised  
by your doctor.



### Dietary modifications

Eat moist or soft foods.  
Avoid foods that require a lot of chewing.  
Avoid acidic, spicy, salty, and hot foods.



### Oral care

Rinse mouth 5-6 times each day.  
Brush teeth with a soft toothbrush.



S. Welker



# Renal disorders

## 3- post-renal transplantation:

- Infections particularly herpetic & candidal.
- Bleeding tendency.
- Gingival swelling

# autoinflammatory

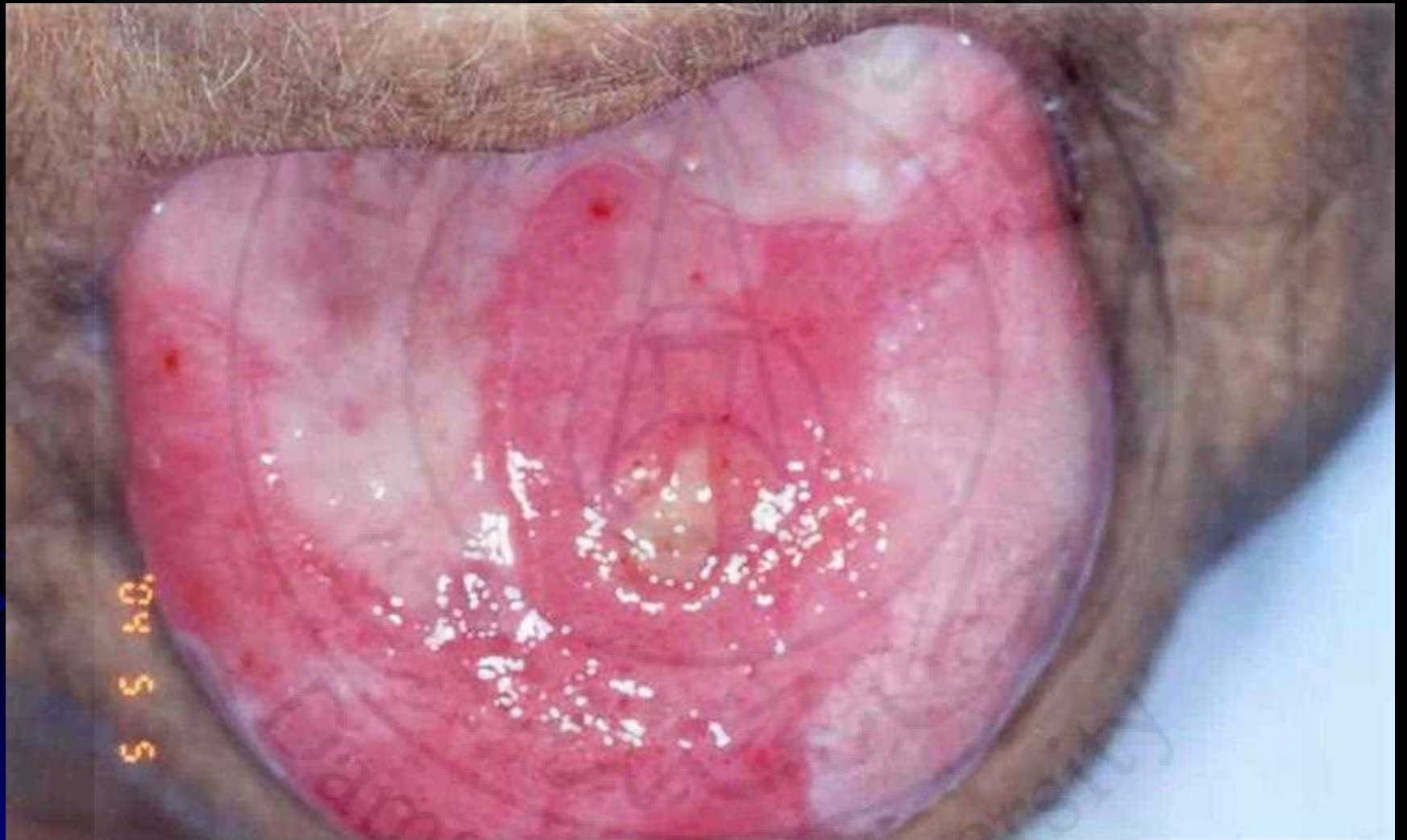
## 1- lichen planus:

- White lesions.
- Red lesions.
- Erosions.
- Desquamative gingivitis.











# Lichen Planus

- Erosive: diffuse erythema and painful ulceration with peripheral radiating striae
- In symptomatic patients, oral lesions may be treated with a topical corticosteroid gel or rinse.
- Reticular: white lacy striae, especially on bilateral buccal mucosa

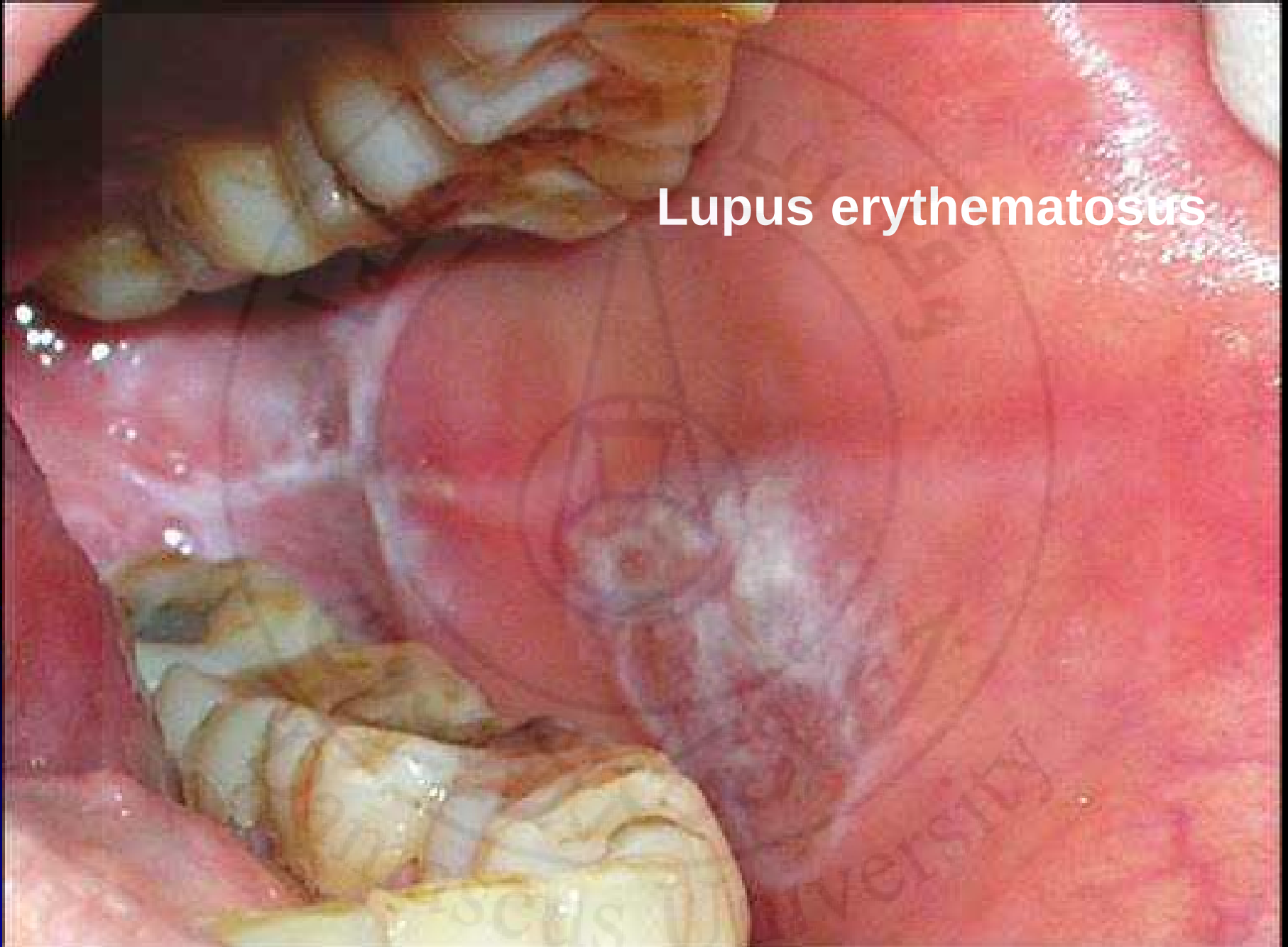
# lichen planus



# Lupus erythematosus

- Oral discoid lesions, honeycomb plaques, raised keratotic plaques, erythema, purpura, petechiae, irregularly shaped ulcers, cheilitis
- In discoid lupus erythematosus, oral lesions seldom occur in the absence of skin lesions

Lupus erythematosus









## ERYTHEMA MULTIFORME(EM)

- Erythema multiforme is an acute limiting dermatitis characterized by distinctive eruption manifested as the iris or target lesion.
- TYPES :
  - a) EM Minor – Localized eruption with no or mild mucosal involvement
  - b) EM Major – Mucosal erosions of ***raised atypical target lesions***
  - c) STEVEN JOHNSON SYNDROME(SJS) – Mucosal erosions ; widespread distribution of ***flat atypical targets*** or purpuric macules

## **(i) ETIOLOGY**

- **Infectious agents :**

- a. HSV { accounts for 55% of EM major}
- b. Mycoplasma infection
- c. Subclinical infection of HSV {EM minor}

- **Drugs:**

Sulfa drugs are most common trigger factors

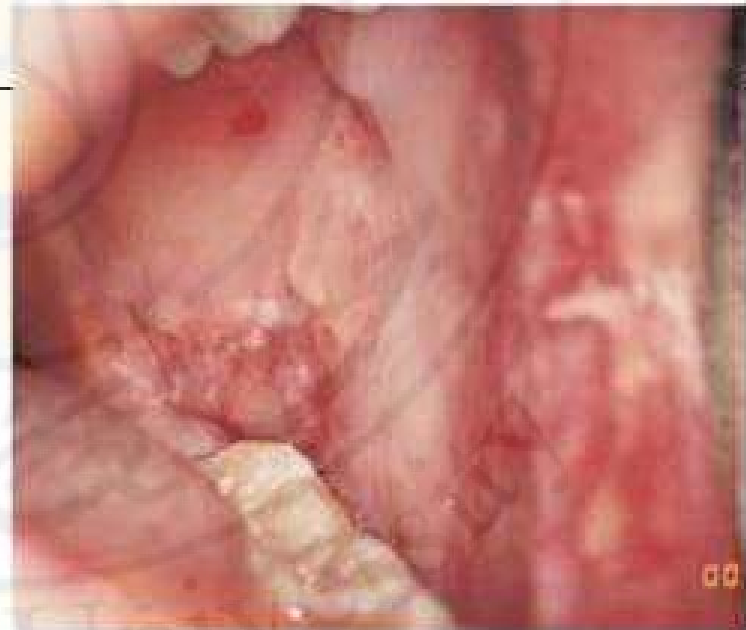
# TARGET LESIONS

- A concentric ring like appearance of the lesions , resulting from the varying shades of Erythema , occurs in the some cases and has give rise to **TARGET or IRIS or BULL'S EYE** describing them.
- Appears rapidly within a day or two and persist from several days to a few weeks , gradually fading and eventually clearing



# ORAL MANIFESTATIONS OF EM

- Pain and discomfort
- Hyperemic macules , papules or vesicles may become eroded or ulcerated and bleed freely
- Common: Tongue , palate , buccal mucosa and gingiva



## **STEVEN-JOHNSON SYNDROME**

- A severe Bullous form of Erythema multiforme
- It commences with the abrupt occurrence of fever, malaise, photophobia and eruptions of the oral mucosa, genital and skin
- Patients usually recover unless they succumb to a secondary infection



# Oral manifestations SJS

- Severe and painful making mastication impossible
- Mucosal vesicles or bullae occur which ruptures leaving it covered with a ***thick white or yellow exudate***
- ***Lips*** exhibit ulceration with bloody crusting and are painful
- Erosions of ***pharynx*** also common
- Mistaken for ANUG



# skin diseases

## 2- pimphigoid & pimphigus :

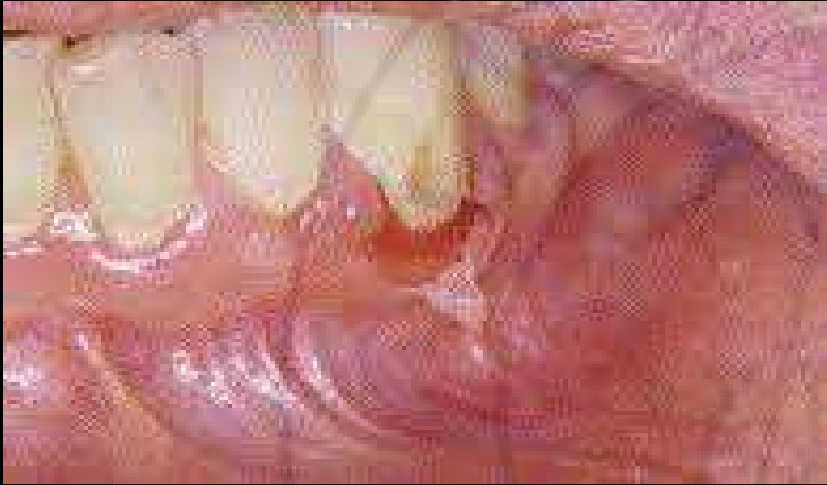
- blisters.
- Ulcerative ,erosive or white lesions .
- Swelling and erythema.
- Desquamative gingivitis.

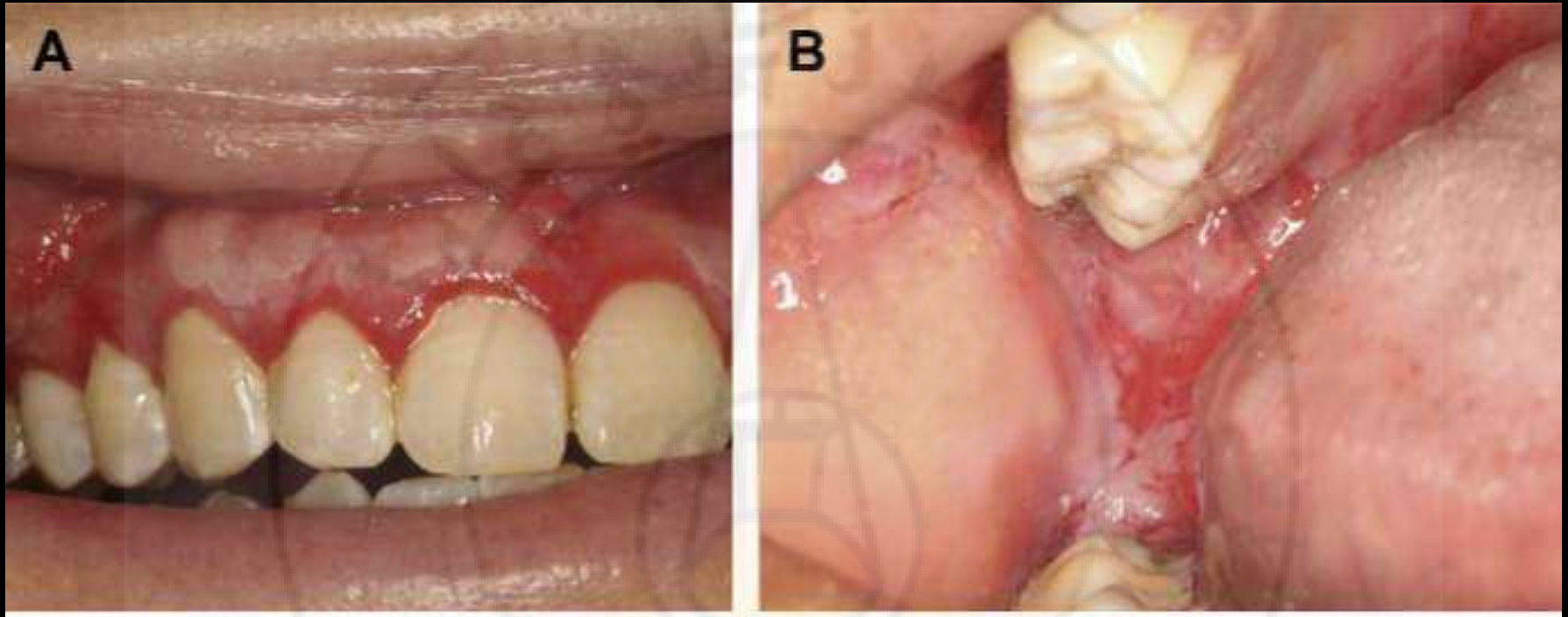
## 3- psoriasis:

- White lesions.
- Lesions like erythema migrans.

- **Benign mucus membrane pemphigoid:**
- Diffuse and painful oral ulceration & scarring.
- Intact blister formation occasionally may be seen intraorally (before rupture and ulceration)
- **Pemphigus vulgaris:**
- Diffuse and painful oral ulceration, positive Nikolsky sign
- Oral lesions often are the first manifestation of disease and may precede the onset of skin lesions.

# Pimphigoid & pimphigus





Diffuse erosion and desquamative gingivitis (A) and superficial ulcers (B) of PV





Widespread superficial ulcers and crusting of lips  
in PNP

## Topical corticosteroids commonly used for the management of oral manifestations of mucocutaneous diseases

| Medication <sup>a</sup>                    | Instruction of Use <sup>b</sup>                                                                                                                                                                             | Comments                                                                                                  |
|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| <i>Topical Gels, Creams, and Ointments</i> |                                                                                                                                                                                                             |                                                                                                           |
| Clobetasol 0.05%                           | Apply to lesions 2–4 times per day.<br>Gels can be applied with gauze and left in place 10–15 min<br>Extensive gingival lesions can be treated with occlusive trays that hold the gel on the affected areas | Gels are preferred for intraoral use and are effective in managing limited areas of involvement           |
| Fluocinonide 0.05%                         |                                                                                                                                                                                                             |                                                                                                           |
| Betamethasone dipropionate 0.05%           |                                                                                                                                                                                                             |                                                                                                           |
| Triamcinolone 0.1%–0.5%                    |                                                                                                                                                                                                             |                                                                                                           |
| <i>Topical Solutions</i>                   |                                                                                                                                                                                                             |                                                                                                           |
| Dexamethasone 0.1 mg/mL (5 mL)             | Hold solution and swish in mouth for 4–6 min before expectoration. Repeat 2–4 times per day                                                                                                                 | For mild to moderate cases in which lesions are diffuse, numerous, or inaccessible to topical application |
| Prednisolone 3 mg/mL (5 mL)                |                                                                                                                                                                                                             |                                                                                                           |

Drugs are listed in a descending order of potency .bFor all cases of topical therapy, patients are instructed to wait 10 to 15 minutes after application before eating/drinking or brushing teet

# psoriasis

