Oral Diagnosis

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- Oral Diagnosis
- It is the art of using scientific knowledge to identify oral disease processes and to distinguish one disease from another.

- *Types of oral diagnosis :*

1) - Comprehensive oral diagnosis :-

- The diagnostic assessment for all dental problems as revealed by : -
- Full history
- clinical examination
- Use of diagnostic aids (INVESTIGATION ,,,, BIOPSY,,,,,)
- It is done for the patients requiring total dental care.

2) Emergency diagnosis :-

- It is the immediate diagnosis of the patient's complaint that requires immediate attention and management by the dentist

  (acute dental pain, accidental

  fractures,…).

- The emergency interferes with obtaining adequate history or full clinical examination

  (only the area of chief complaint).

3) Spot (snap) diagnosis :-

- In simple cases where rapid diagnosis can be achieved perfectly, based on minimal data e.g.

palatal ulcer

+

history of eating hot pizza

=

diagnosis of pizza burn.

4) Differential diagnosis :-

- It is the collection and categorization of data to develop a list of two or more different diseases having common primary clinical presentation (though different in etiology).
- This presentation may be in the form of :

- Change in colour

  * White lesions, or white and red lesions

  * Pigmented lesions (red, yellow, brown,)

- Loss of mucosal integrity in the form of ulcers or erosions.

- Soft tissue swellin (fibroma, lipoma, ….)

- Bony lesions

5) Tentative (working or provisional diagnosis :-

- It is primary, uncertain diagnosis before all diagnostic data are assembled.

6) Definitive (final) diagnosis :

- It is the final diagnosis based on accurate appraisal of all available data

(case history, clinical examination and special investigations) that point clearly to a specific disease entity.

Symptoms and signs:

All findings can be grouped as either:-

- symptoms (subjective)
- or signs (objective).

Symptoms (subjective):

Symptoms are complaints that are described and reported by the patient and can not be detected by the examiner.

For example,:-

- pain,
- altered taste,
- nausea
- sensitivity to hot or cold,
- parathesia,
- and past occurrence of bleeding or swelling.

- **Signs (objective findings):**

Objective findings are the changes or deviations from normal that can be detected by the examiner.

- For example,:-
  - discoloration of teeth or soft tissues,
  - swelling,
  - tenderness to palpation

Treatment plan:

- Treatment plan may take one of two forms:
- A. Emergency or immediate treatment plan:-
- B. Comprehensive or long-range treatment plan:-

- **The diagnostic method**

It is the application of a scientific method to reach a final diagnosis.

- **Elements of the scientific diagnostic method include:**

1 - Collection of information.

2- Evaluation of the information.

3- Diagnostic decision.

4- Reassessment.

- 1-Collection of information for reaching a diagnosis include:

1 – Patient history.

2 – Clinical examination.

3 – Diagnostic aids.

2 - Evaluation of the information

- It is the organization of the collected information to determine its clinical significance.

- Depending on basic knowledge and clinical experience, the clinician evaluates the obtained data and findings to formulate the diagnostic decision.

- Methods for obtaining a patient's history
- The primary methods for obtaining a patient's history are:-
- 1. Printed questionnaires.
- 2. Patient interview.
- 3. Combination of both.

II – Chief complaint (cc)

- The chief complaint (cc) is a statement of why the patient consulted the dentist.

- It is usually recorded in the patient's words to accurately reflect the patient's perception of the problem and to provide an idea about his level of knowledge about dentistry.

- ***Common chief complaints***

Usually the patient comes to the dental clinic complaining of one or more of the following common complaints:

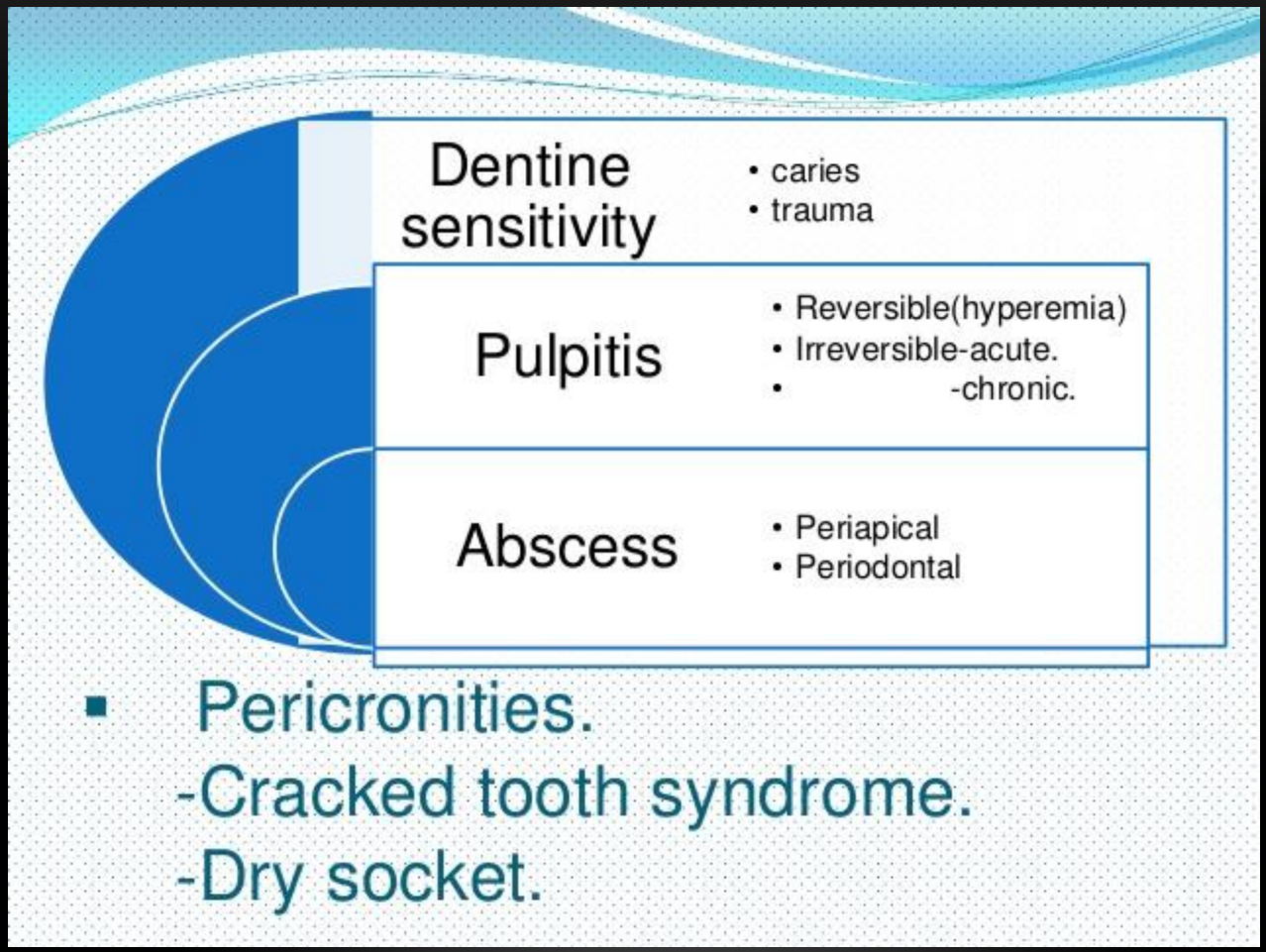
1 – Pain

- Which may be:-
  - somatic,
  - neurogenous
  - or psychogenic.

2 – Burning sensation

- As a manifestation of:-
  - viral and fungus infection,
  - geographic and fissured tongue,
  - atrophy of tongue coating,
  - anemia and vitamin deficiency.

PAIN



- Pericronities.
  -Cracked tooth syndrome.
  -Dry socket.

3 – Paraesthesia and numbness

- Caused by vitamin deficiency, pressure on the mandibular nerve such as :-
  - neurofibromatosis,
  - injury to the trigeminal nerve,
  - trauma from anaethetic needles
  - and following surgical procedures.
- Also, it may be caused by:-
  - diabetes,
  - pernicious anemia,
  - syphilis
  - and prolonged use of some medications such as:-
    - streptomycin,
    - sedatives,
    - tranquilizers

4 - Sensitivity

- Sensitivity to hot, cold and sweats may result from decayed teeth, pulpitis or exposed roots.

5 – Bleeding

- Bleeding or hemorrhage may occur accidentally or following surgery including extraction.
- It may result from different causes such as :-

  - trauma,
  - post-operative infection
  - or even uncontrolled blood disorders.

- Gingival bleeding may be the early manifestation of periodontal problems.
- The patient may complaint of bleeding gums spontaneously or on slight provocation such as tooth brushing or eating hard food.

6 – Swelling

- Soft tissue swelling such as:-
  - facial cellulitis
  - and glandular swelling
- hard tissue swelling such as:-
  - Paget's disease
  - ameloblastoma.

7 – Oral ulceration

- Ulceration of the oral mucous membrane are multiple and caused by different etiologic factors.

- The most common oral ulcerations in dental practice are:-
  - recurrent aphthous ulceration
  - and traumatic ulcers.

8 – T.M.J. disorders

- Patients with T.M.J. disorders may complaint of:-
  - clicking in jaw joint
  - and unilateral pain

    felt in the ear and radiates to the angle of the mandible with or without limitation of jaw function.

9 – Functional disorders

- The patient complaint may result from functional disorders such as:-

  - dysphagia
  - xerostomia,

    which is a clinical manifestation of salivary gland dysfunction not representing a disease entity.

10 – Bad breath (halitosis)

- It results from either extra-oral or more commonly oral causes especially poor oral hygiene.
- Dental infection

- In some instances the cause may be psychogenic.

11- Esthetic problem

- Orthodontic treatment or malposed teeth may be the only complaint of certain age group of patients.

- Also, discolored or hypoplastic teeth may result in psychological esthetic problem for many individuals.

- It should be noted that in many cases of gum recession and exposure of the roots especially of the anterior teeth, the main complaint of the patient is bad esthetic.

Chief complaint chart

- Chief complaint C/c ……
- History of chief complaint ……
- 1 – Onset: …… Date: ……Character: ……..
- 2 – Duration ……
- 3 – Character and severity of the complaint ……..
- 4 – Course ……
- 5 – Location and site ……
- 6 – Distribution ……
- 7- Precipitating factors ……
- 8 – Associated phenomenon ……
- 9- Relieving factors ……
- 10- Previous medications ……..

[1] Onset

a - Character

b - Date

a) Character of onset: Sudden (abrupt) / gradual

Sudden onset =

(1) Acute inflammatory conditions e.g. Acute dentoalveolar abscess, Erythema multiforme

or

(2) Allergic conditions

- Gradual onset = (1) Chronic inflammatory conditions
  (2) Neoplastic lesions

.

(b) Date of onset:

- Should be recorded in:-
  day, month and year.

- **[2] Duration:**

Recorded is hours, days, weeks, months, years, including periods of remissions and exacerbations.

- * Short duration (hours – days) :

  characteristic for acute conditions.

- * Weeks–months:

  characteristic for chronic conditions and

  neoplastic lesions (if with large size

  malignancy is suspected)

- * Years:

  characteristic for chronic conditions and

  benign neoplasms

- [3] Character and severity :
- Severity :

  (Mainly of pain) :

  - This will be affected by pain threshold of patient and may be described as :-
    - Mild,
    - Moderate
    - Severe.

Character : of pain may be

(1) Throbbing pain

means fluid accumulation e.g.:.

- pus accumulation in acute dento alveolar abscess

(2) Lancinating, stabbing, shooting or electric shock like pain:-

pain of nerve origin e.g.:-

- herpes zoster,
- post herpetic neuralgia
- paroxysmal trigeminal neuralgia..

(3) Interference with sleep and work:

Acute dental pain e.g. acute pulpitis.

[4] Location and site:

- * Location :

  - The anatomical area : tongue, cheek, gingiva, etc..

- * Site:

  - The specific area in an anatomical location e.g. lateral aspect of the tongue

- *N.B.* Sometimes pain may be referred from its origin to a remote area.

[5] Course:

- Could be recorded as:

- Progressive:

  (increasing in severity) e.g.

  - tumours,
  - acute inflammatory lesions.

- Regressive:

  (decreasing in severity) e.g.

  - self drained abscess.

- Recurrent, intermittent, remission and exacerbation

Recurrent	Intermittent	Remission/Exacerbation
One lesion heals and a similar one appears in the same site or another site .* Patient is completely free from signs and symptoms between attacks * Frequency well separated (weeks, months, years)* e.g. RAU, erythema multiforme-	• It is the same lesion, with signs and symptoms disappearing then reappearing. • * Patient is completely free from signs and symptoms between attacks. • Frequency of attacks is within very short period of time e.g. within the same day. • E.g. salivary gland stone, accompanied by intermittent gland swelling, at meal times Paroxismal trigeminal neuralgia attacks.	Lesion is present all the time, signs are present and the change is in the .severity of symptoms **During remission no * or less severe symptoms, reappearing with exacerbation** **Frequency well * separated e.g. seasonal** **e.g. lichen planus.**

[6] History of recurrence:

The history of previous occurrence of the lesion may be of importance in diagnosis, e.g. **RAU, eryhthema multiform**.

[7] Distribution:

(A) The lesion may be :-

(1)Solitary : e.g. traumatic ulcer

or (2) Multiple: Multiple lesions are either:

i) Unilateral

- e.g. Herpes Zoster

ii) Bilateral lesions

- which are either :-

- symmetrically distributed :

e.g. **lichen planus**

- assymetrical distributed :

e.g. **erythema multiforme**.

[8] Precipitating factors and relation to other activities:-

- *Pain may increase by eating, swallowing, sleeping, cold or hot drinks:-

  which are then called "precipitating factors" (ppt).
- According to ppt factors diagnosis could be guessed:-
- e.g. Any exposed dentin will lead to sensitivity with thermal changes specially cold,

  e.g. carious lesions, exposed root dentin

[9] Relieving factors:

- Factors which relieve chief complaint e.g.:-
  - Rest,
  - Medications as simple analgesics,
  - Vasodilators
  - Morphine should be noted.

[10] Associated phenomena:

- These are manifestations associated with the complaint:
  - Fever

    (acute abscess).

  - Foetid odour + pain + bleeding gingiva +

    mild fever + lymphadenopathy

    (ANUG.)
- Others: e.g. nausea, vomiting trismus, numbness,...etc.

  all have value in diagnosis of cases.

[11] Previous medication:

- Mouth washes, analgesics, antibiotics, previously used by the patient, and their effect on c/c., as well as duration of treatment should be noted. e.g. :-

- **Mouth wash:**

  patient may use anti inflammatory mouth wash as benzydamine hydrochloride, if pain is relieved, therefore pain is of gingival origin, if not, therefore it is of dental origin

5 Sensations

- See
- Hear
- Smell
- Feel
- Taste

(I don't think we taste our patients, Do we?)

INATION

INTRA ORAL EXAMINATION

Inspection – palpation – percussion – probing - auscultation

Probing

- This is critically important technique as it can help detect caries and any periodontal dieses

Feel: Percussion

- We examine the this by striking an object on the tooth and evaluate the produced sound.
- This technique also helps in grading the tooth mobility

Hear: Ausculation

- Depends on the fact we listen to the normal sounds produced by the patient
  - Wheezing = Respiratory dieses
  - TMJ clicking= TMJ disorder

Smell: Odor

- Just by smelling the patient oral odor, we can help in the differential diagnosis.

- Acetone odor= Uncontrolled DM
- Foul odor = ANUG

Functional Evaluation

- Simple to evaluate its function:

- E.g. Salvia flow from the glands. Pulp testing and occulasal relationship are just a few of the different methods of evaluation.

Exam: Lips

- **Palpate in the vestibule, observe color**

FIGURE 12-1 Bidigital Palpation

Examination of Lips and Labial Mucosa

Lips

- Fordyce granules (also seen on buccal mucosa)

Lips

- Angular cheilitis

ANGULAR CHEILITIS

Lips

- Herpes labialis

Lips

- Melanotic macule

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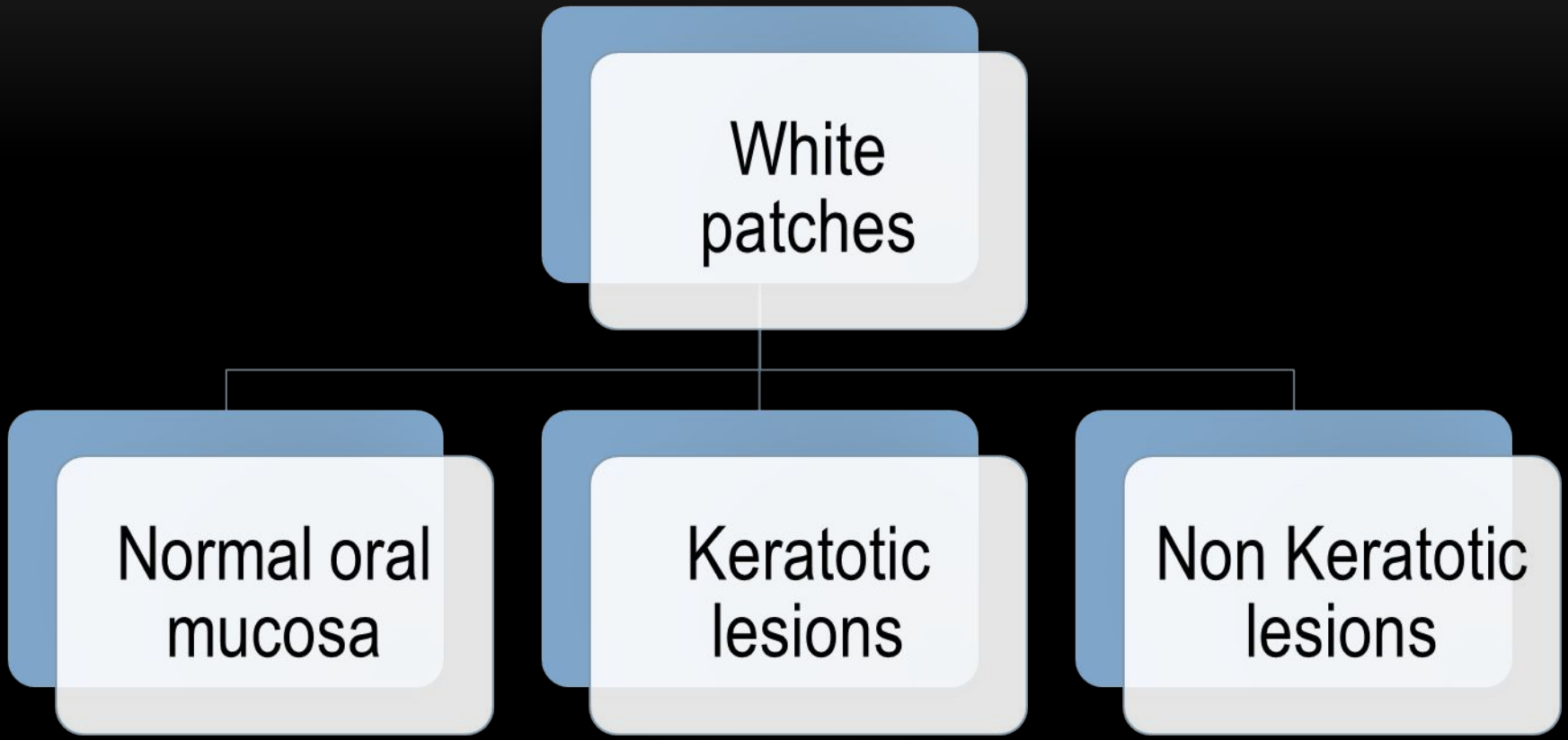


NORMAL ORAL MUCOSA

- Normal oral mucosa with variation in structure and appearance :-

1- Fordyces granules

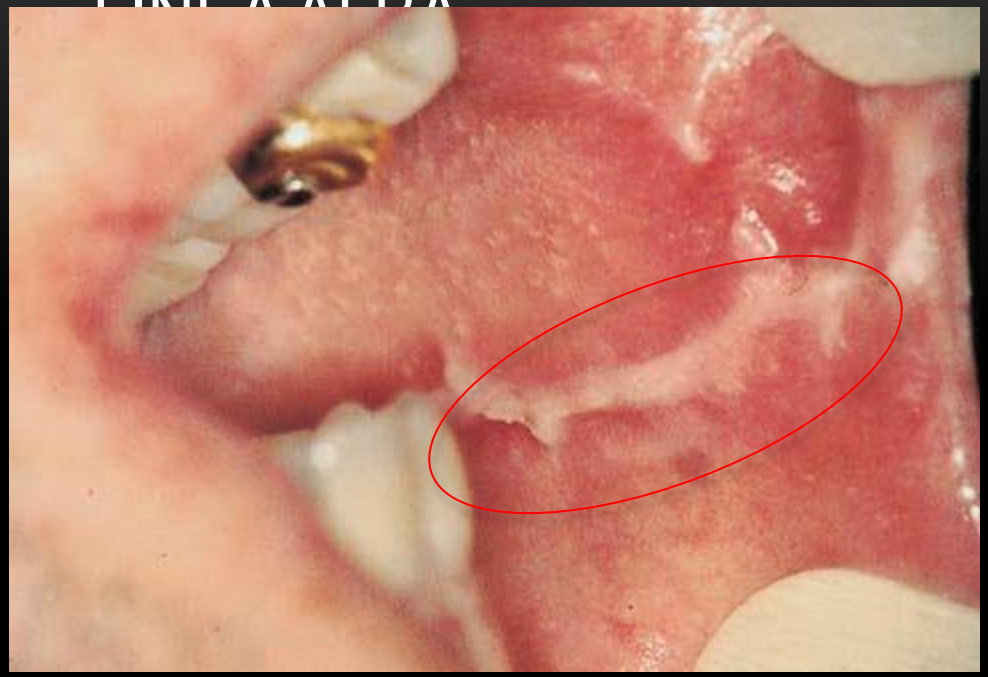
2- Linea alba

3- Leukodema

BUCCAL MUCOSA

- Leukoedema

LINEA ALBA



BUCCAL MUCOSA

- Linea alba

FORDYCE'S GRANULES

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LABIAL MUCOSA

- Mucocele

KERATOTIC LESION

- Keratotic lesion (can't rubbed off) :-

1- oral keratosis

2- leukoplakia

3- candidal leukoplakia

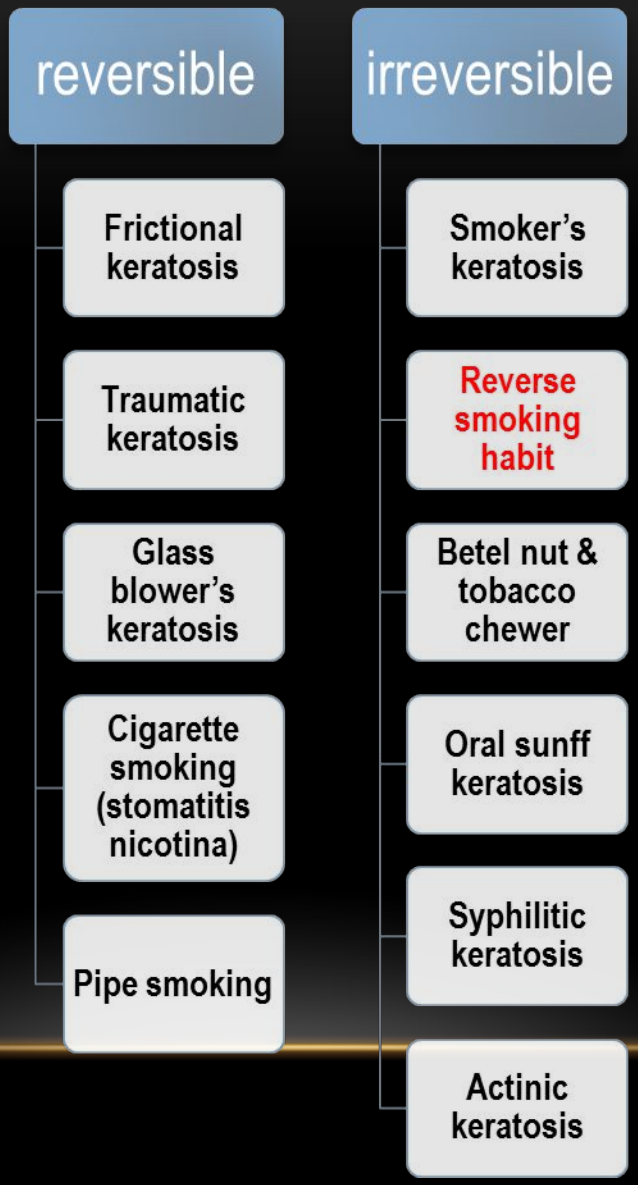
4- LP

5- DLE

6- White Spongy nevus

ORAL KERATOSIS (CAN'T RUBBED OFF)

Def. :IS a group of the white keratotic lesions which cannot be rubbed off or stripped off and have definite etiological factors



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FRICTIONAL KERATOTIC

reversible)

(

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SMOKER,S PATCHES

(reversible)

White keratinized .a patch on the *vermilion border* of .the lips

b. it may be flat, raised .or nodular

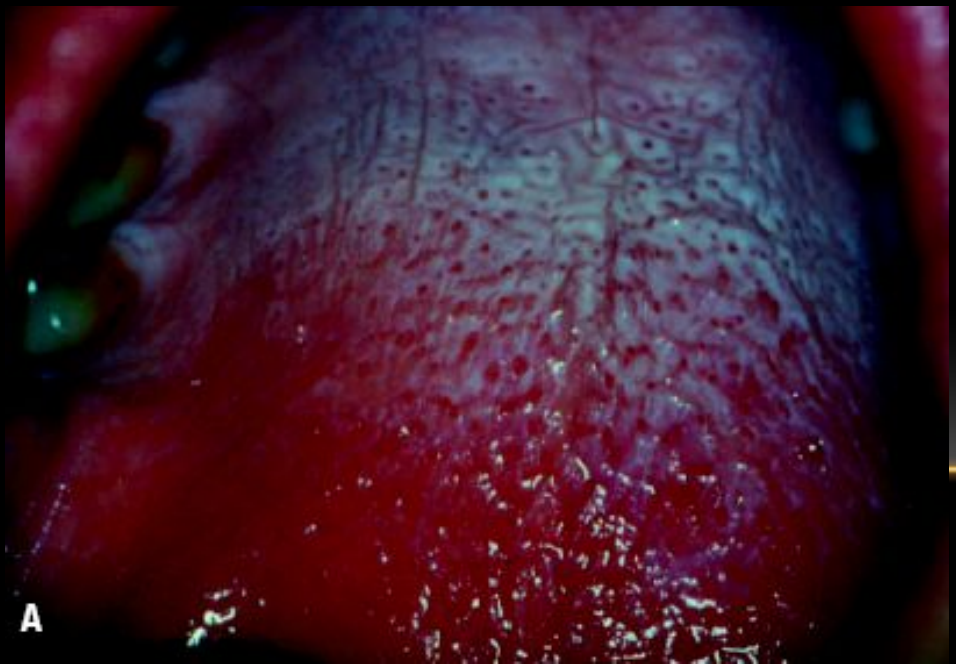
c. lips and finger burns .may be associated

NICOTINIC STOMATITIS

Etiology → the epithelial lining of the ducts of the minor salivary glands often shows squamous metaplasia → obstruction of the duct → retention cyst → inflammation .of the duct

Site → posterior part of the hard .palate

Clinically → the lesion appears as raised yellowish white rings around the openings of salivary gland ducts, which appear as .red dots (*umbilicated appearance*)



ACTINIC KERATOSIS

irreversible)

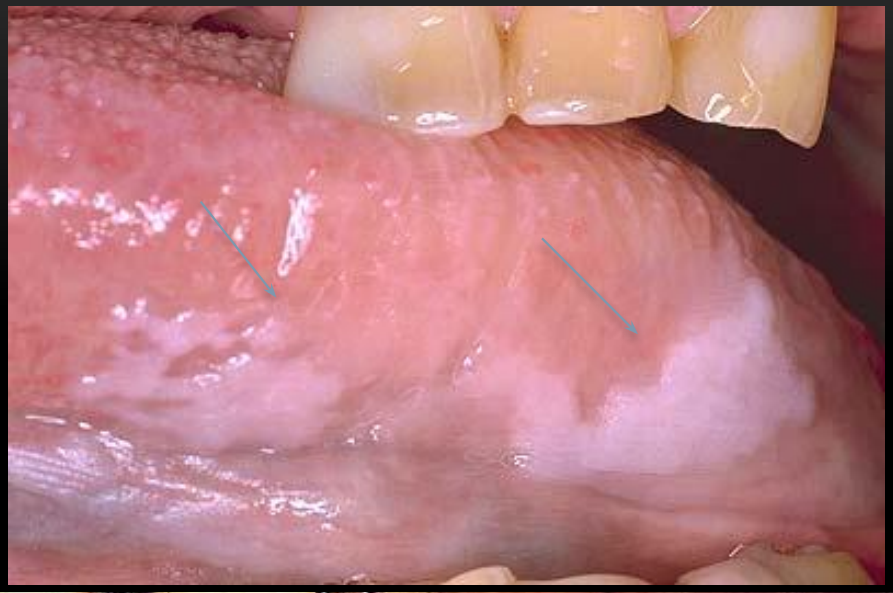
(

It is a *premalignant lesion* due to exposure to .ultraviolet rays

Damaging effect due to cumulative exposure to UV rays in white people .having little melanin

HOMOGENOUS LEUKOPLAKIA

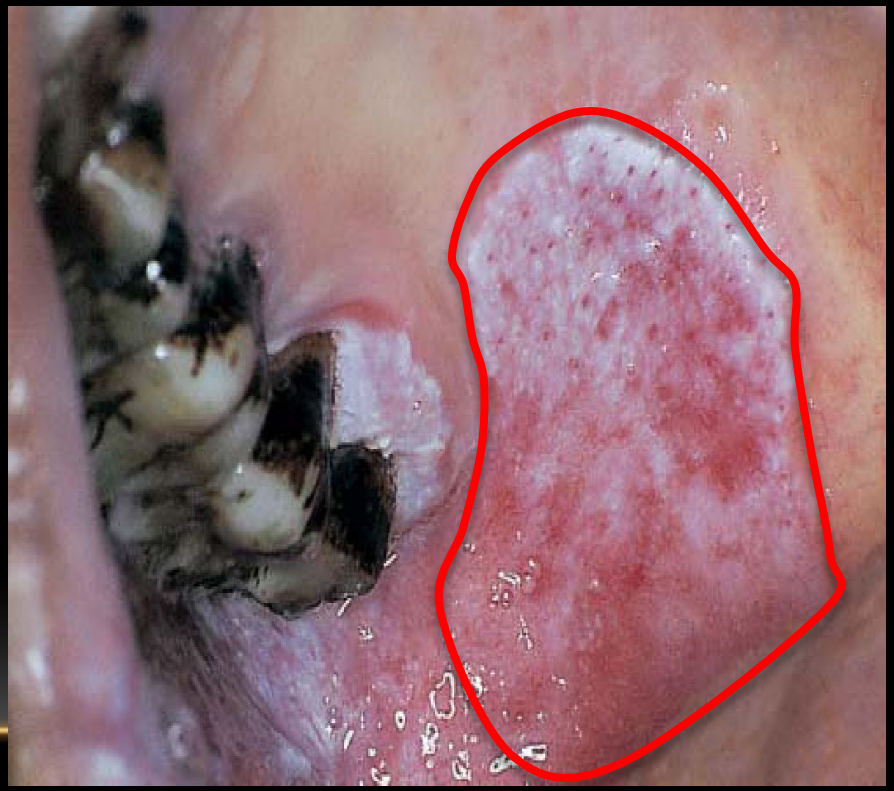
- Flat
- Corrugated
- smooth & elevated
- wrinkled



SPECKLED LEUKOPLAKIA

corner of the .mouth

white patches **(keratotic) on** ***erythematous base*** **(atrophic .mucosa)**



BUCCAL MUCOSA

- Cheek-chewing

BUCCAL MUCOSA

- Lichen planus

DURATION

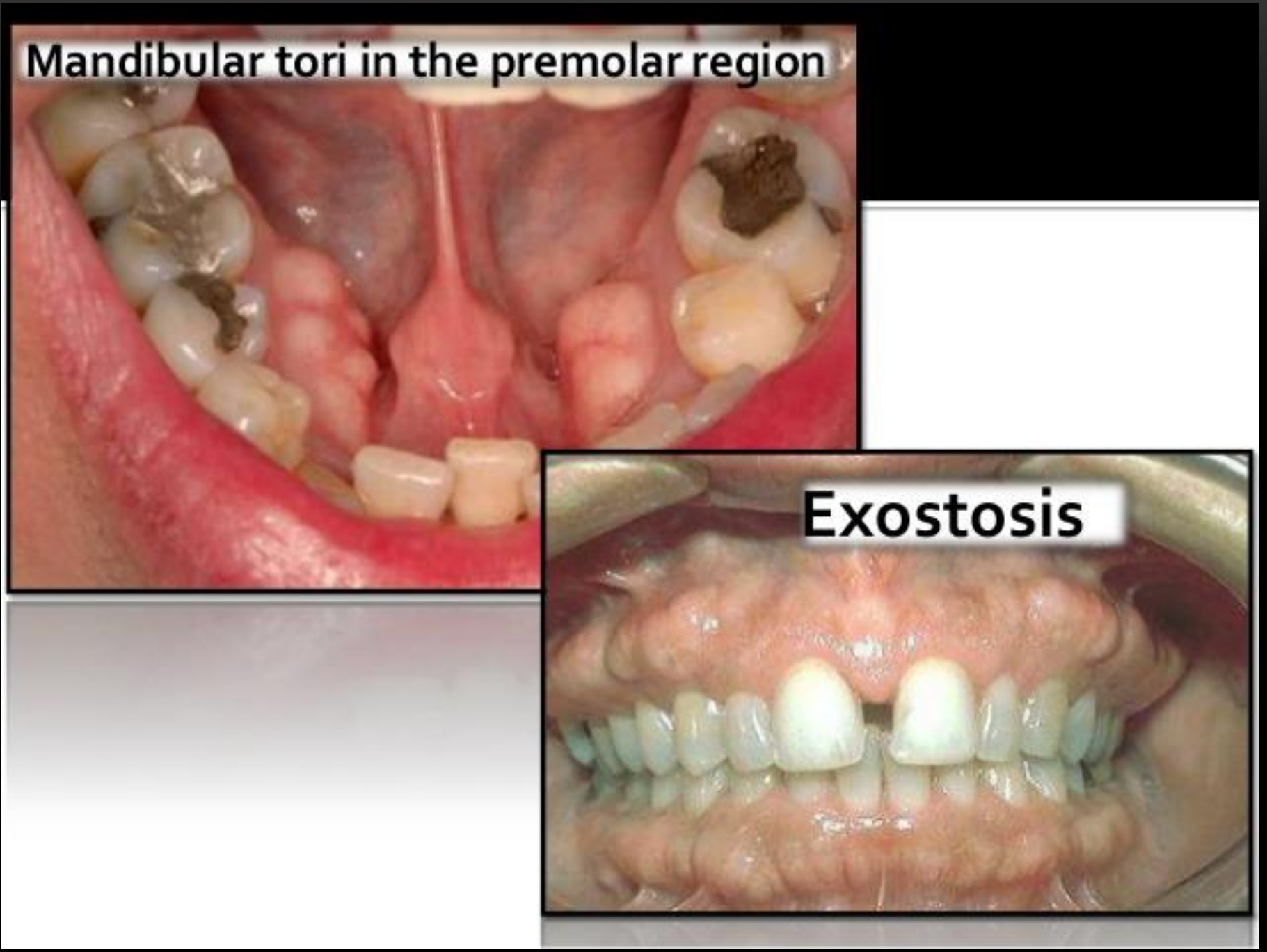
2 YEARS MAXIMUM → LEAVING SOME **PIGMENTATIONS** ON THE SKIN.

- **Wickham's striae**

Kobner phenomenon

BUCCAL MUCOSA

- Fibroma


Mandibular tori in the premolar region
Exostosis

Palatal Lesion

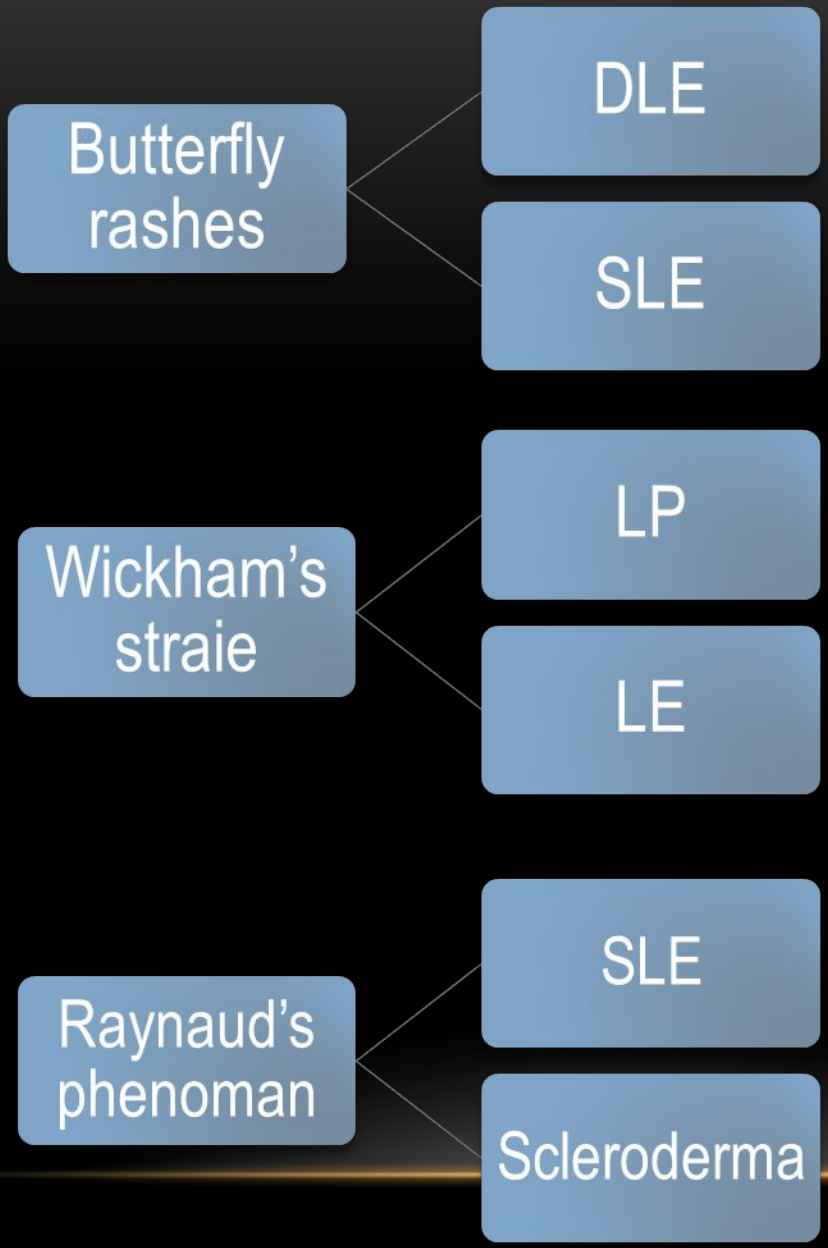
- Torus

Gingivae

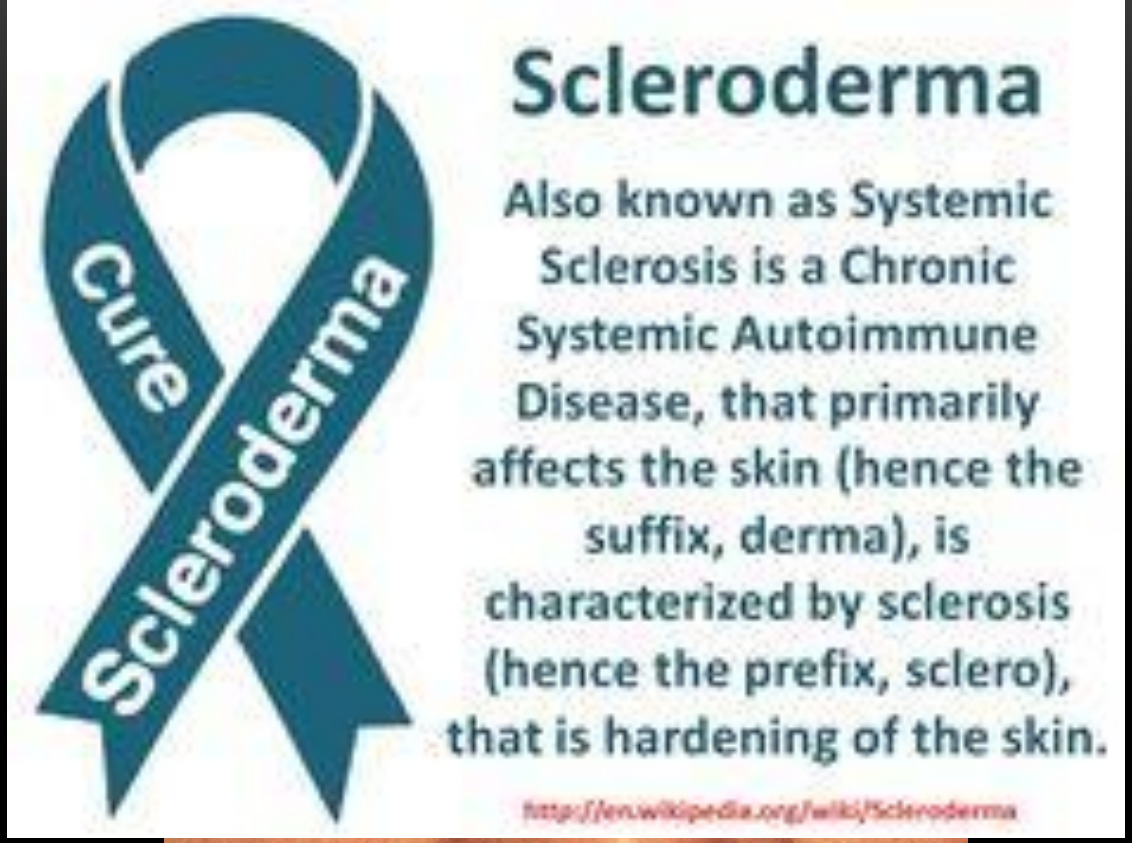
- Mandibular tori

Palatal Lesion

- Denture stomatitis


Butterfly rashes
DLE
SLE
Wickham's straie
LP
LE
Raynaud's phenoman
SLE
Scleroderma

Systemic Lupus Erythematosus (SLE)


Cure
Scleroderma
Scleroderma
Also known as Systemic Sclerosis is a Chronic Systemic Autoimmune Disease, that primarily affects the skin (hence the suffix, derma), is characterized by sclerosis (hence the prefix, sclero), that is hardening of the skin.
http://en.wikipedia.org/wiki/Scleroderma

RAYNAUD'S PHENOMAN

- Is cyanosis and pain of finger and toes on exposure to cold

Common in systemic LE and sclerodermas

STRETCHING OF WHITE LESION MAY SHOW:-

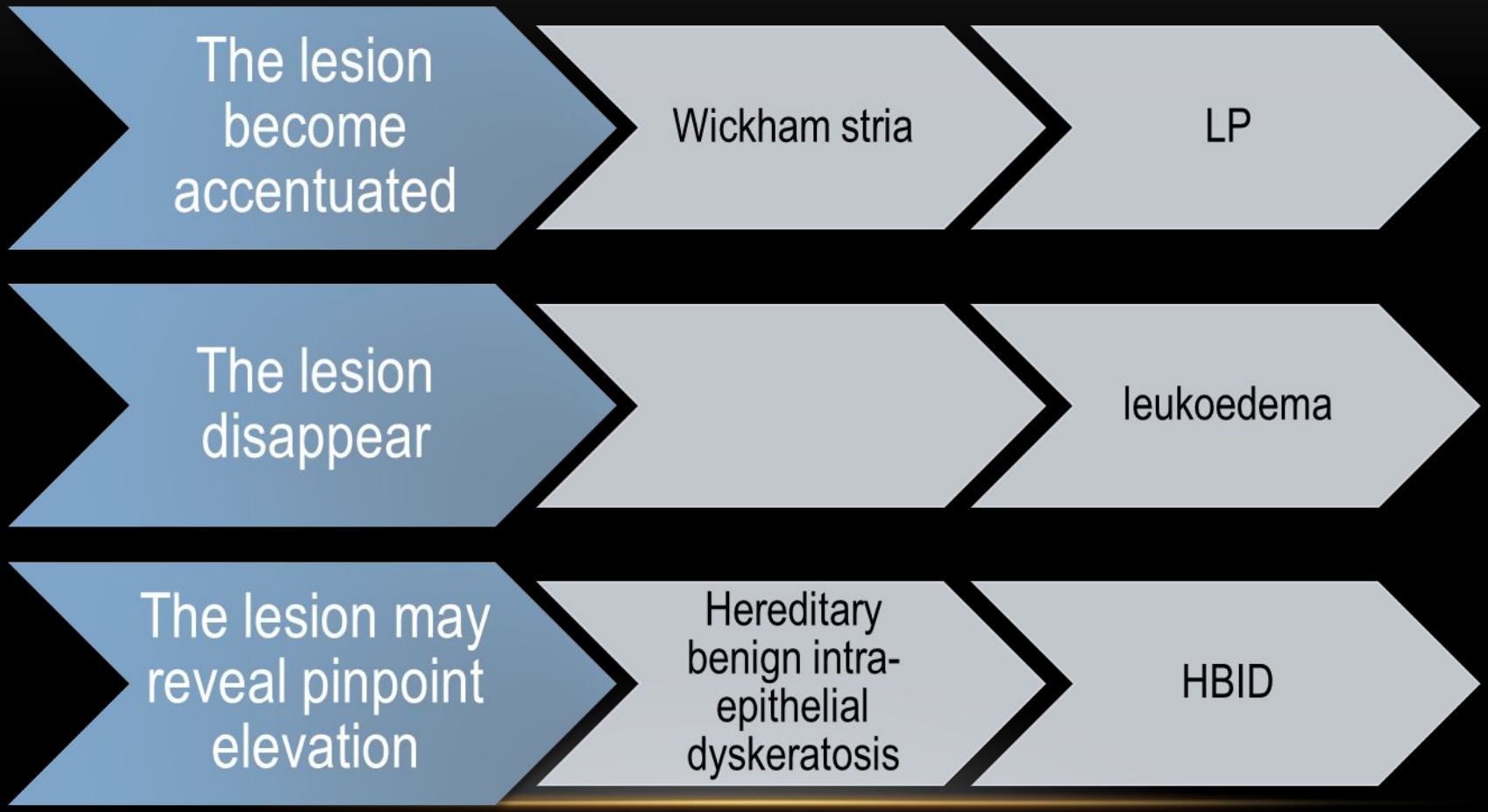
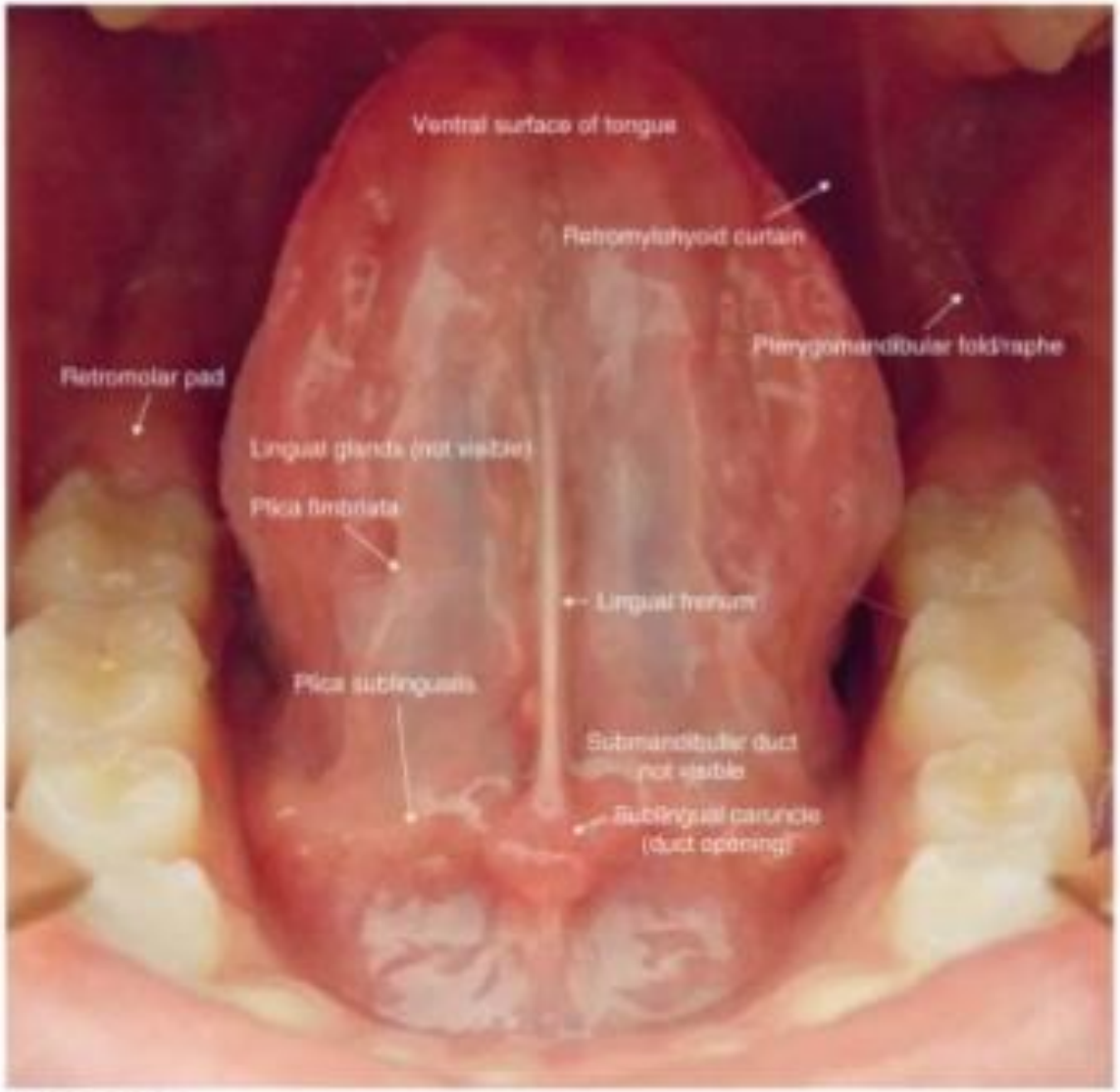


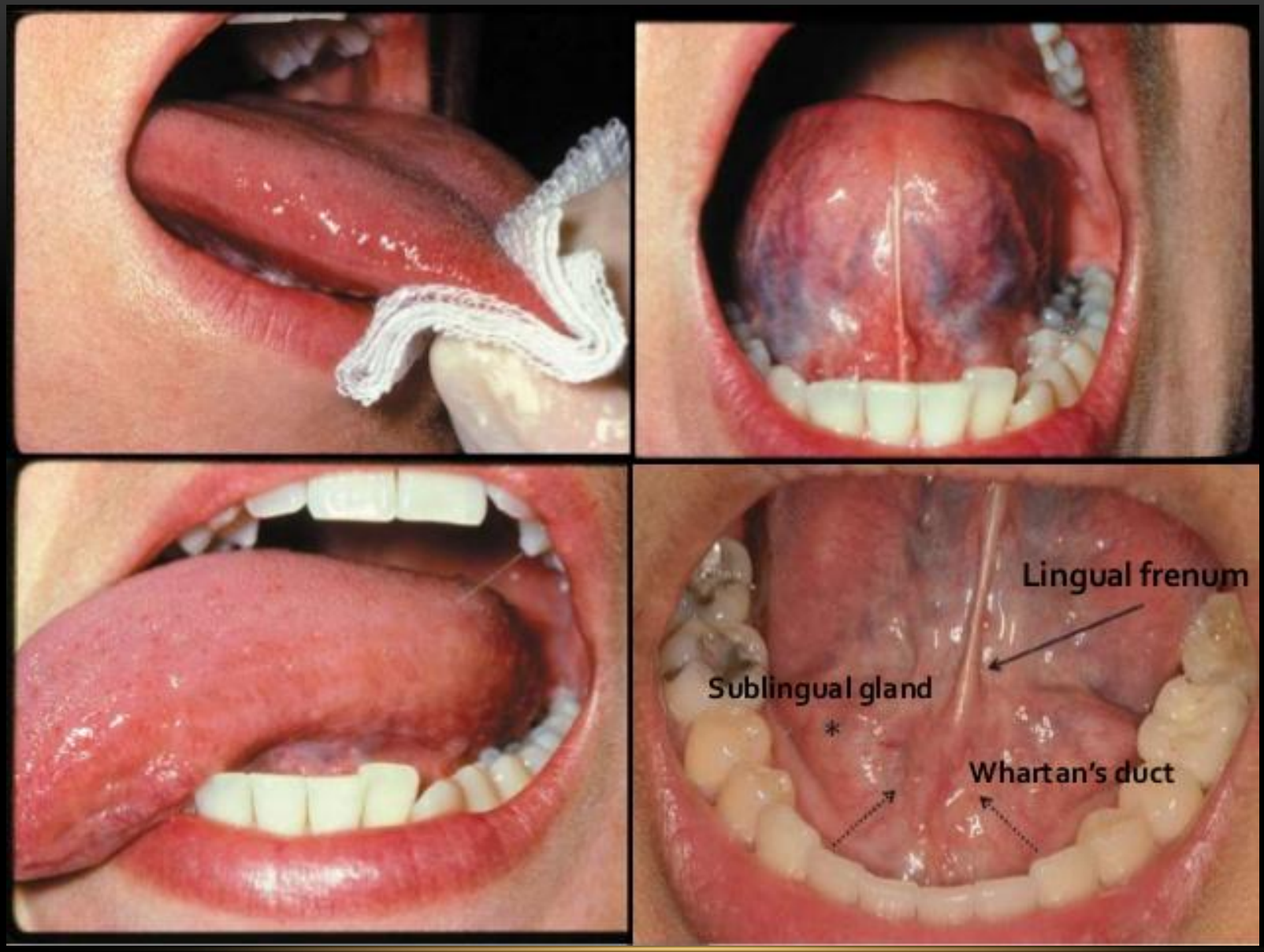
FIGURE 12-7 Anatomical Landmarks of the Oral Cavity-Ventral Tongue View

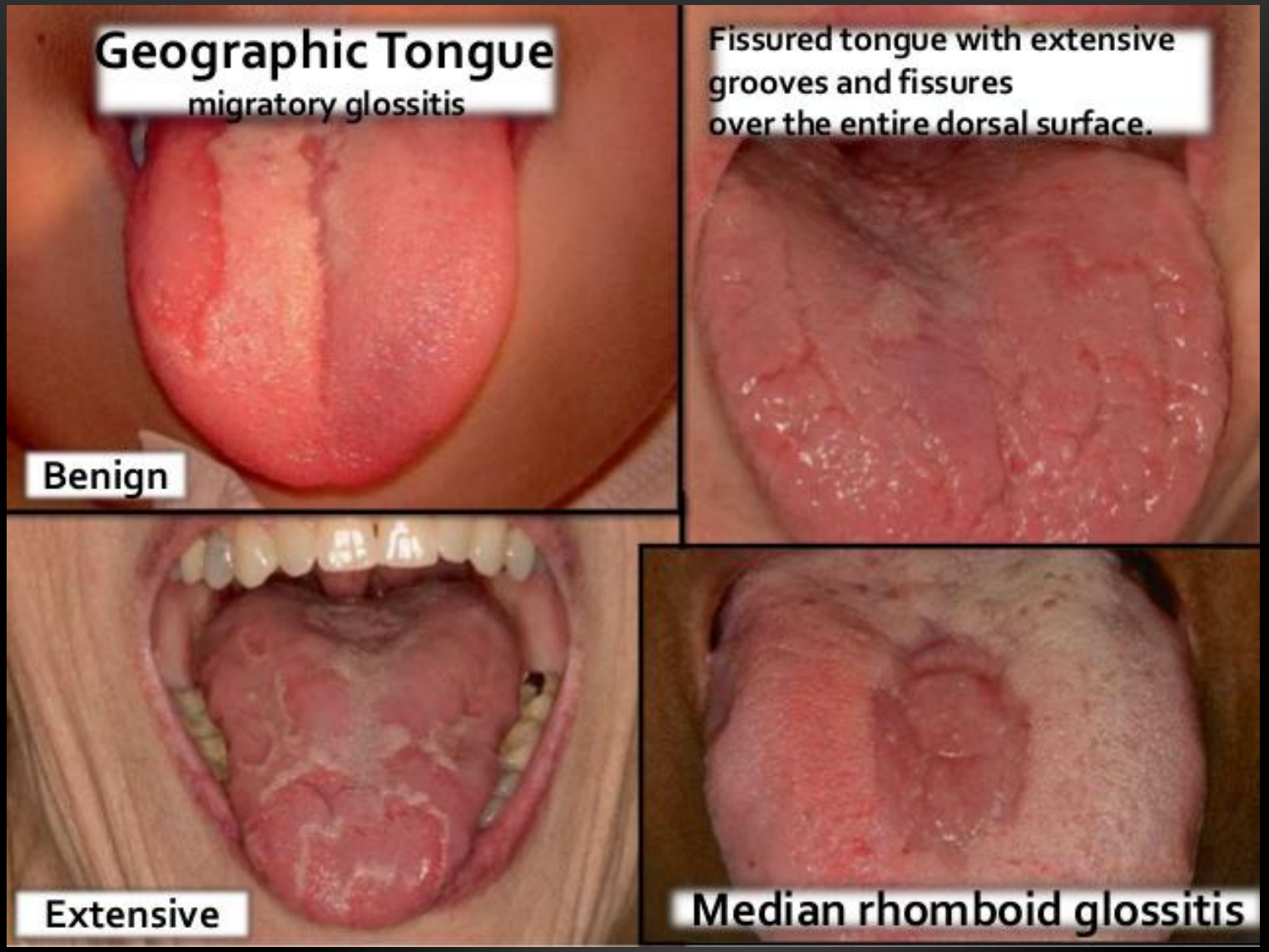


Exam: Tongue

Exam: Tongue

- **You may observe lingual varicosities**


Lingual frenum
Sublingual gland
*
Whartan's duct


Geographic Tongue
migratory glossitis
Benign
Fissured tongue with extensive grooves and fissures over the entire dorsal surface.
Extensive
Median rhomboid glossitis

Tongue

Visual Inspection

Palpation

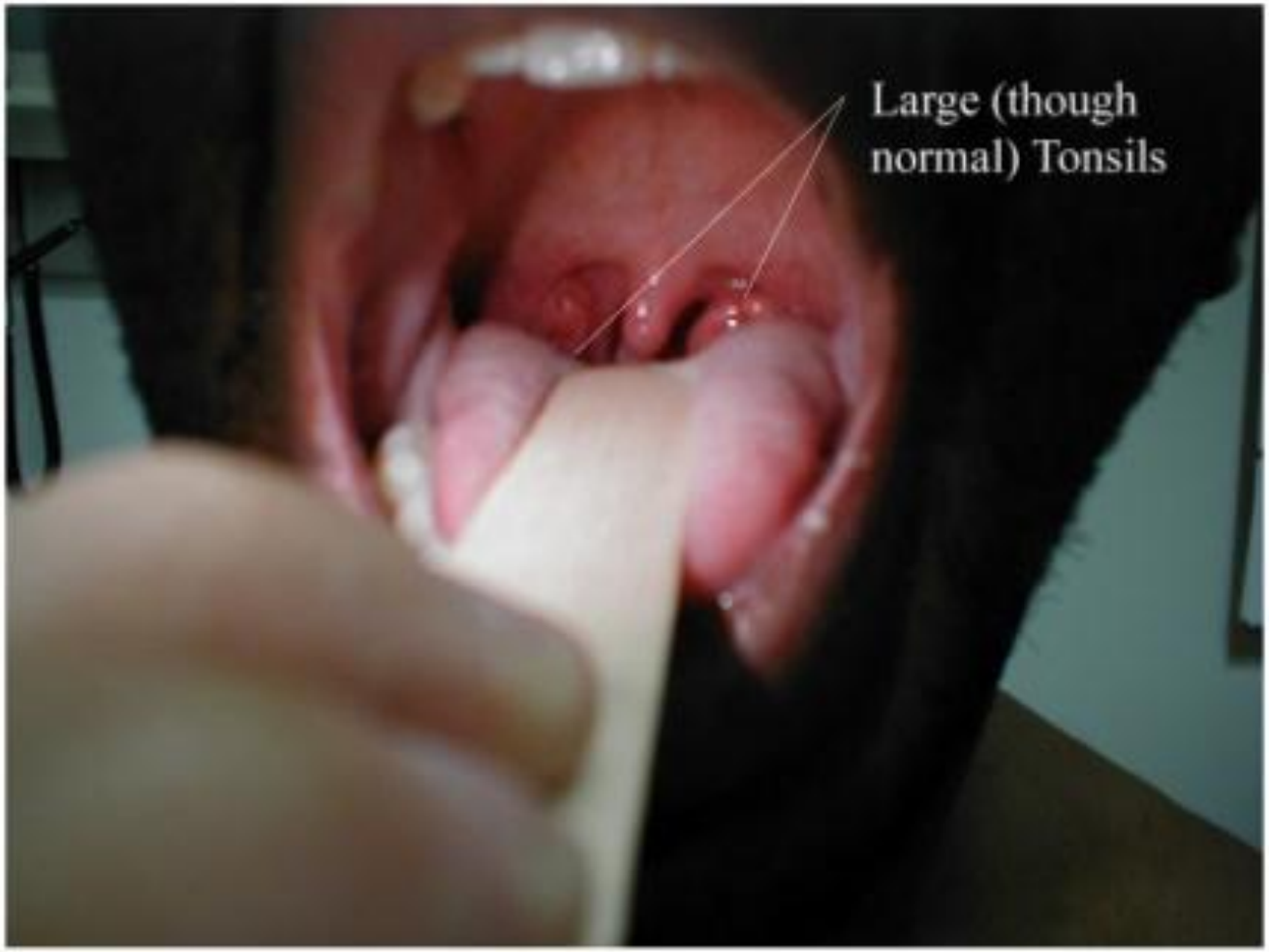
TONGUE LESIONS

- "Coated" tongue & "hairy" tongue

TONGUE LESIONS

- Cancer

Tonsils



Identify the examination procedure

- Finger test

- ***Gingiva:***
- The following features of the gingiva should be considered e.g.:
- colour,
- size,
- contour,
- consistency,
- surface texture,
- areas of bleeding and pair

MARGINAL GINGIVAL INFLAMMATION

- ***Periodontal pockets:***
- In order to evaluate the amount of periodontal tissues lost in periodontal disease and to identify the apical extension of the inflammatory lesions, the following parameters should be recorded:
- - Pocket depth (probing depth).
- - Attachment level (probing attachment level).
- - Furcation involvement.
- - Tooth mobility.

Gingivae

- Pericoronitis

Gingivae

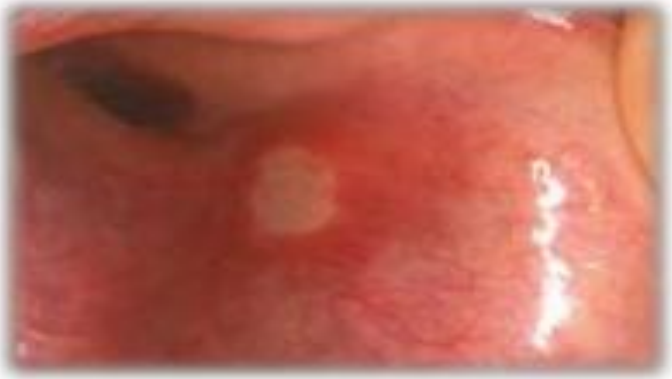
- Acute necrotizing ulcerative gingivitis

NO SPECIFIC LOCATION

- Traumatic ulcer

NO SPECIFIC LOCATION

- Aphthous ulcer



NO SPECIFIC LOCATION

- Leukoplakia

Teeth

- Caries

Examination of the teeth:

- Teeth are examined for caries, overhanging fillings, hypersensitivity, proximal contact relationships, tooth mobility, occlusion, pathologic migration of the teeth and sensitivity to percussion.

Teeth

- Severe Erosion

Teeth

- Severe Abrasion

- History of habits:

- Clenching or grinding the teeth.
- Tongue thrusting.
- Smoking.

EXTRA ORAL EXAMINATION

- GENERAL APPRAISAL
- SKULL (CRANIUM)
- FACE
- EYE
- NOSE
- HAIR
- SKIN
- JAWS & TMJ
- SALIVARY GLANDS
- LYMPH NODES
- THYROID GLAND
- HANDS AND FINGERS

GENERAL APPRAISAL

- **Starts while patient entering the clinic.**
- **Performed without patient interruption.**

Report, record, or observe the following:

1. Physical structure (body type)

- ***asthenic*** : slender or slim
- ***normosthenic*** : average weight & length
- ***sthenic*** : short, stout

2. Stature

giant, tall, short, dwarf or normal

3. Body weight

over, under or normal

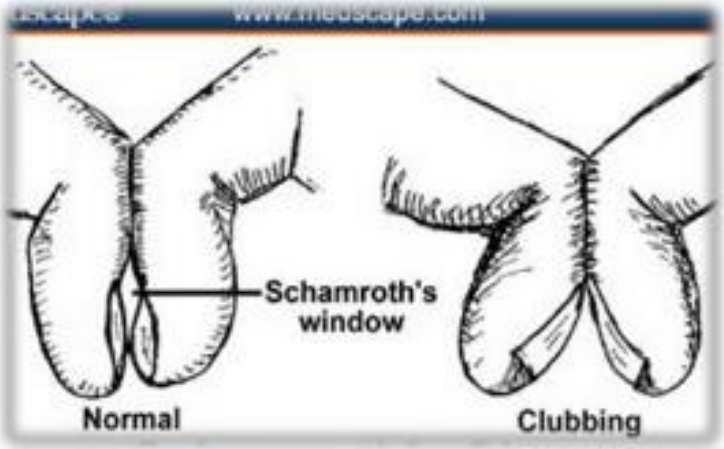
4. Behavior

lazy, nervous, irritable or normal.

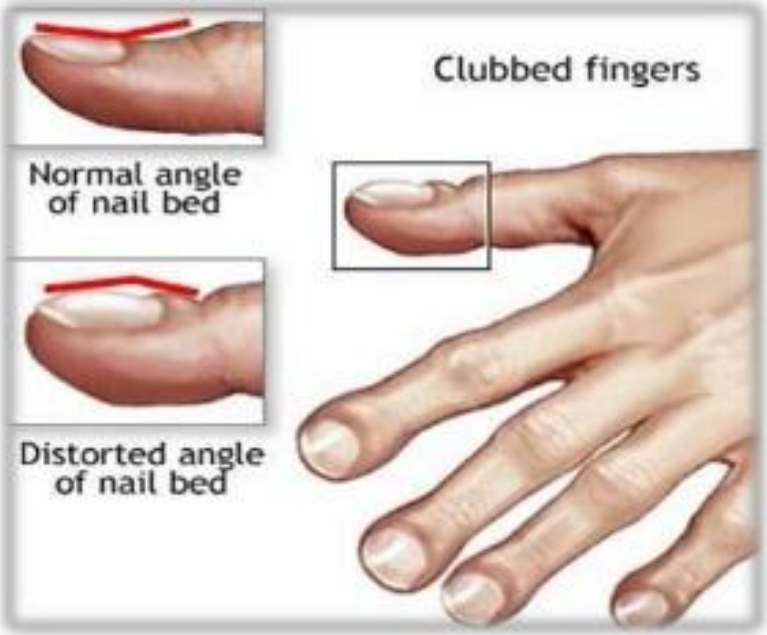
5. Speech

normal or difficult .

Hands



koilonychia or nail spooning (may suggest iron deficiency anaemia),



cyanosis or bluish discoloration (may suggest heart or lung disease).

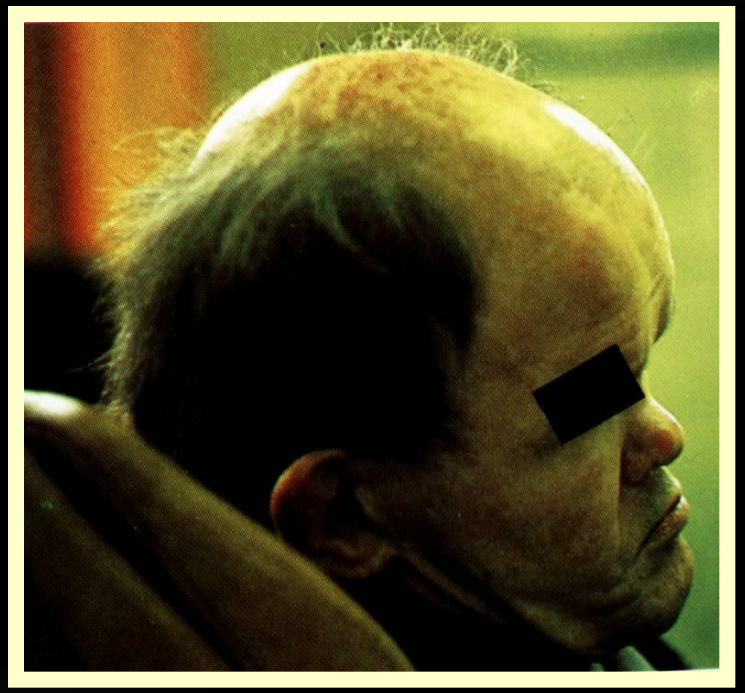
7. Recording vital signs

temperature	37	normal
pulse rate	72 B/M	normal
blood pressure	80/120	normal

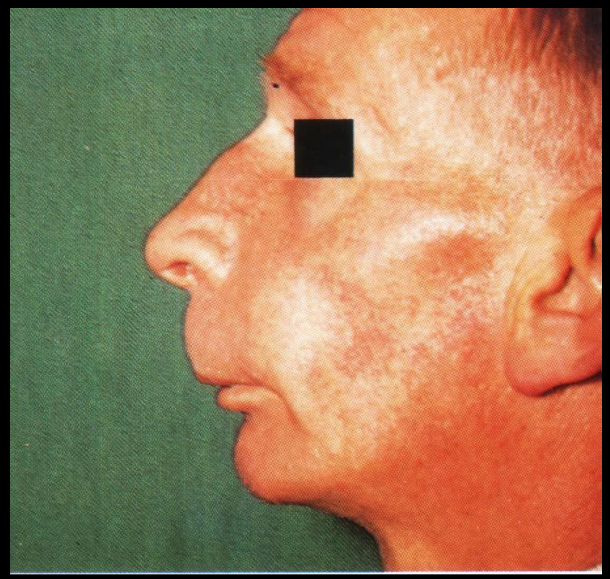
SKULL AND CRANIUM

- **Size** : from supra orbital ridge to occipital protuberance.
  - **Small head** (micro cephalus) brain under development
  - **Large head**
    - **paget**
    - **hydro cephalus**
    - **acromegalic**
- **Shape** : prominent forehead
  - rickets
  - congenital syphilis

CONGENITAL SYPHILIS



PAGET,S DISEASE

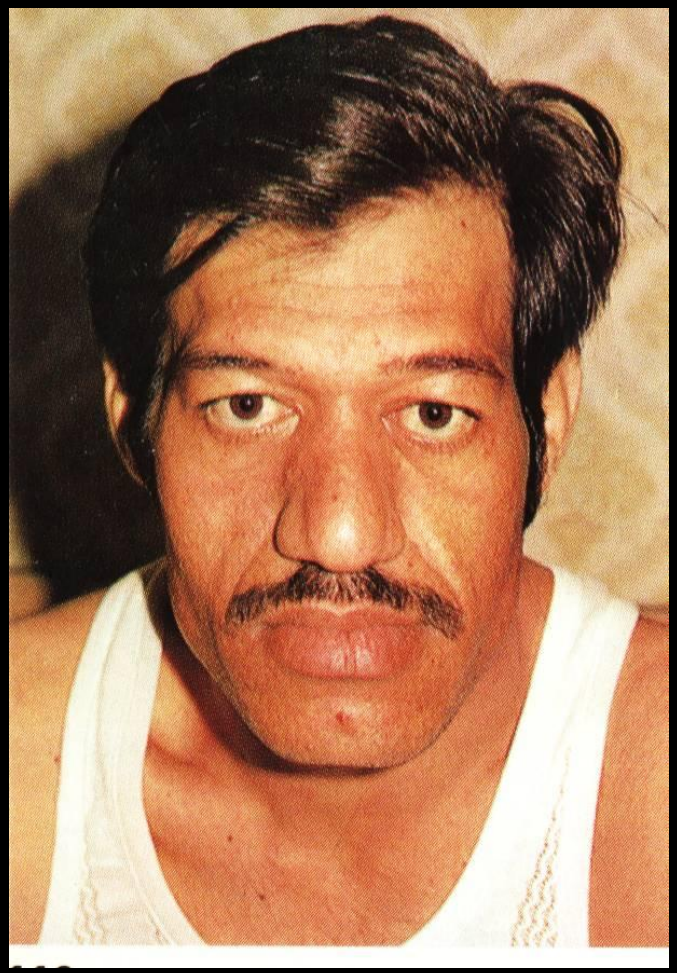


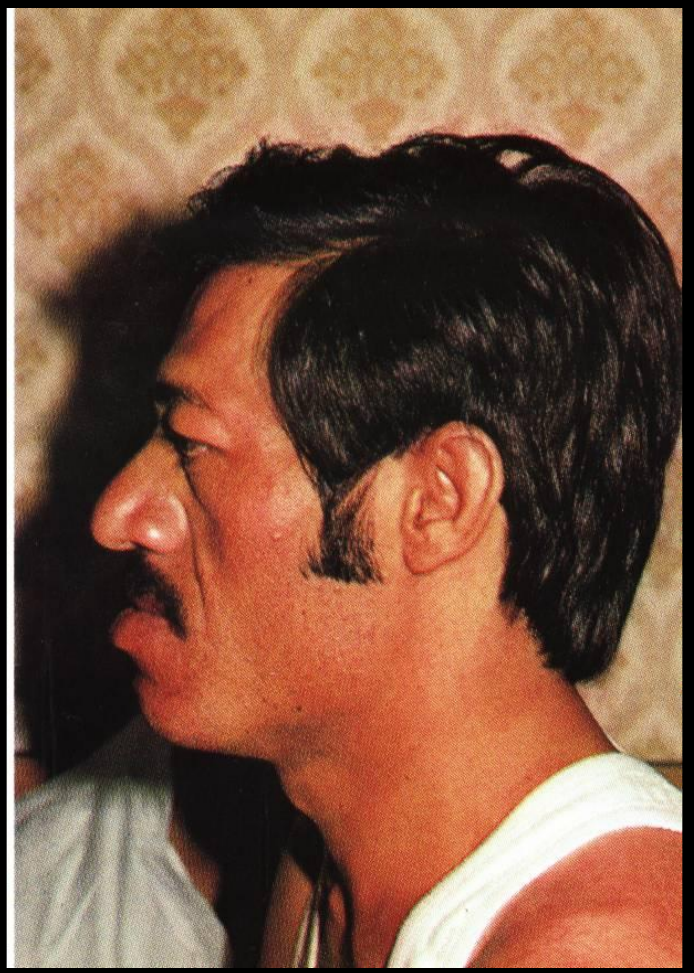
THE FACE

Characteristic face pattern

1. **Acromegalic** face: coarse features prognathism prominent forehead.
2. **Moon's** face: in Cushing disease the face round, flushed & obese.
3. **Hyper thyroid** face: moist skin, protruded eye ball and nervous muscle movement
4. **Congenital syphilis** face: saddle nose, rhagades and interstitial keratitis.

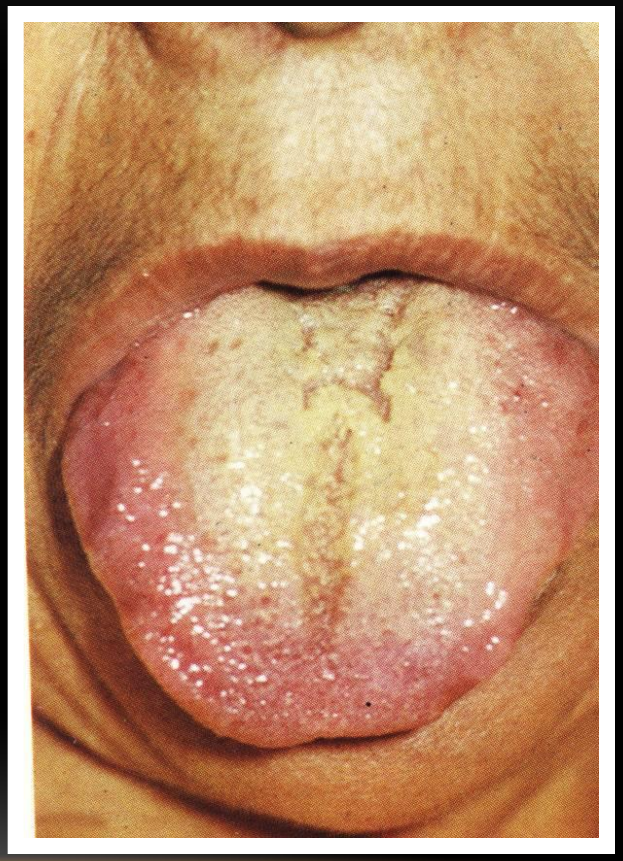
ACROMEGALY



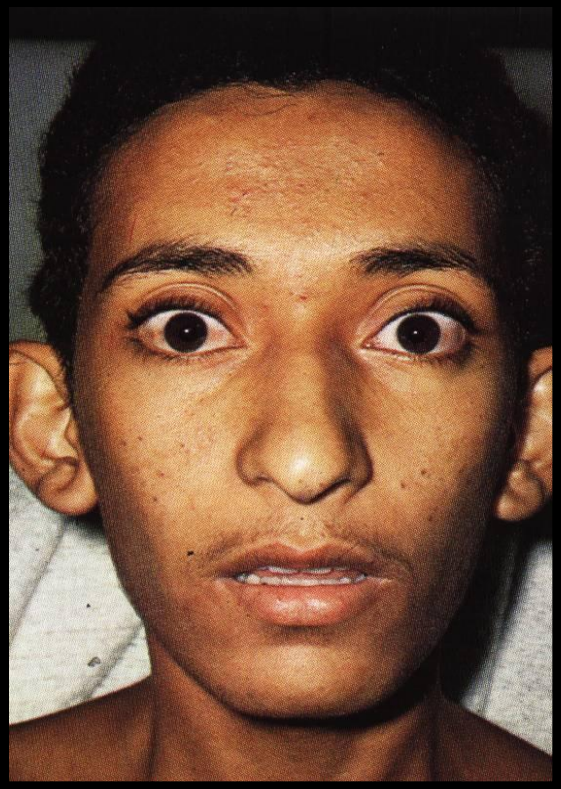


ACROMEGALY

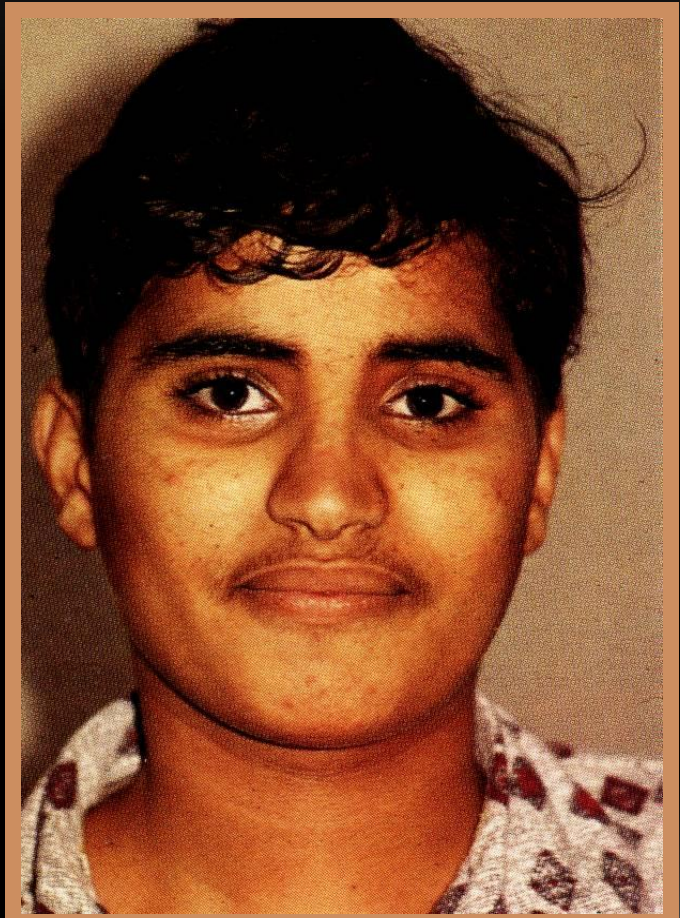
ACROMEGALY

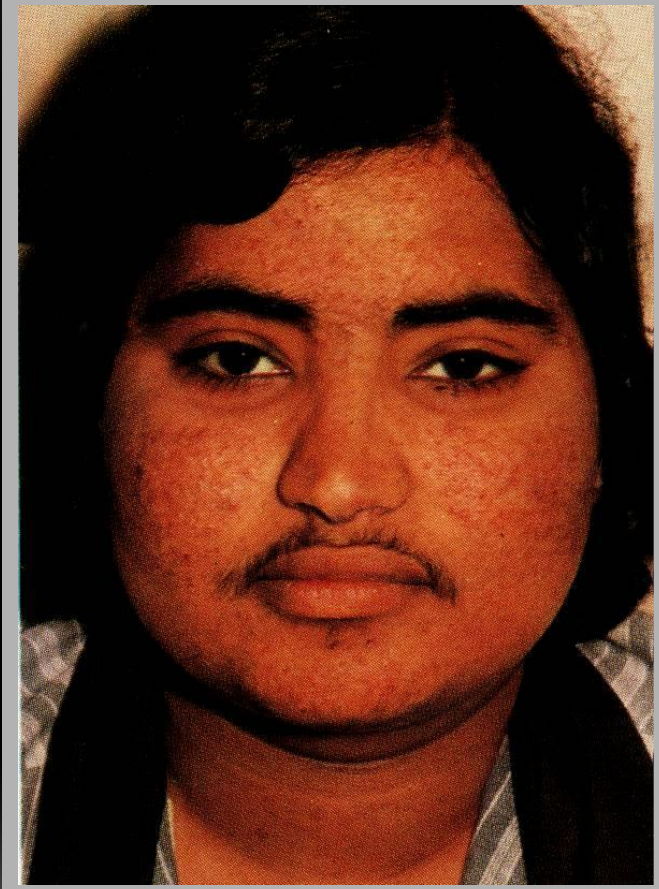


THYROTOXICOSIS

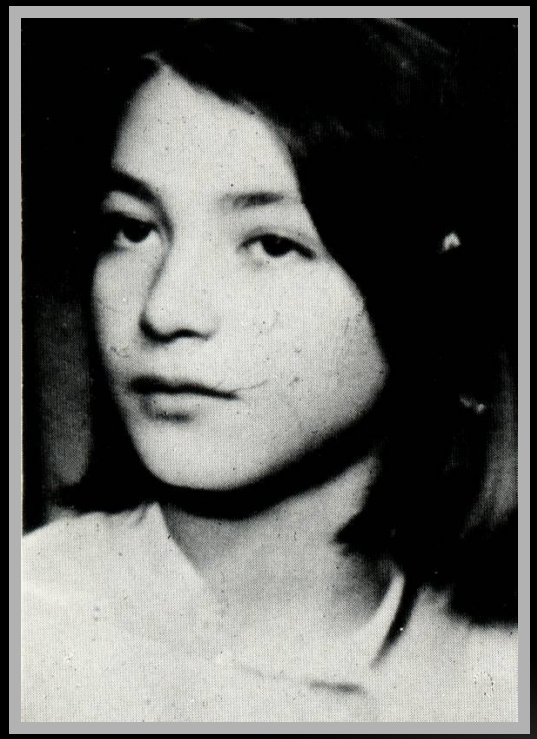


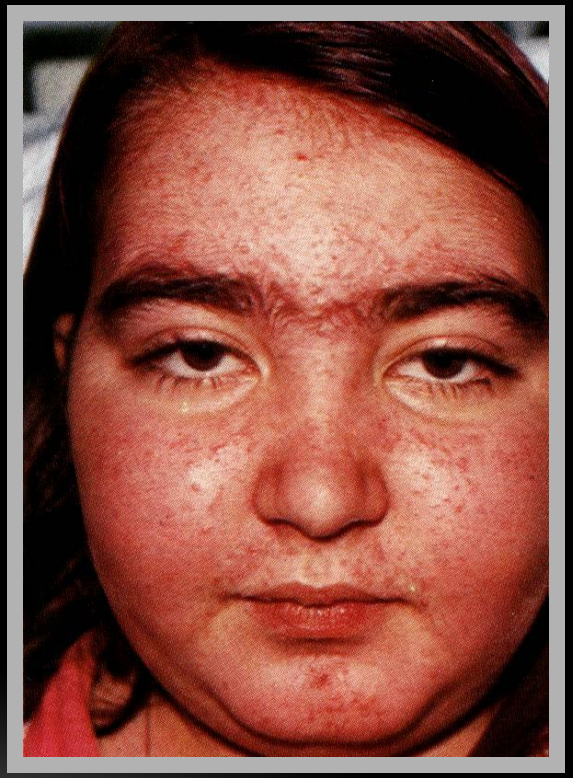
MOON FACE



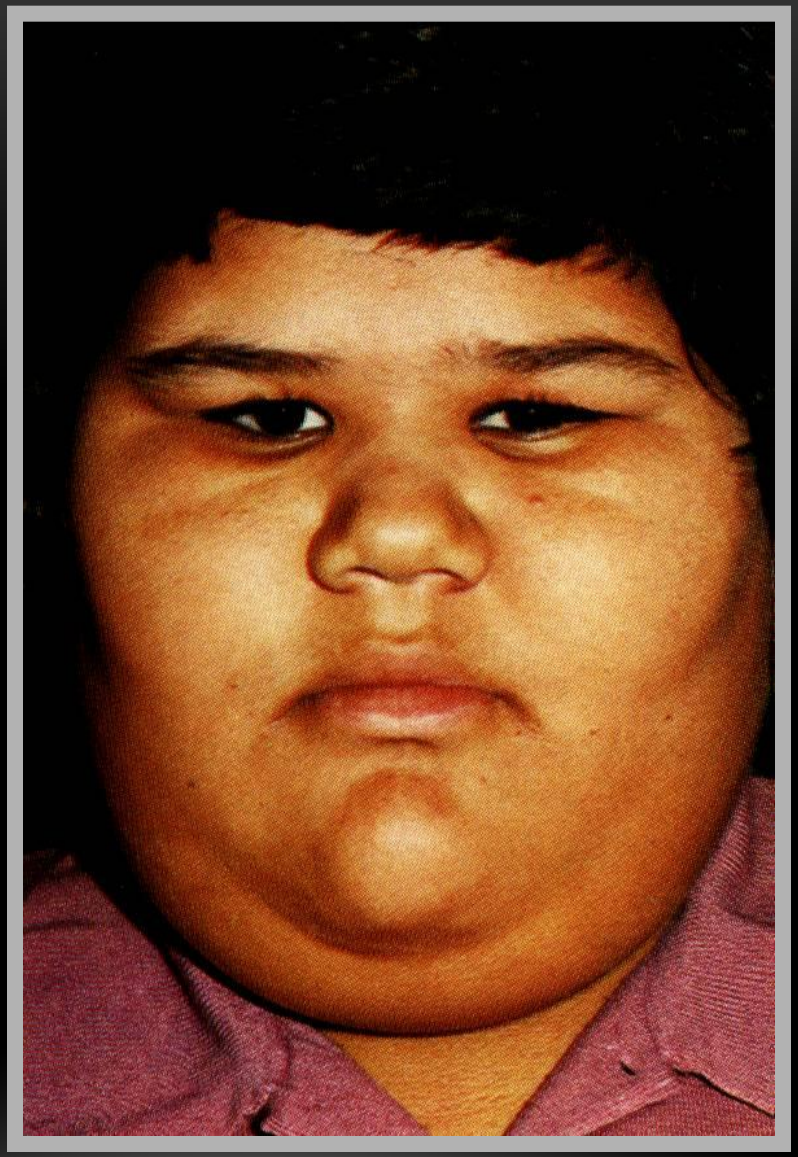


CORTISONE THERAPY





OBESITY



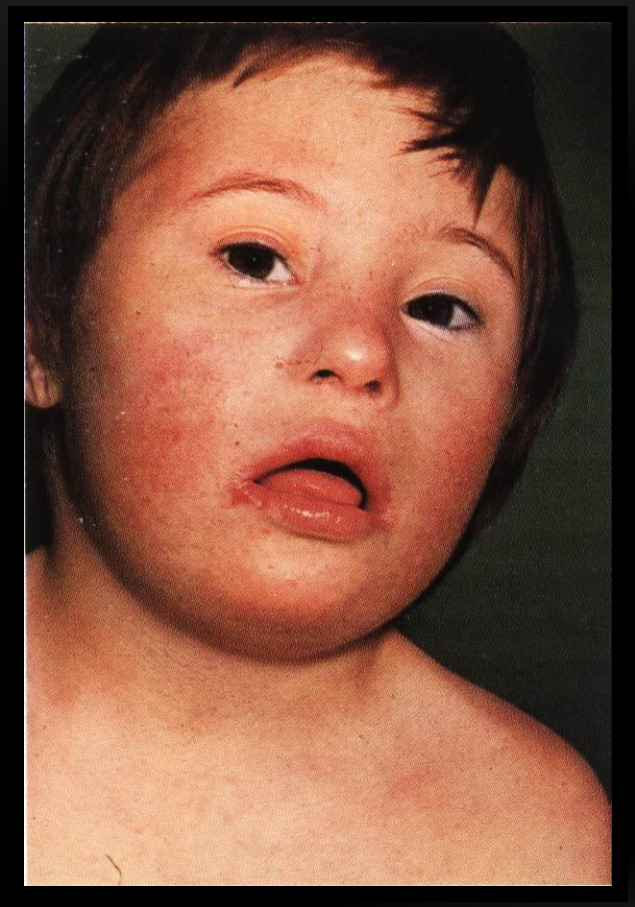
5. **Nephrotic** face : puffy, pale with baggy eyelids

6. **Sclerodermic** face: “mask face” smiling, whistling & other expression are difficult and the skin is very tight.

7. **Mongoloid** face: slanted eyes, broad flat nose, large tongue, scanty hair & stupid expressions.

8. **Adenoid** face.

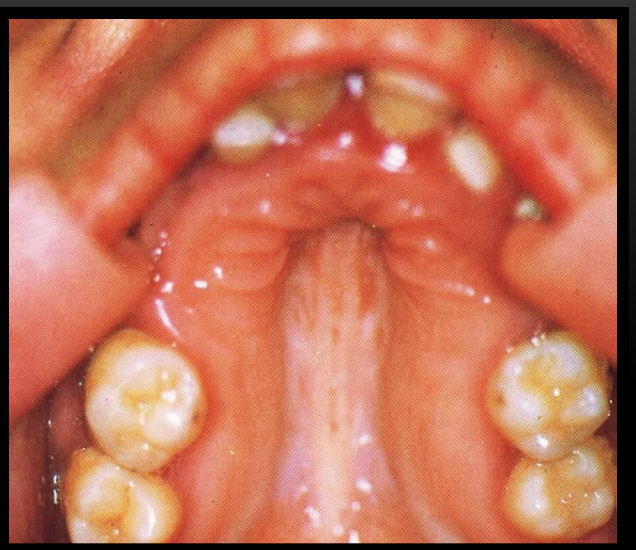
Mongoloid patient



DOWN,S SYNDROME

CLINICAL FINDINGS OF MONGOLS

- Mouth breather
- Cracked lips
- Macroglossia
- Fissured tongue
- Cleft lip or palate
- Poor oral hygiene
- Short roots lead to rapid loss of teeth
- malocclusion

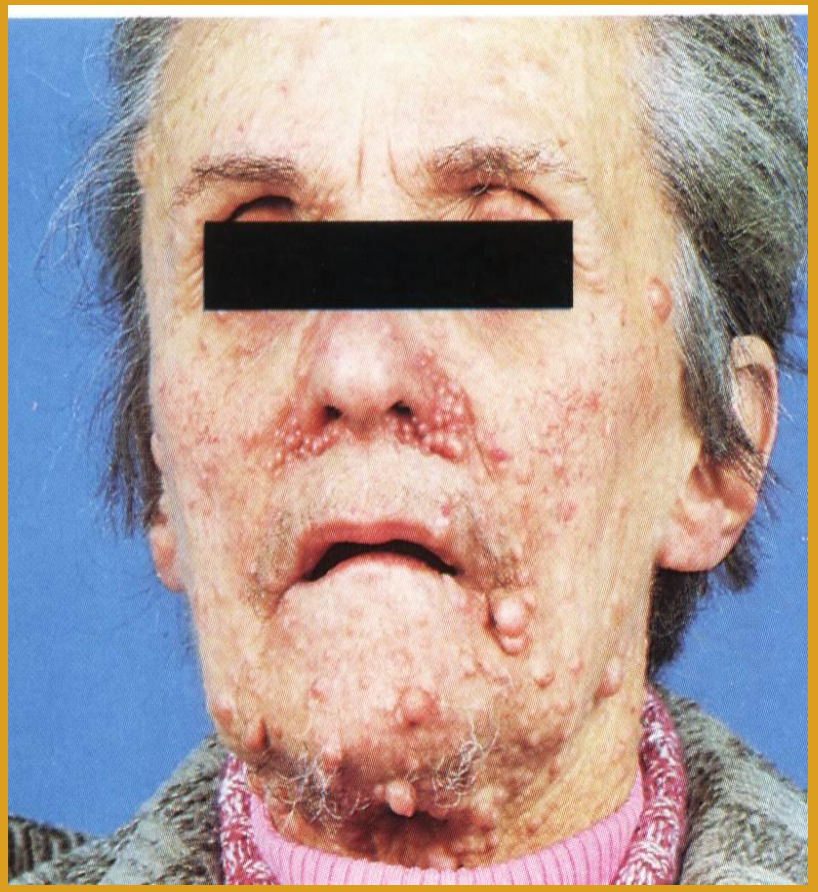


Clinical findings

LUPUS ERYTHEMATOSIS

NEUROFIBROMATOSIS

- Mandibular canal enlargement (lip numbness).
- Macroglossia,fissuring and precancerous

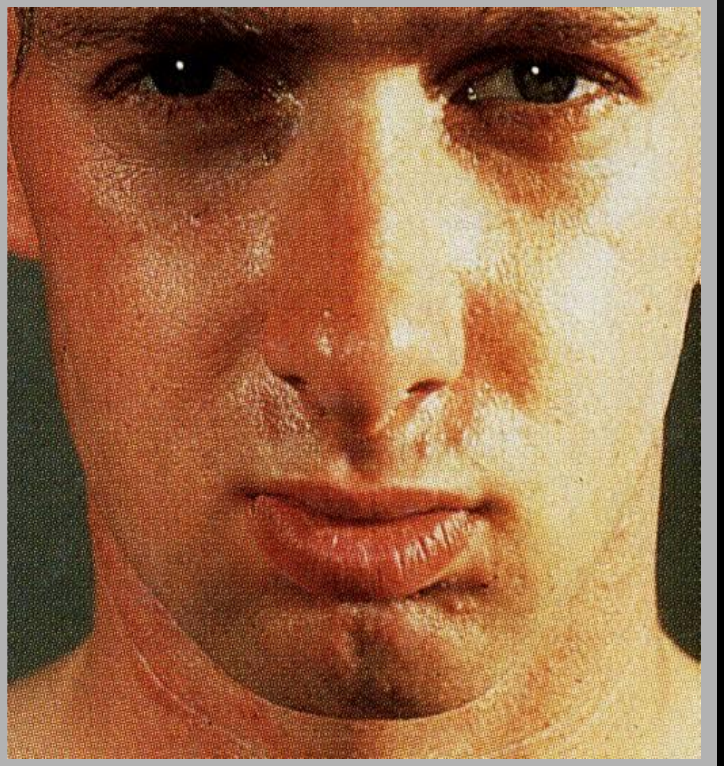


ANGIO EDEMA

sever facial swelling

SURGICAL TRAUMA

Third molars ext



Post operative

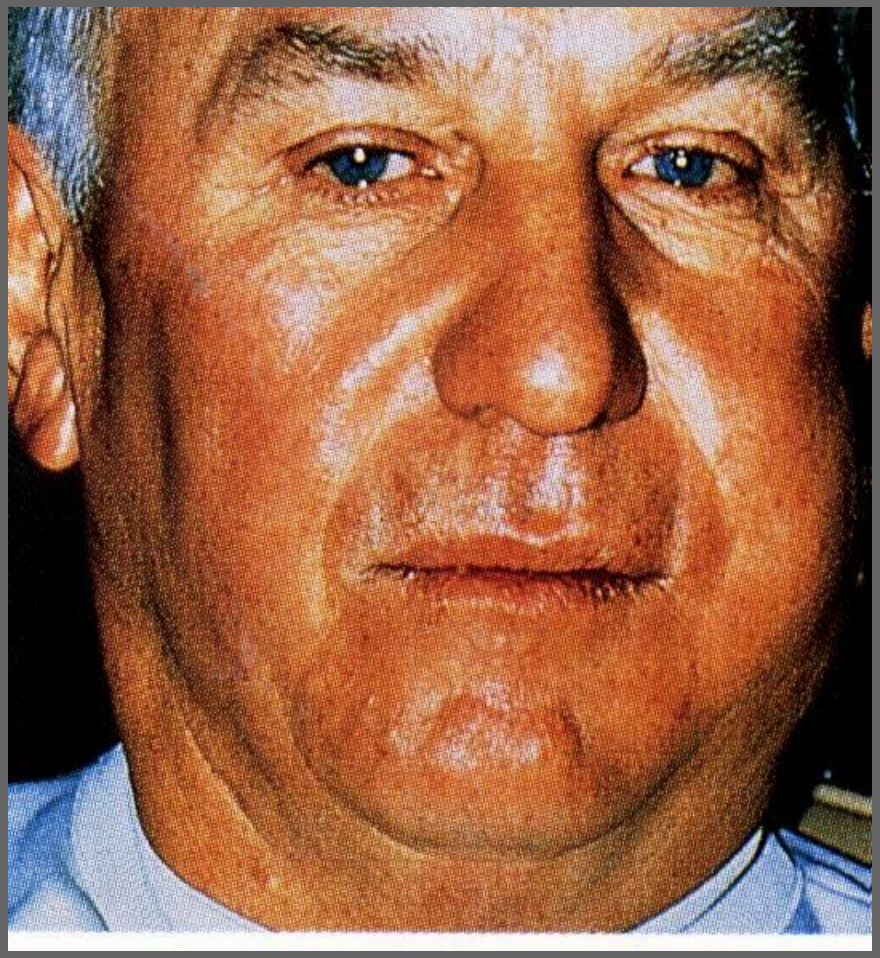
Two weeks later

MASSETER HYPERTROPHY

EMPHYSEMA

- **AIR EMPHYSEMA**

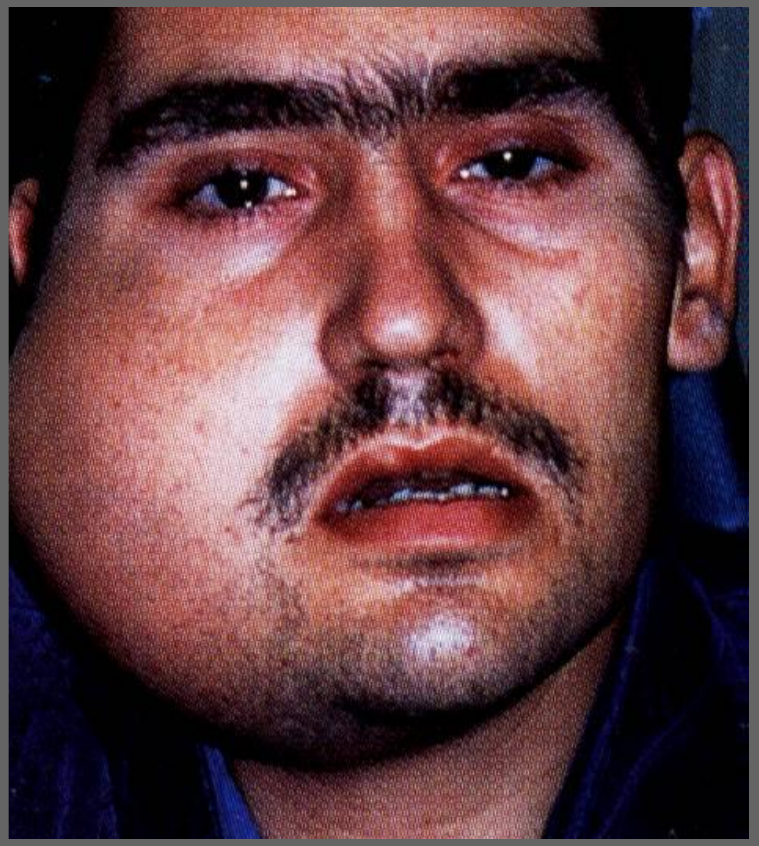
  is a compressible swelling that produce crackling sound upon palpation . It is caused by air forced under mucoperiosteal flap from using high speed hand piece during surgery.



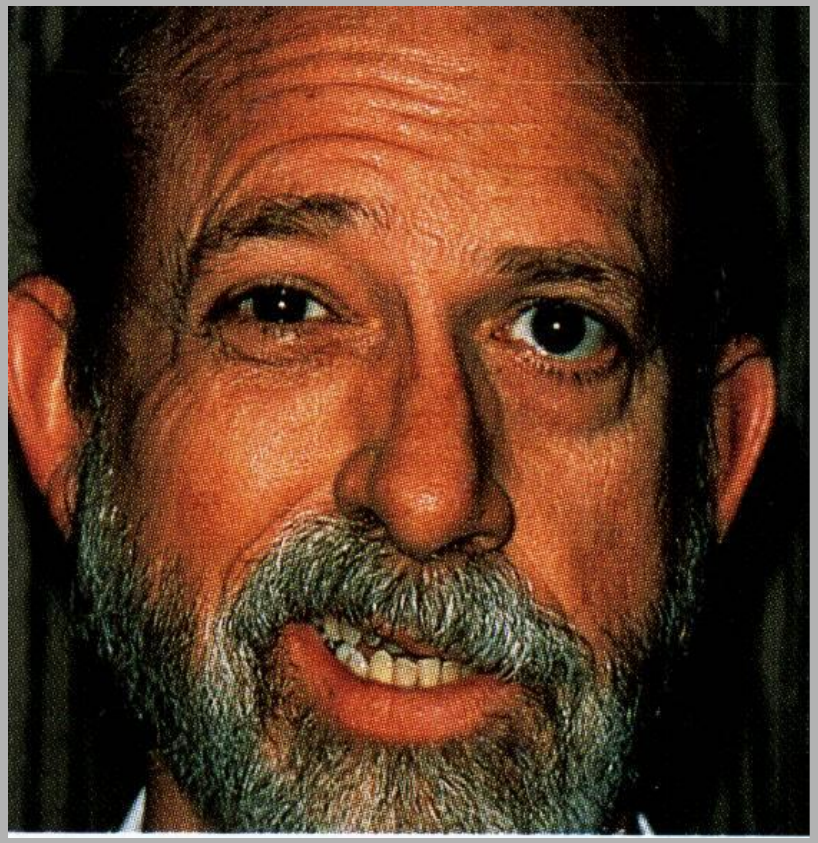
Face
Symmetry

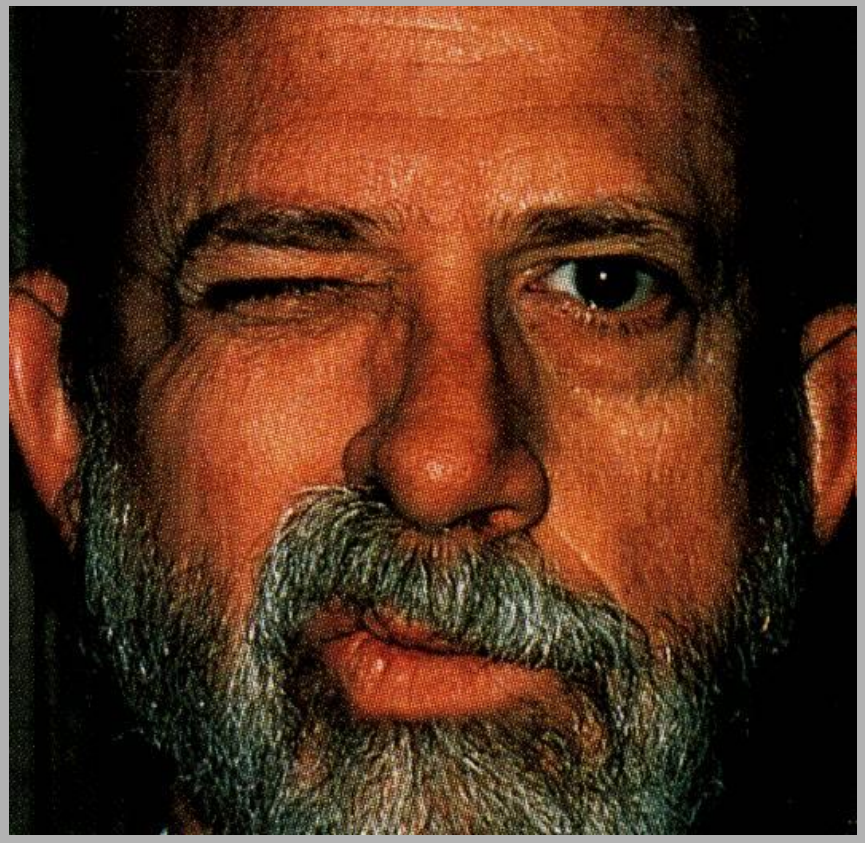
EWING,S SARCOMA

- An aggressive and rapidly growing malignant tumor that has extended via mandibular cortical plate .



BELL, S PALSY





Left side paralysis

- **Chicken pox** is the primary infection by Varicella – Zoster herpetic virus. Papules, vesicles and pustules as skin rash on the trunk, neck, and face will be seen for 7-10 days before spontaneous resolving. Reactivation of dormant varicella virus from sensory ganglia and migration along nerves will induce Herpes Zoster (**Shingle**).

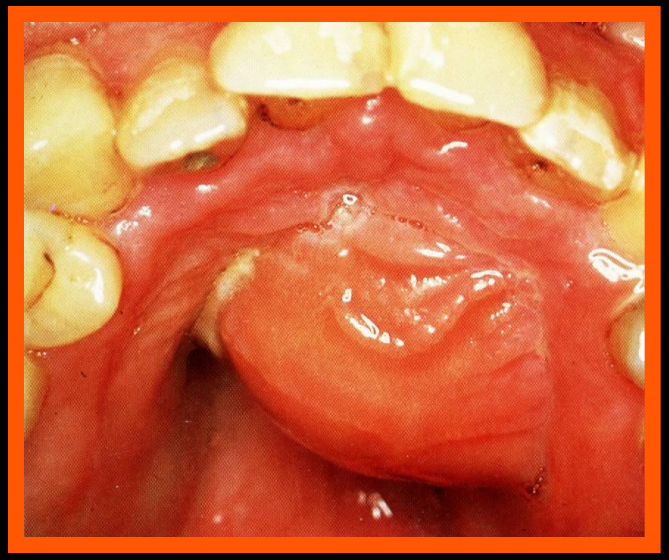
HERPES ZOSTER

Varivax is a life time vaccine is .now available

HERPS ZOSTER

Shingles affects skin by vesicles and pustules that ruptures to form painful crusts persists for weeks . Unilateral bleeding ulcers surrounded by red halo and covered with yellow slough may affect the palate or tongue according to the Trigeminal affected division .

INFECTED CYST



UPPER INCISORS

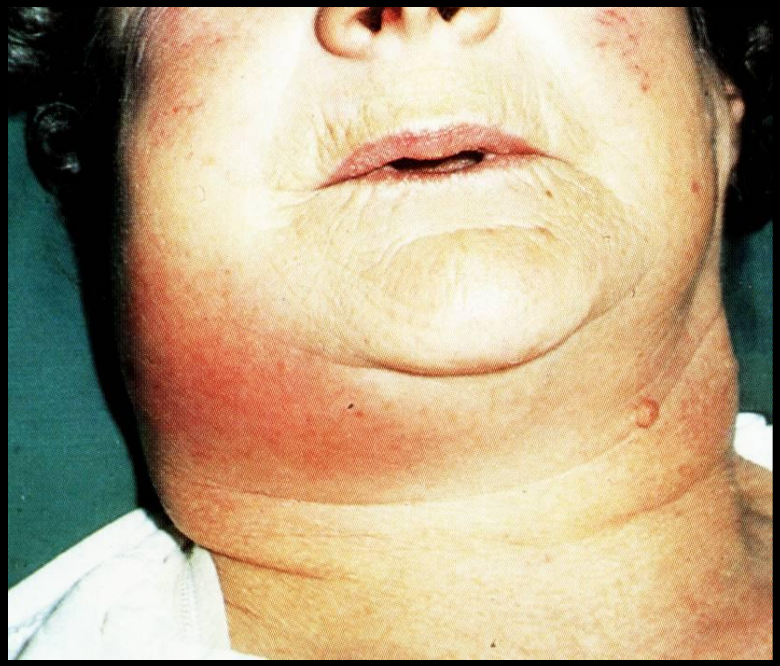
ACUTE DENTO ALVEOLAR ABSCESS

LOWER INCISORS

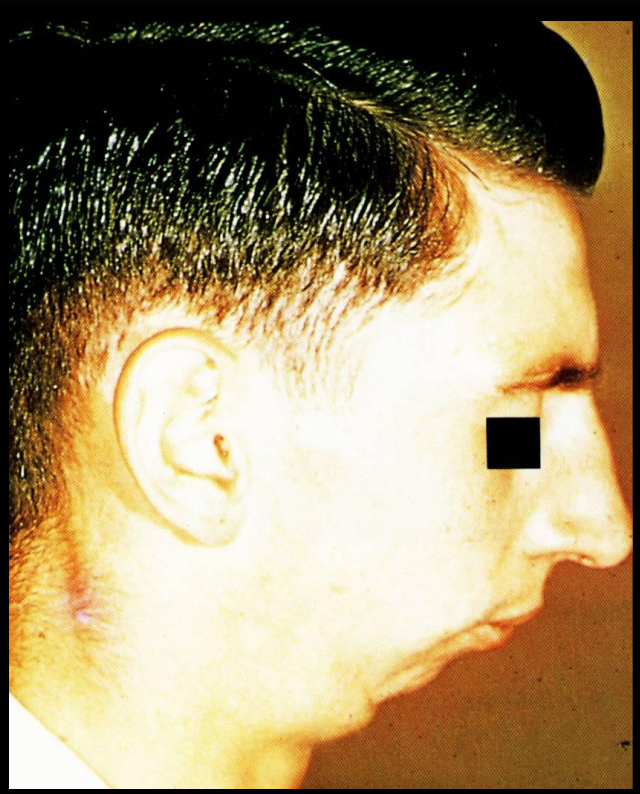
ADAA

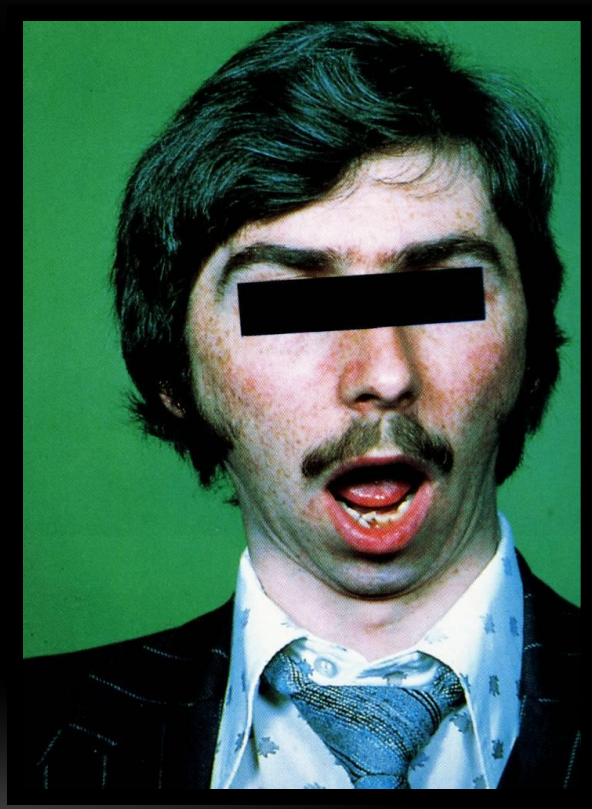
UPPER PRE MOLARS

LOWER MOLAR

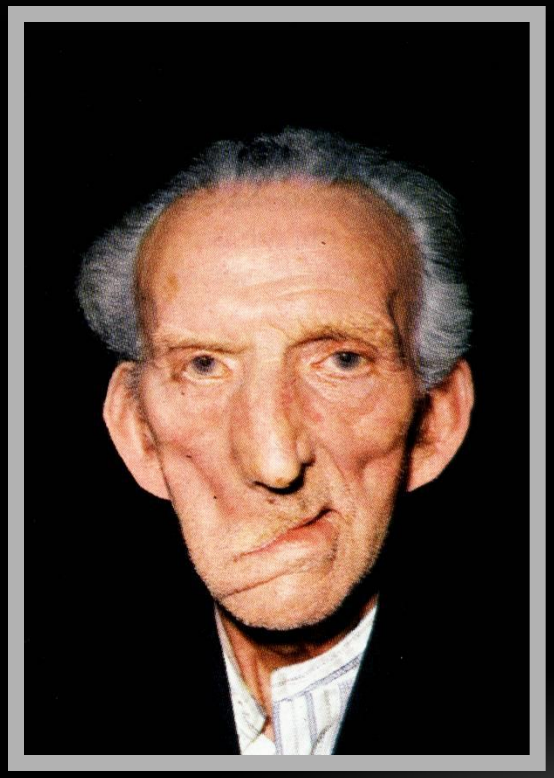


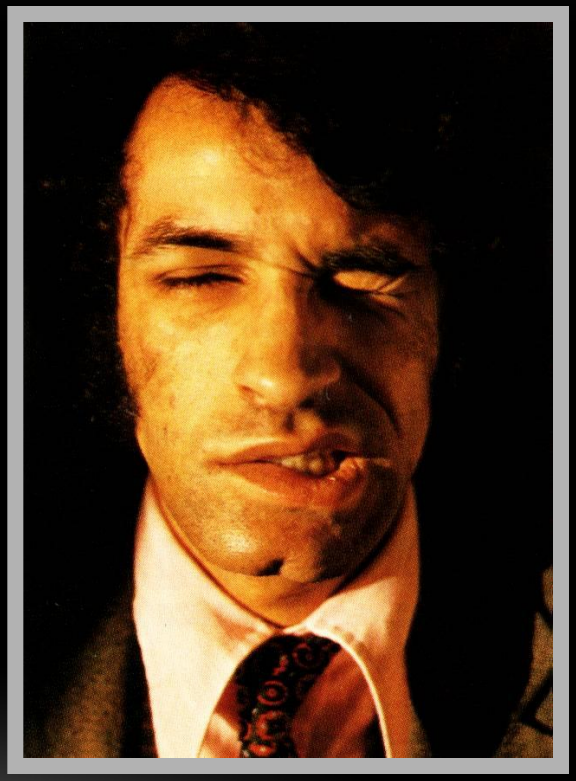
MICROGNATHIA





FACIAL PALSY





PAROTID GLAND ENLARGEMENT

SALIVARY CALCULI

FIGURE 12-2 Bimanual Palpation. A: Examination of the buccal mucosa by simultaneous

palpation on extraorally and intraorally. B: Examination of the floor of the

mouth by simultaneous palpation with fingers of each hand in apposition

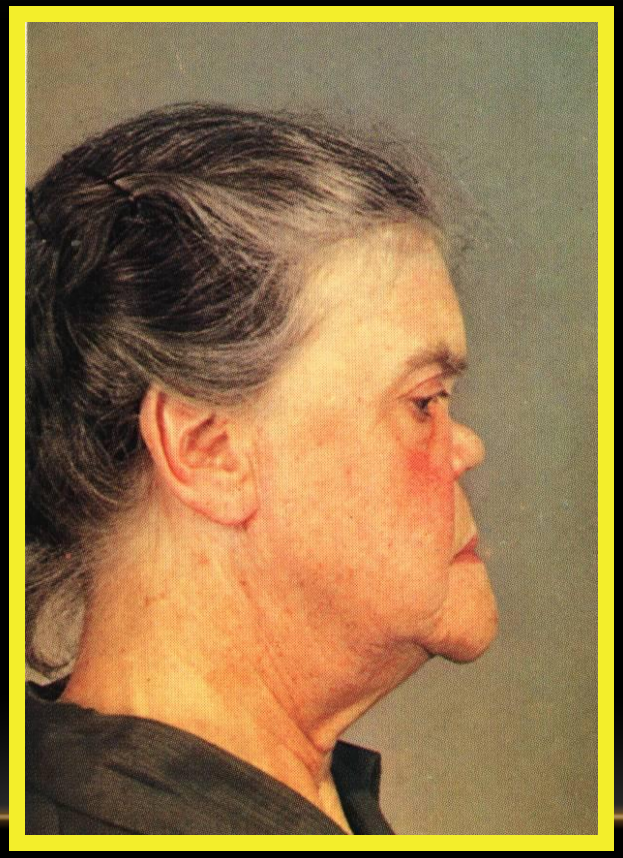
THE NOSE

Nasal abnormalities may be interrelated to oral lesions.

The following might be affected:

- **Shape**: as saddle nose (depressed nasal bridge) in congenital syphilis, myxodema, sickle cell anemia and due to trauma.

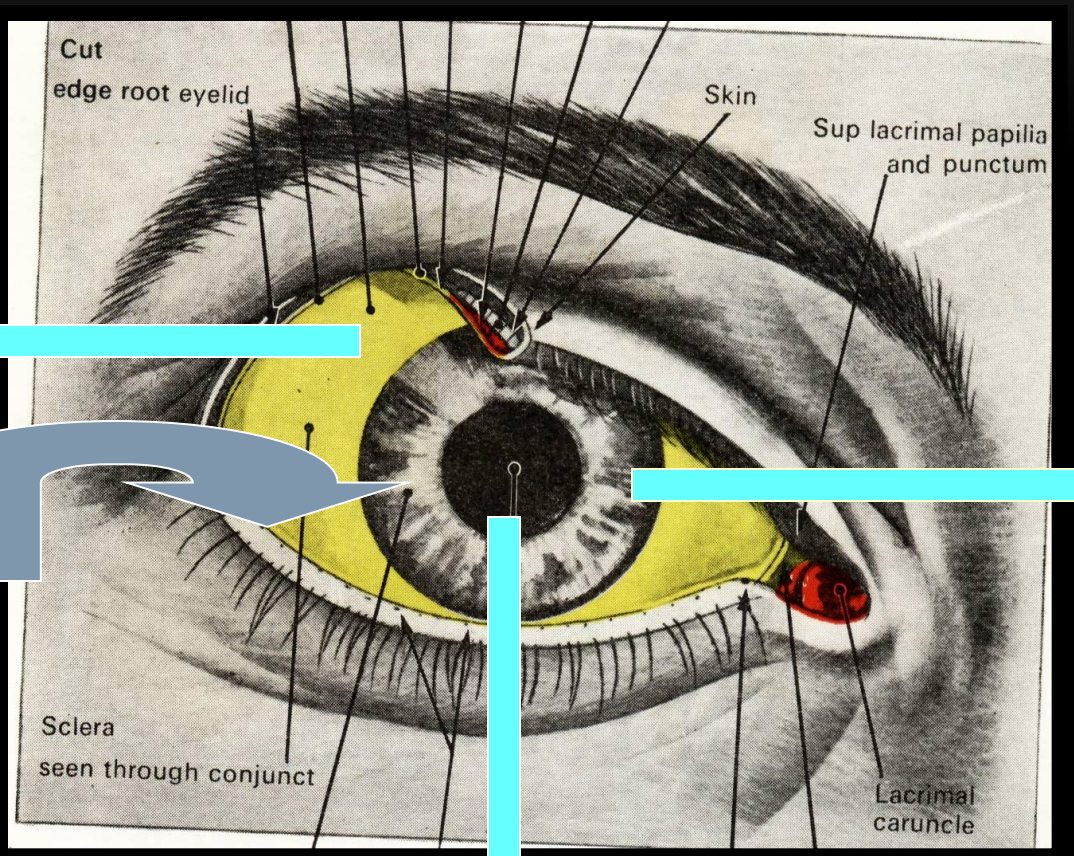
SADDLE NOSE



ACROMEGALY

Enlarged nose

THE EYE



sclera

conjunctiva

Iris

pupil

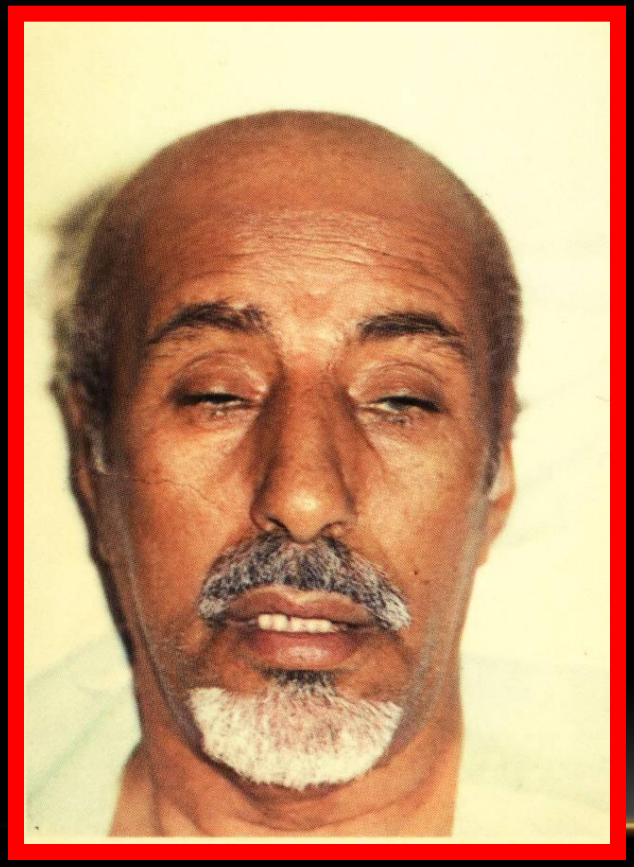
Eye lesions of dental relation

1) Ptosis

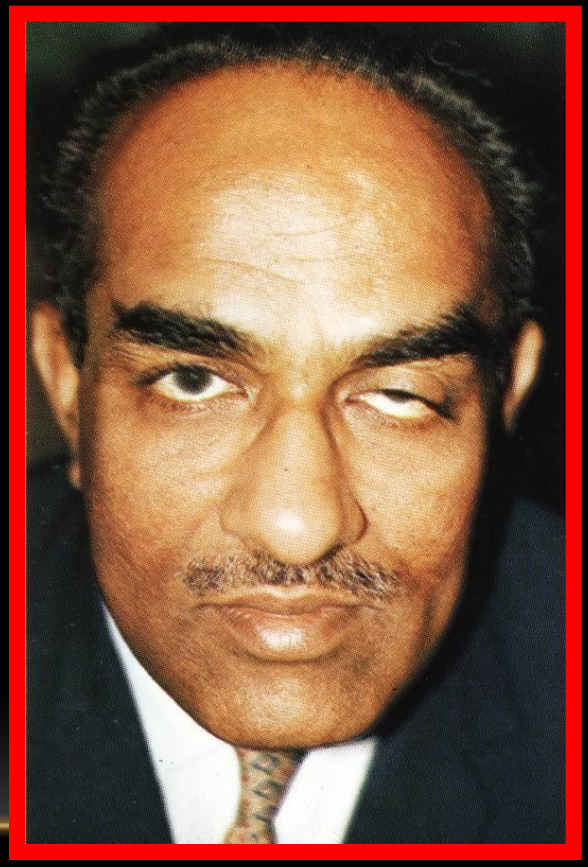
- Dropping of upper eye lid
- Inability to open the eye completely

It is due to paralysis of levator muscle supplied by third occulomotor N.

CONGENITAL PTOSIS

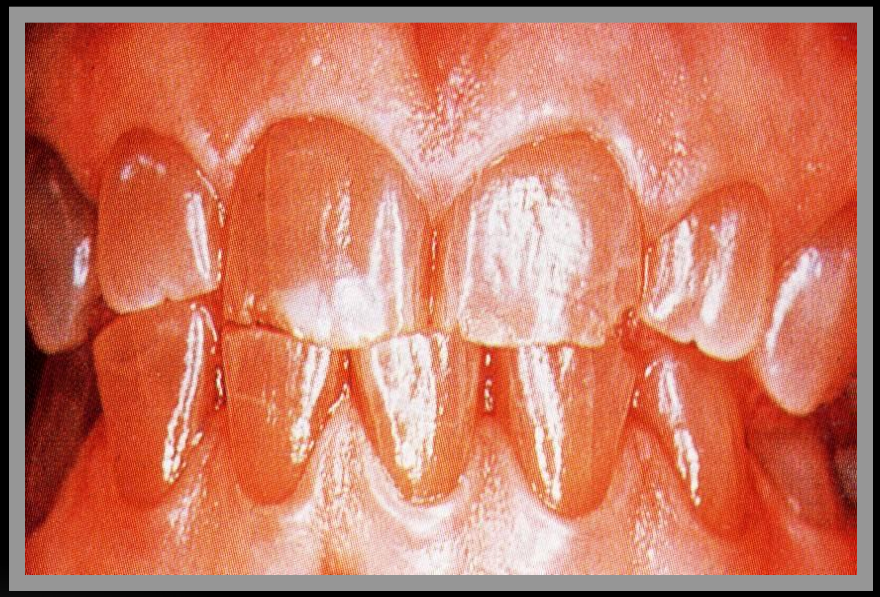


bilateral



unilateral

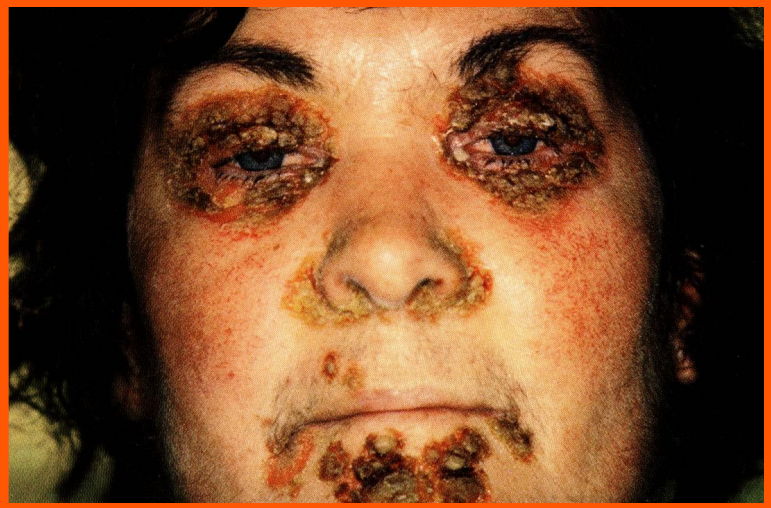
DENTINOGENESIS IMPERFECTA



Blue sclera

Opalescent cracked teeth

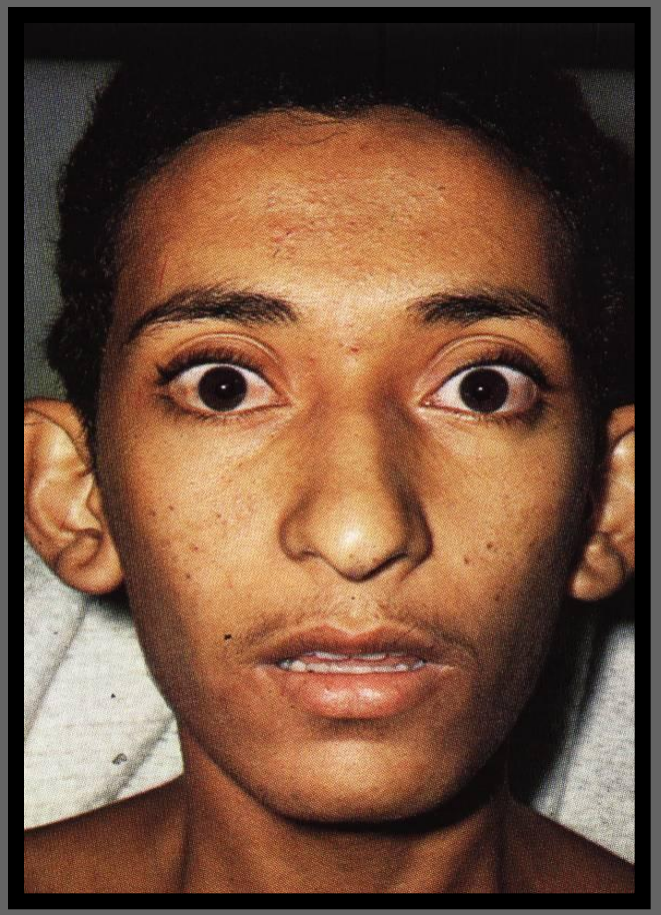
PEMPHIGUS VULGARIS



- Autoimmune vesiculobullous lesion affects skin and oral mucosa or other mucosal tissue.
- Clinically flaccid intraepithelial bullae easily rupture causing electrolytes imbalance.

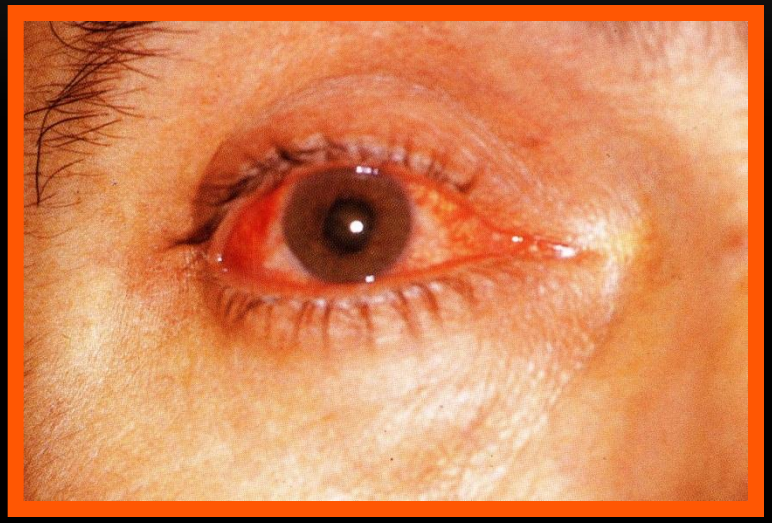
Exophthalmia

- Protruded eye ball is common finding in THyrotoxicosis.



CONJUNCTIVITIS

REITER,S



Behcet,s

SYNDROMES AND OTHER DISEASES

- Muco Cutaneous Ocular Syndromes

1- STEVEN JHONSON S

2- BEHCET S

3- RITTER S

THE SKIN

The skin should be inspected for :

- color changes,
- pigmented lesions, and
- scars

Palpation is used to examine surface texture changes and to check skin .temperature

Skin lesions in dermatologic diseases might - be used for differentiation between similar oral lesions as erythema multiform, erosive . lichen planus and lupus erythematosis

Skin color

- Depends mainly on the amount deposited pigmented material as:-

Melanin Brownish black

Carotene Golden yellow

Oxy hemoglobin Red

Reduced hemoglobin Blue

Increased melanin physiologically in pregnancy or pathologically as in Addison's disease.

- Pallor skin in anemia is due to decreased O2 carrying capacity.

- Bluish or cyanotic color occurs due to stagnation of reduced blood as in heart failure.

- Yellow color in excessive carotene intake or in obstructive jaundice

(excessive bilirubin deposition).

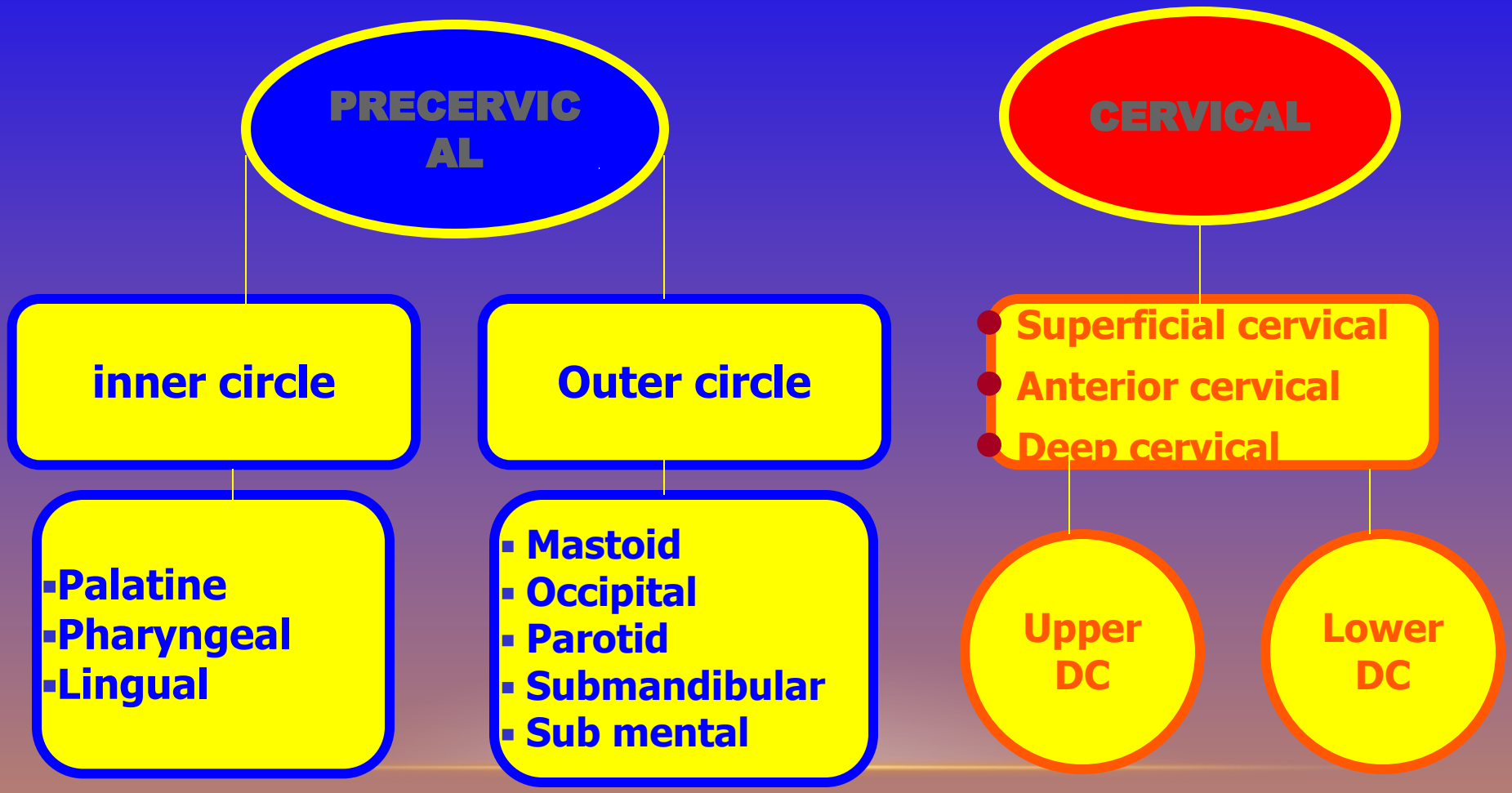
Face:

Skin

Skin rash

Jaundice

LYMPH NODES OF HEAD & NECK



PRE-CERVICAL GROUP

Inner Circle lymphoid tissue around pharynx

1) **Palatine** at the mucous membrane of the lateral wall of the pharynx between palatoglossal & palatopharyngeal arches, large in children.

2) **Pharyngeal** at the mucous membrane of the posterior pharyngeal wall.

3) **Lingual** lymphoid aggregations mostly at dorsal & lateral aspects of post 1/3 of the tongue. Less frequent on ventral surface of the tongue, floor of the mouth, palate or cheek mucosa.

- Enlargement of this group causes dysphagia.

- **The palatine, pharyngeal & lingual tonsils are called** lymphatic ring of **waldyer**

Drainage all lymphoid tissue of inner circle drains into deep cervical.

Outer Circle

1) **Occipital** drain posterior part of scalp.

2) **Mastoid** drain parietal region of scalp.

3) **Parotid** drain lateral part of frontal region, middle ear & lateral aspect of the eyelid.

4) **Sub mental** drain middle portion of the lower lip and tip of the tongue.

5) Submandibular (submax.)

- Medial part of eye lid.
- Nasal, cheek & upper lip skin cover.
- Gum & teeth of lower jaw.
- Floor of the mouth.
- Lateral and anterior 2/3 of the tongue.
- Lateral part of lower lip.

CERVICAL GROUP

1) Superficial Cervical group

- Below parotid gland, associated with the external & anterior jugular vein.
- Drain external ear Angle of the jaw.

2) Anterior C.G (Pre-tracheal)

- It drains larynx, trachea & thyroid gland.

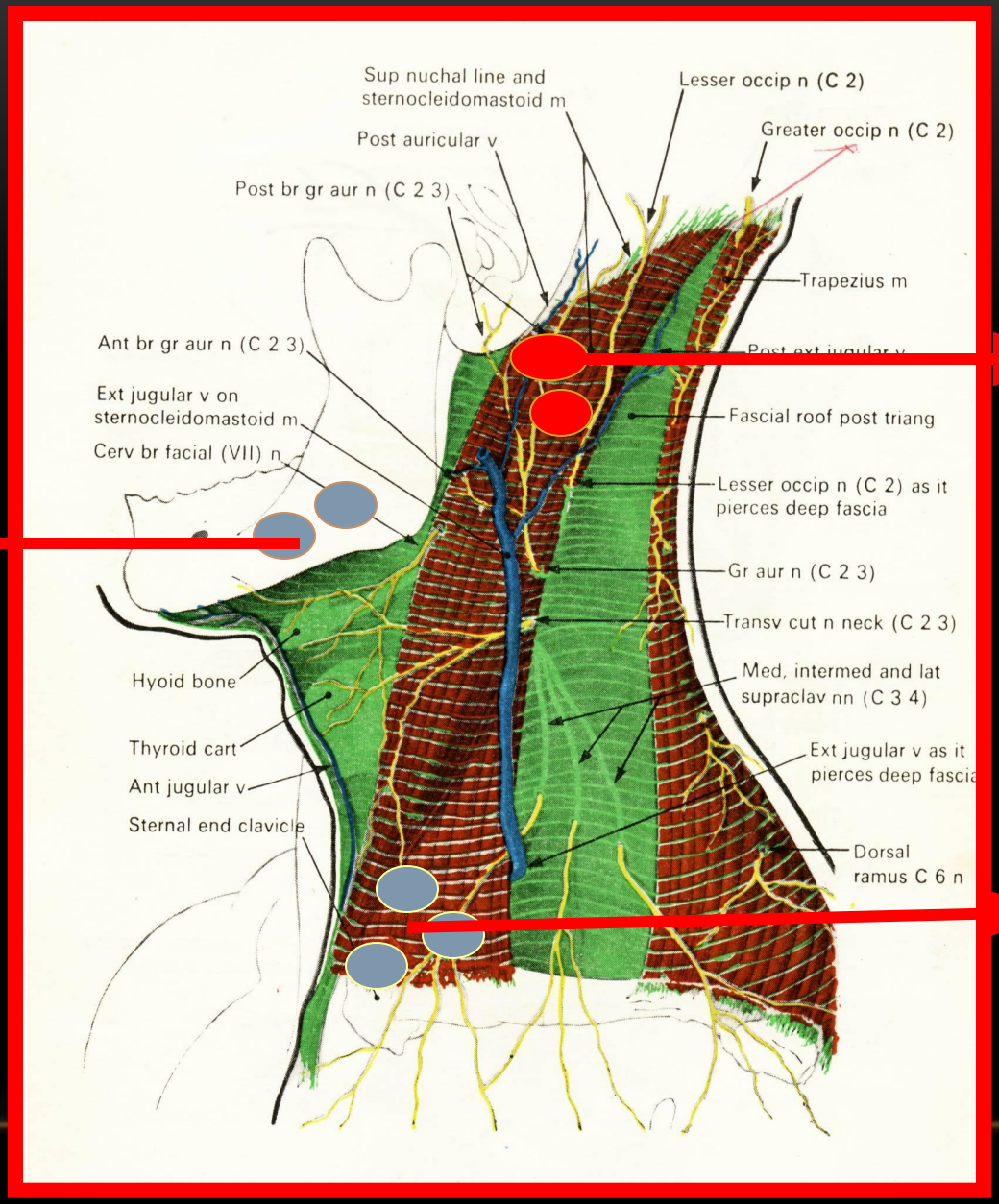
3) Deep C.G (upper & lower)

N.B.

Deep cervical drains

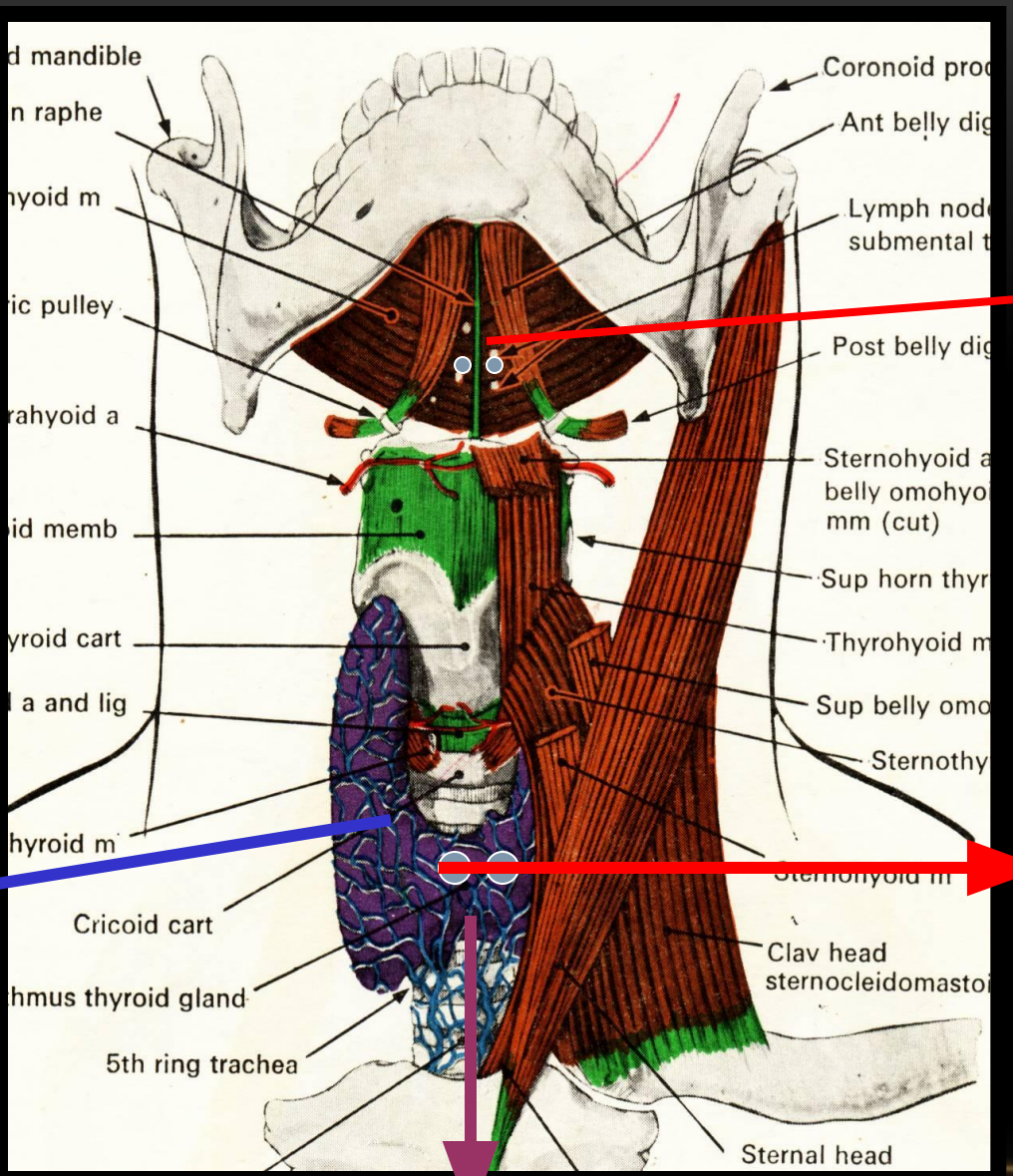
- Maxillary teeth, gum, hard palate and post 1/3 of tongue.
- all pre cervical & superficial cervical L.N.

SUB MANDIBULAR LN



Upper deep Cervical LN

LOWER deep Cervical LN



SUB MENTAL LN

ANT CERVICAL (PRETRACHEAL) LN

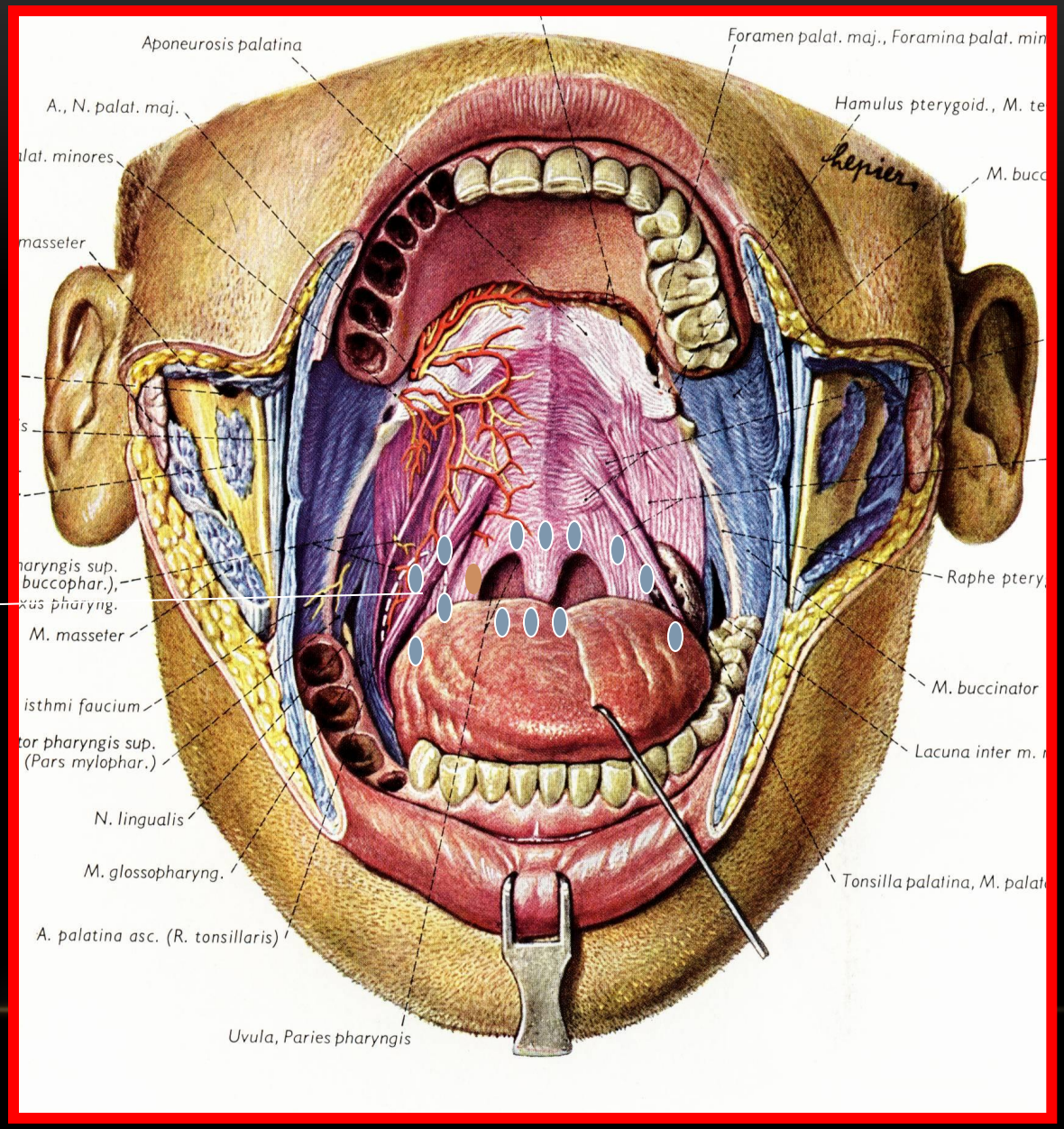
Thyroid G

ITHMUS OF THYROID

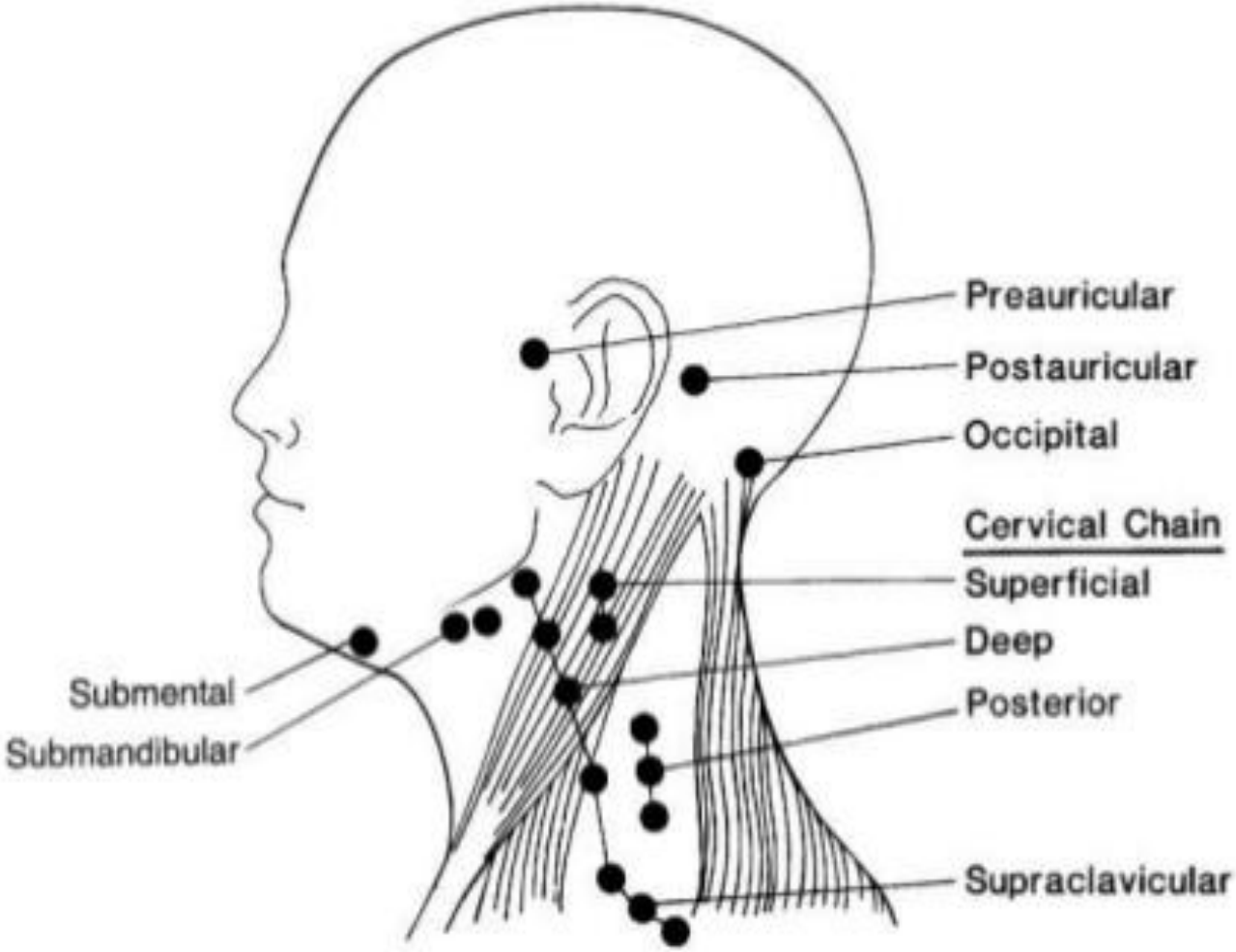
Identify the procedure being performed

- Bilateral sub-mandibular lymph node examination

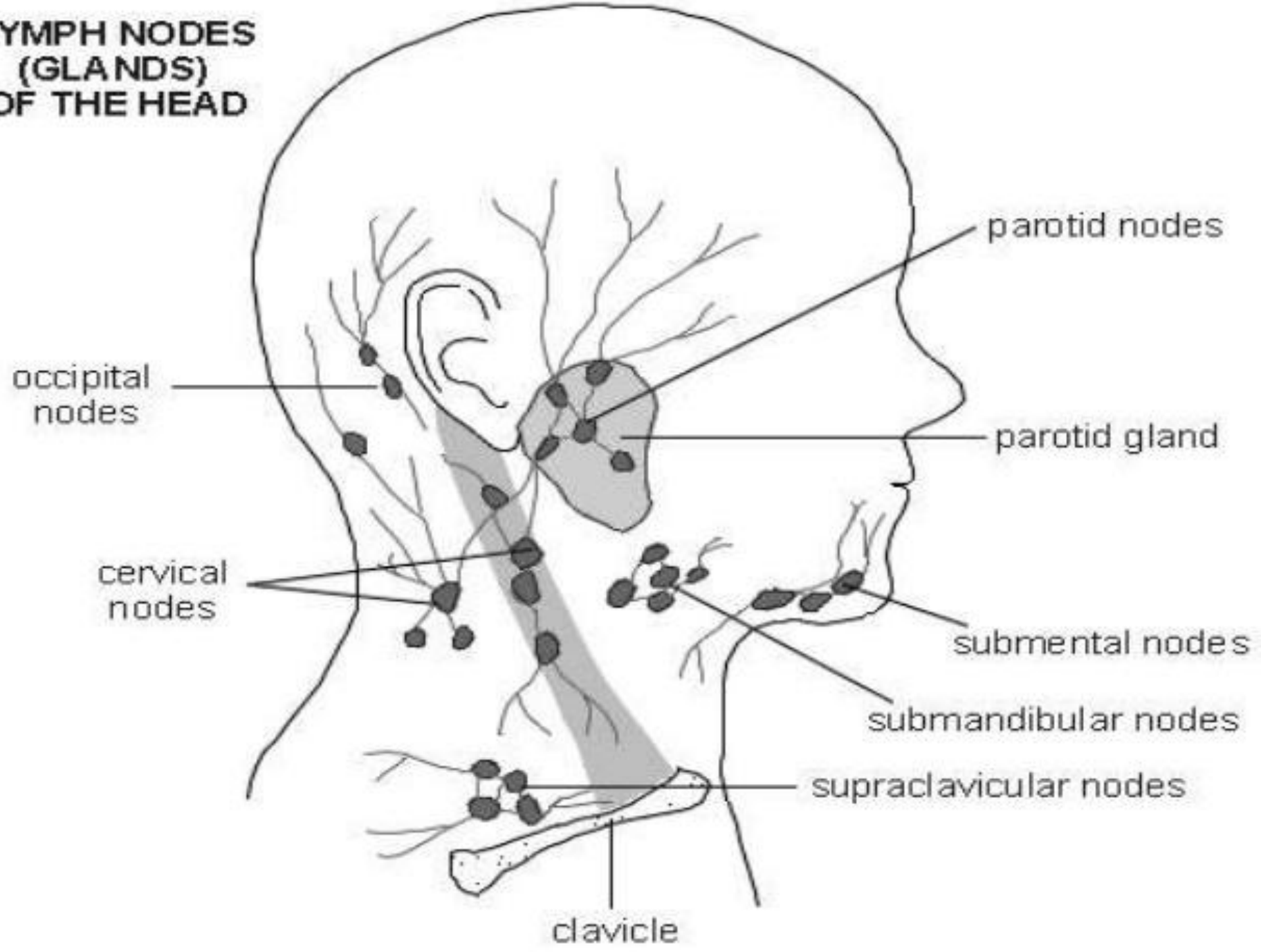
INNER CIRCLE LN



Lymph Nodes



LYMPH NODES (GLANDS) OF THE HEAD




Preauricular
Submental
Tonsilar
Submandibular
Anterior Cervical
Posterior Cervical
Supraclavicular
Cervical Adenopathy

Lymph node enlargement

Localized factors

1. Infection
   a) Acute: NUG, ADAA, AHGS, Chancre
   b) Chronic: Scrofula (T.B. Lymph Nodes)

2. Neoplastic metastasis

Generalized factors

1) Infection

a) **Acute** : infectious mononucleosis

b) **Chronic** : secondary stage of syphilis or AIDS

2) Neoplastic

- **Reticulosis**
  * Hodgkin's disease 45%.
  * Lympho sarcoma 40%.
  * Reticular cell sarcoma 15%
- **Leukemia**
  * Acute monoblastic & lymphoblastic.
  * Chronic lymphocytic & myeloid.

Other Causes :-

* Sarcoidosis
* S.L.E
* rheumatoid arthritis
* histoplasmosis
* phenytoin & drug induced
* Kawasaki disease

Lymph node should be examined for

- Being solitary or multiple.
- Unilateral or bilateral.
- Localized or generalized.
- Discrete or matted (fused).
- Painful (tender) or painless.
- Consistency (soft, firm or hard).
- Fixation to underlying structure.
- Draining area.

The lymph node may be

- Tender, soft and discrete in acute infections.
- Firm without tenderness in chronic infections.
- Firm and matted in malignant lymphoma.
- Hard and fixed in sarcoidosis.

Lab tests in LN enlargement diagnosis

1- Pulp test for tooth vitality.

2- Chest X ray for TB identification.

3- Dental X ray for :-

* Impacted tooth.

* Infected tooth.

* SG stone.

4- Blood tests as:-

* CBC – ESR – Paul Bunnel test – serologic test

5- Biopsy.

6- Smear & Culture in TB or Syphilis.

7- Blood Ca++ level

(increase in sarcoidosis)

8- Kveim test

(positive in sarcoidosis)

SALIVARY GLANDS

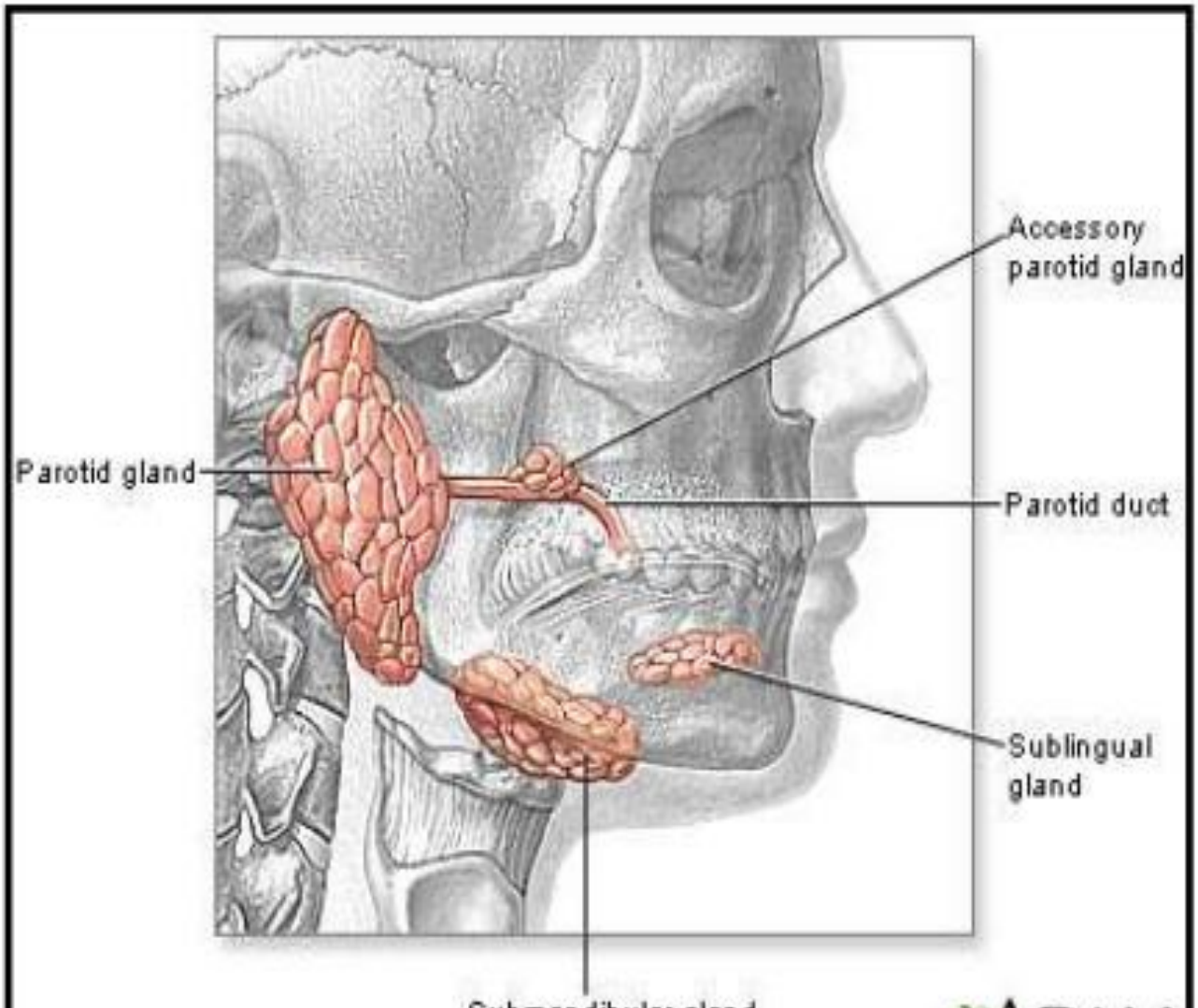
Enlargement of major salivary glands may be due to :

1) Infection (viral or bacterial)
2) Mechanical (Stone in main duct)
3) Systemic disease as diabetes, malnutrition, liver cirrhosis, sarcoidosis, Sjogren disease.
4) Neoplasm (benign or malignant).
5) drugs as antihypertensive (diuretics)

Enlargement of salivary glands may be accompanied by

- Pain & tenderness
- Facial asymmetry
- Facial palsy
- Xerostomia diagnosed by
- diminished salivary secretion
- burning mouth
- difficult speech and swallowing etc

Salivary glands



Identify the procedure being performed

- Bimanual palpation of sub-mandibular salivary gland

THYROID GLANDS

Normally the gland is usually palpable as two lobes connected by isthmus at the level of 2,3 & 4 tracheal rings.

Examination could be done by:

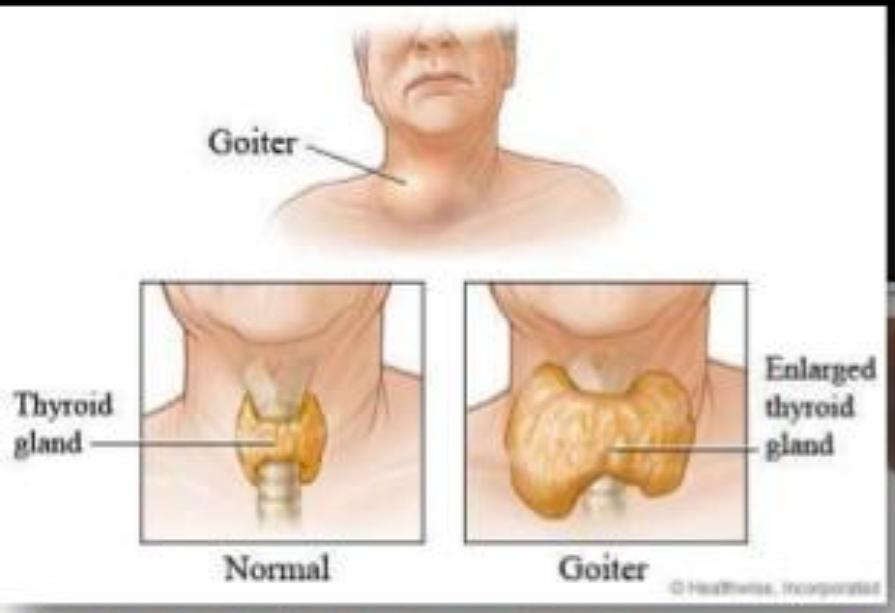
Inspection

The head is extended and the patient is observed during swallowing. Any mobile swelling related to the gland should be reported.

Palpation

The examiner should be behind the patient palpating the gland by fingers of the two hands on the lobes while the thumb at the back of the neck . By palpation we report the size, shape, consistency, asymmetry and pulsation.

Thyroid Gland examination



TMJ

Occlusion
Ms of mastication
Jiont

FIGURE 12-4 Assessment of the Temporomandibular Joint

Identify the Examination Procedure

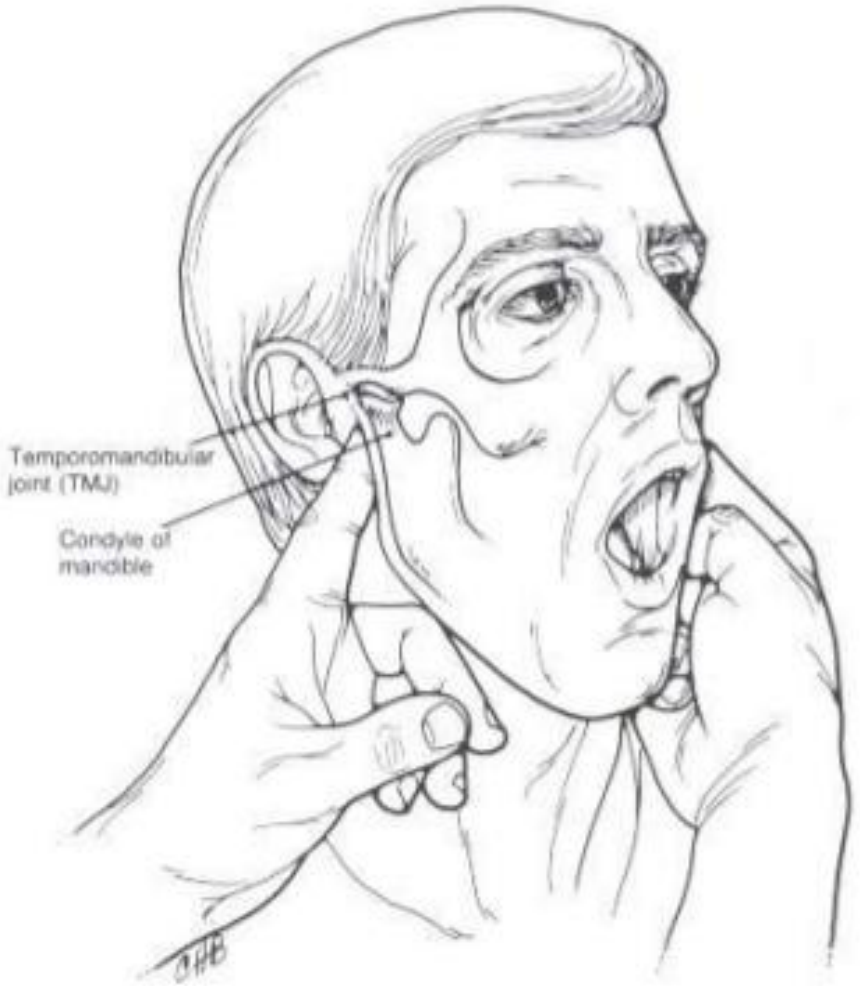
- Examination of lateral pole condyle

- Intra-auricular examination of posterior surface of condyle

Identify the Examination Procedure

- TMJ auscultation

TMJ



Identify the Examination Procedure

- Bi-digital palpation of Masseter muscle

Identify the Examination Procedure

- Palpation of Lateral Pterygoid muscle insertion

Identify the Examination Procedure

- Palpation Temporalis muscle Origin