General examination and Related question

Dr . Shahidullah shamol

FCPS (MEDICINE)

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What to see in general examination

First at a glance see
A—Appearance
ill looking or any specific characteristic face (Cushing)
B—Behavior and body built
C--co –operative or not
D-Dicubitus -- on choice or specific dicubitus --- propped up
Then in eye
- ❖Anaemia
- ❖Jaundice

Other abnormality in eye and lid
- ❖ subconjuntival haemorrhage
- ❖Arcus senilis
- ❖Xanthelasma
- ❖Tip of nose and lip cyanosis

Oral cavity
Tongue
- ❖Anaemia
- ❖Jaundice
- ❖Cyanosis
- ❖Candida
- ❖Ulcer
- ❖Fasciculation
- ❖Other change in tongue
- ❖dehydration

Gum change
Soft and hard palate
Lip – cyanosis and angular stomatitis

NECK

- Cervical lymphnode in lying position
- JVP

Chest

- Look for boney tenderness
- gynaecomastia
- Spider navei
- Body Axiliary hair and chest hair
- Any scar mark and pigmentation

Arm

- Nutritional status (some body don't like it)
- mid-arm circumference
- Skin fold thickness over triceps
- BP – usually seen at last (though it part of general exam not usually seen in exam as most of the time sir don't let to)

Abdomen

- Dehydration
- Shape of abdomen
- Distended or shrunken
- Engorged vein
- Pigmentation and scar marks

In hand

- Pulse
- Anaemia
- Jaundice
- Cyanosis
- Clubbing
- Koilonychia
- Leuconychia
- Other deformities

Respiratory rate

Temperature

Inguinal and popliteal lymphn

- Edema
- Sole of the foot
- Pre-sacral area– for edema
- Spine for any deformities

Ask to patient to sit

- see thyroid
- lymph node

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1. **first stand right side of the patient**
2. give her/him salam
3. introduce yourself to him
   a. I m a 5th year medical student of MMC
4. take permission
   I will going to examine you it will not hurt u .may I proceed?

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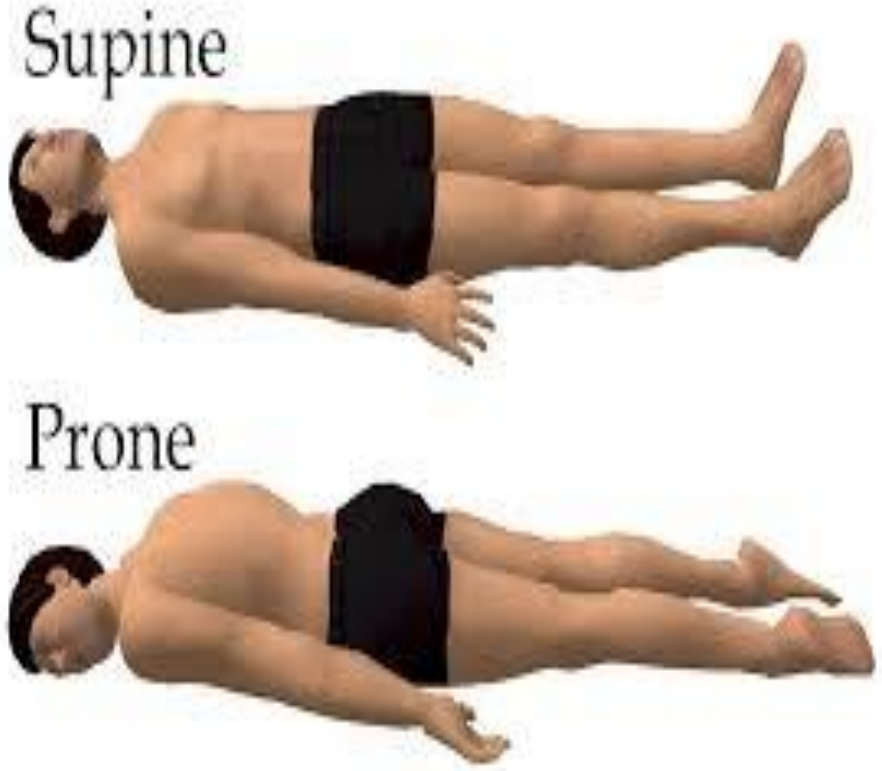

positioning of patient

- ❖usually lying in supine position
- ❖head is over the pillow
- ❖arm will be away from body

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exposure of the body

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first see with in second

- ❖Does the patient look ill?
- ❖appearance (any facial characteristic –see appearance par of this chapter)
- ❖body build
- ❖obese or cachetic

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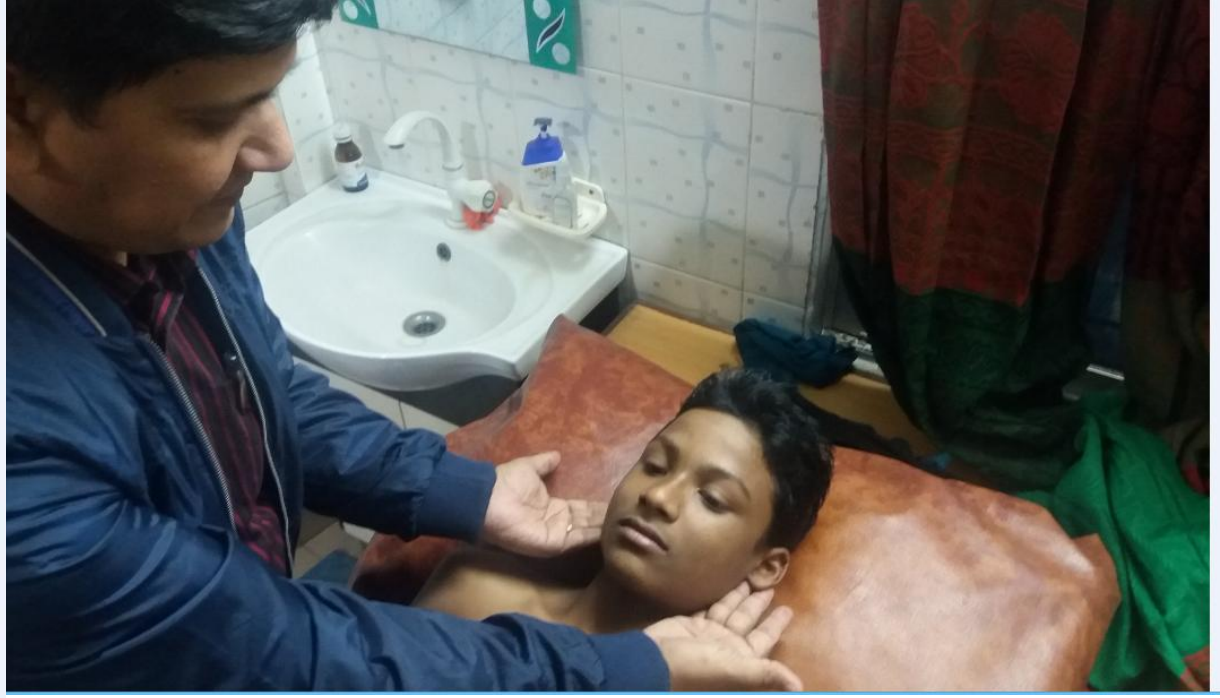

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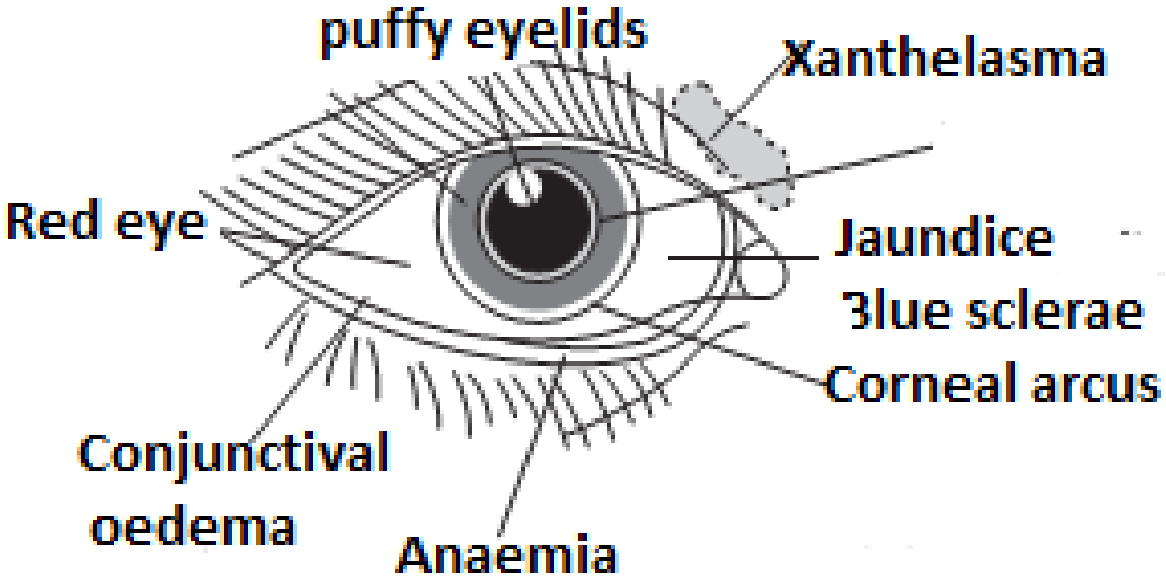


What to see on eye

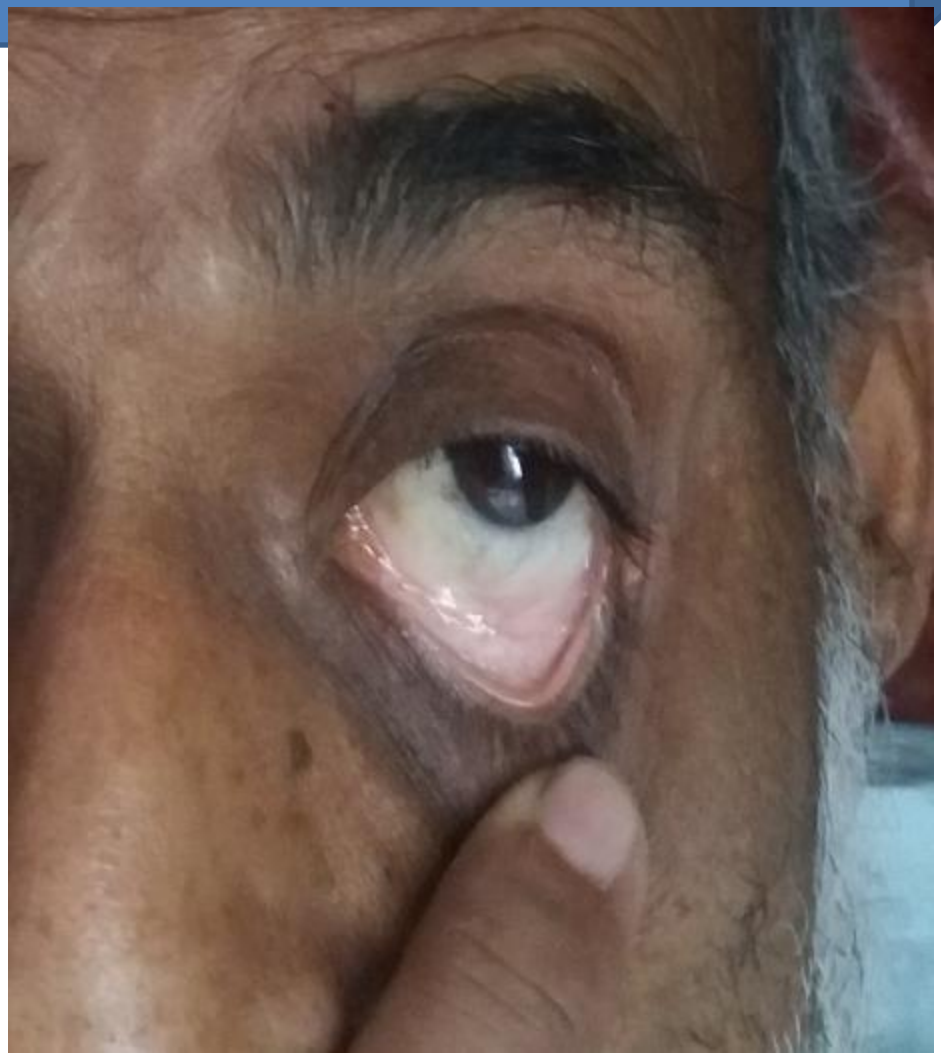
- anemia
- jaundice

other only if present

(not routinely mention only if present)

- subconjuntival hemorrhage
- arcus senilis
- xanthelasma

Look for anemia



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anaemia

- ✓ place thumb just below the lower lid of both eyes and pull them downward and ask the patient look up ward
- ✓ it expose the lower pole of conjunctiva
- ✓ look it pale or nor
  - if pale ---anemia
  - red / pinkish ---normal
  - if dark red –polycythemia


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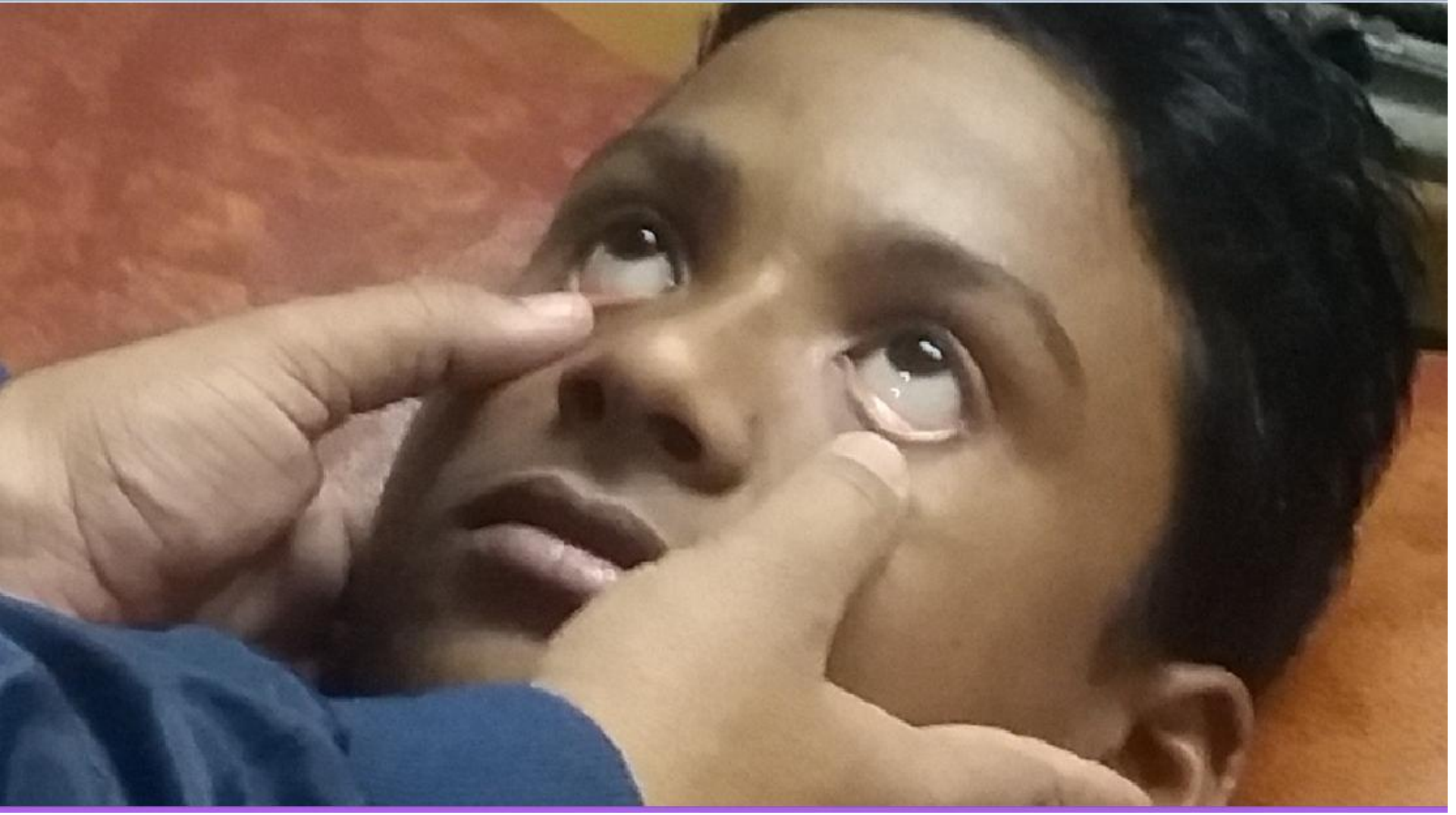

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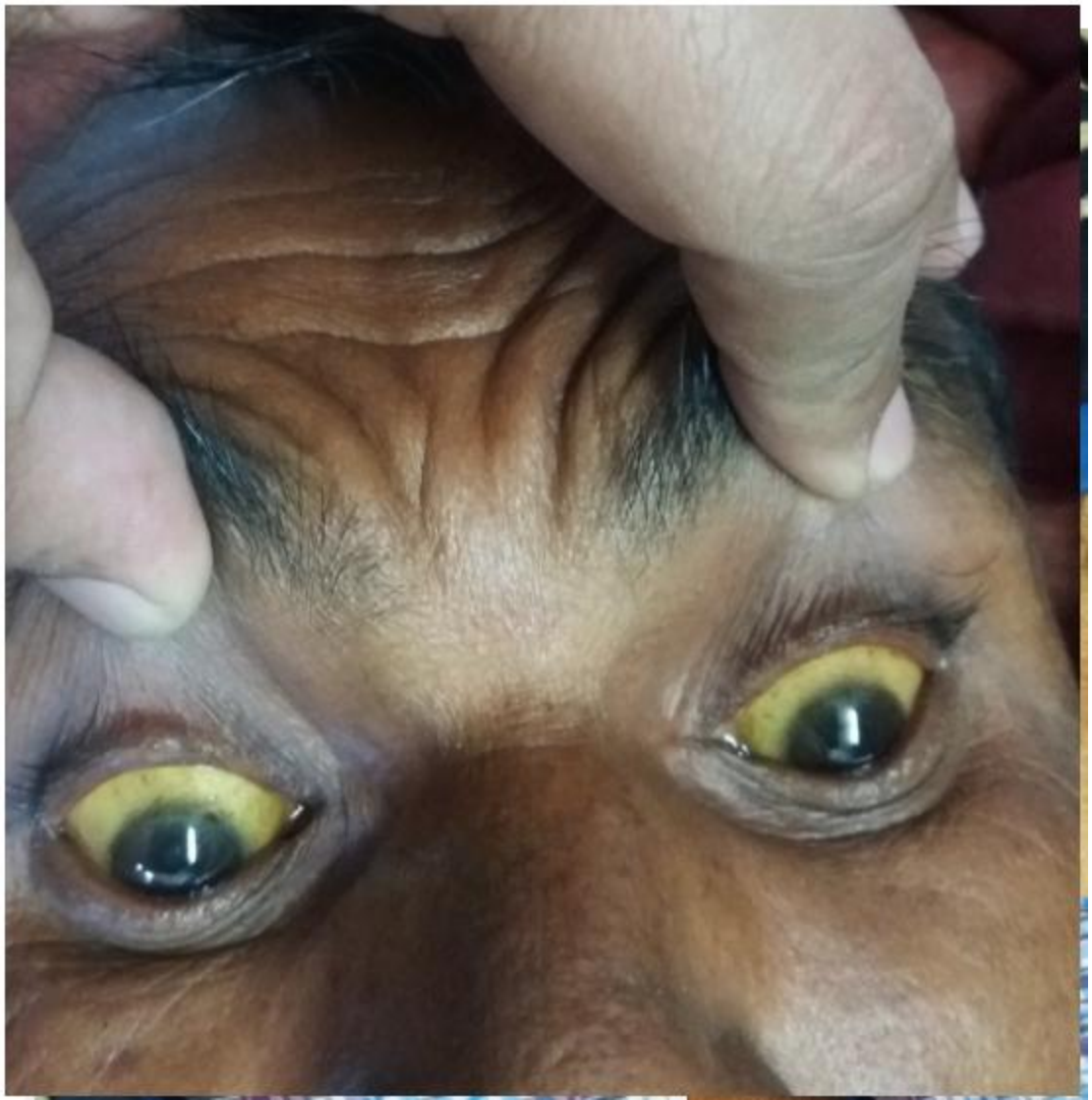
Look for jaundice



site :is upper sclera

retract both upper eye lids upward with left thumb and index finger and simultaneously ask the patient to look his feet or keep the right hand in front of eye below the eye level and ask the patient to look at my palm
now look upper sclera for jaundice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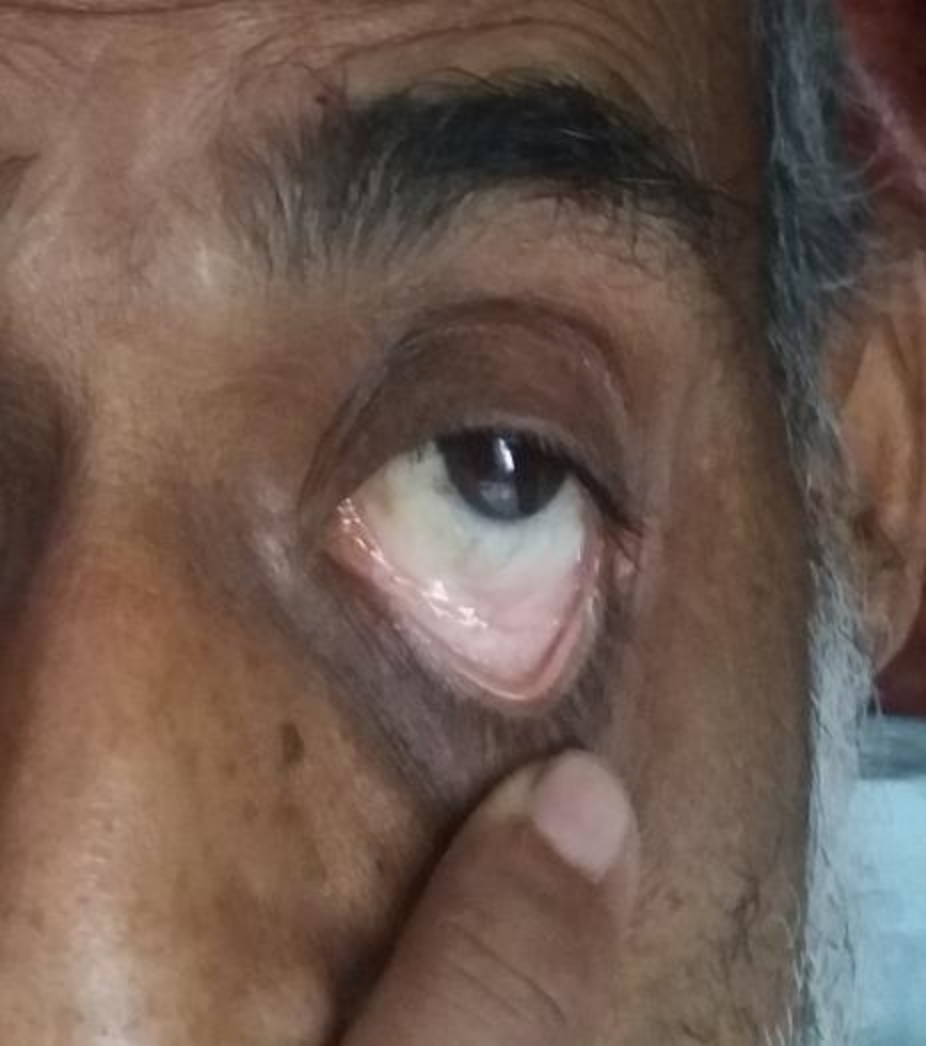

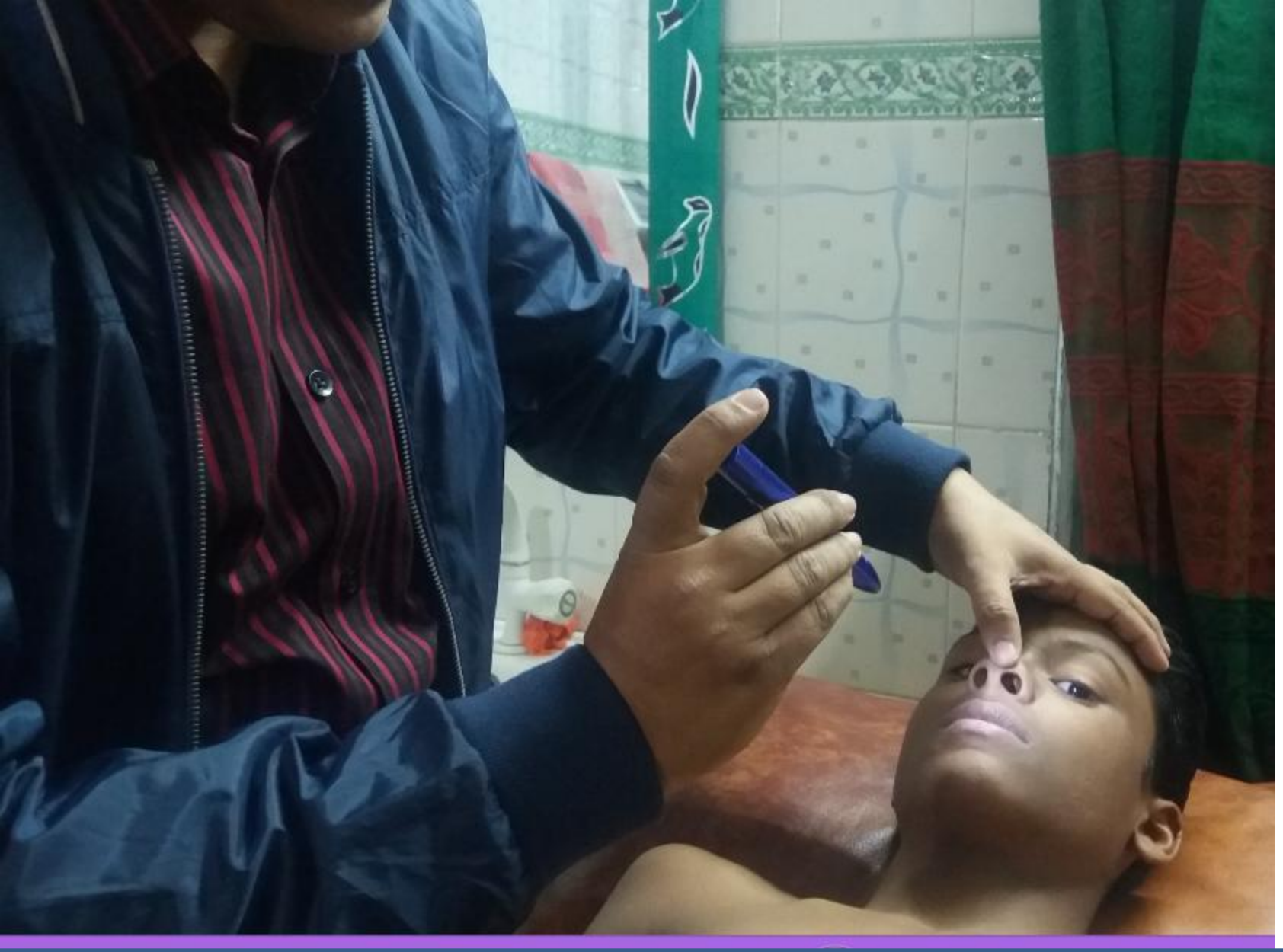

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nose ---obstruction

Look at oral cavity & tongue

Anaemia
jaundice
cyanosis
dehydration
other condition--

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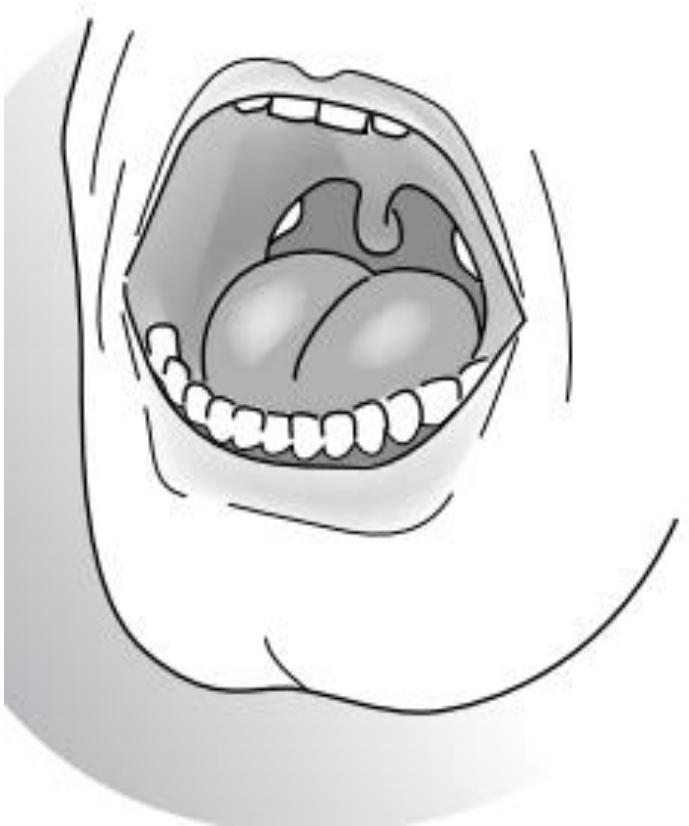
first ask the patient to open his mouth with the torch see any abnormality of tongue

- ❖hydration (moist or dry crackle)
- ❖now look tongue , soft and hard palate for ulcer , pigmentation , oral thrush (white patch)
- ❖also look lip for cyanosis and angular stomatitis at the corners



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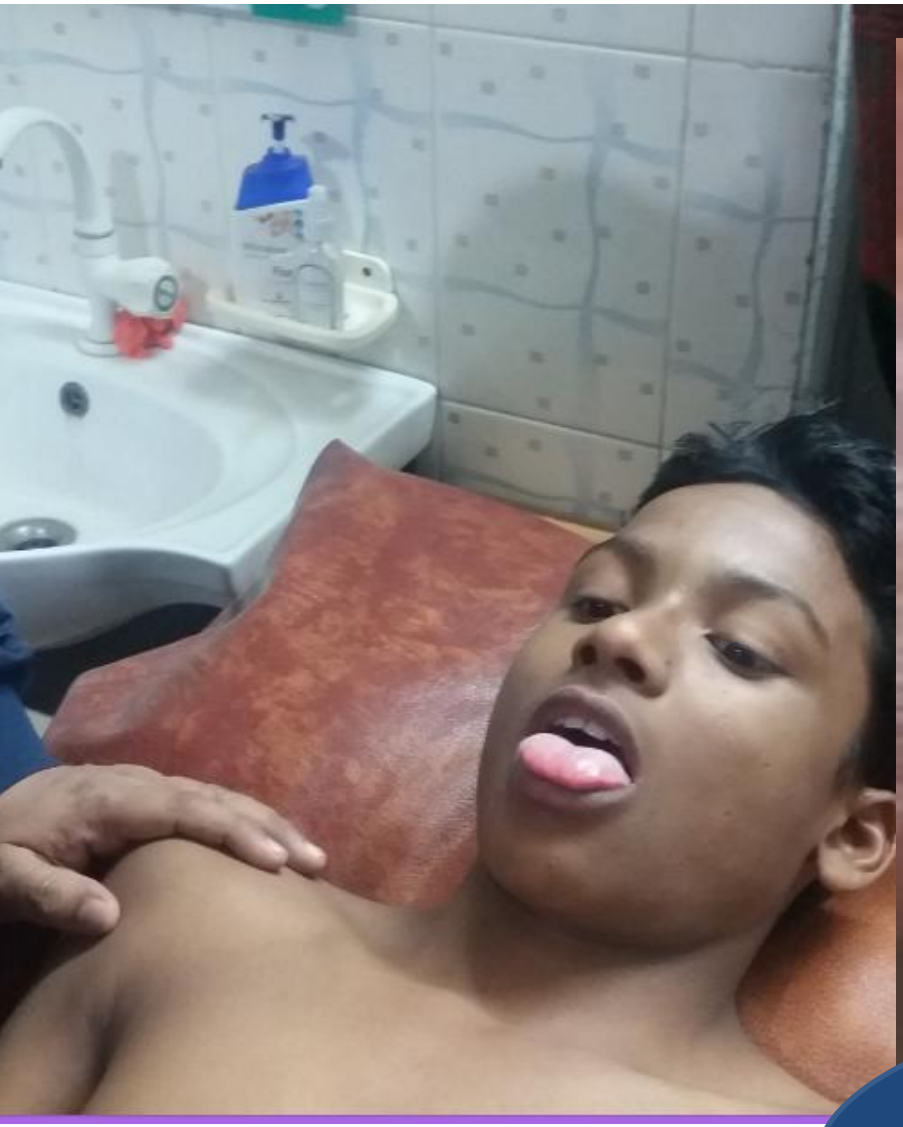
1. now ask the patient to protrude the tongue
    a. aim to see anemia and cyanosis
    b. in case of anaemia tongue become pale ,smooth and loss papillae (dorsal surface)
    c. cyanosis it become bluish

Central cyanosis



CYANOSIS
&
Anaemia

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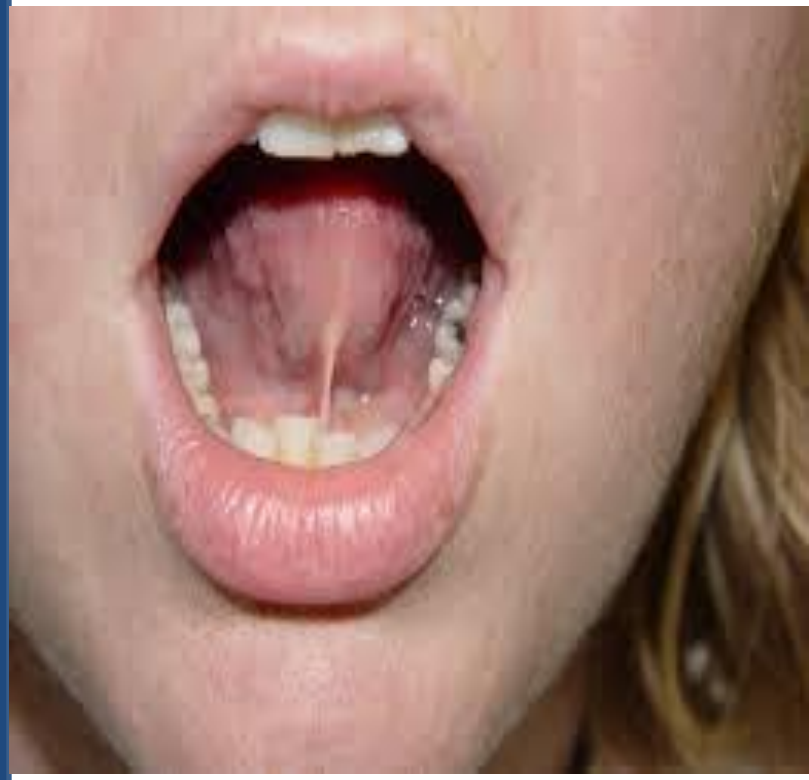
Jaundice



- Now ask patient to show the under surface (ventral surface).
- if pt not understand then ask t o touch the soft palate with tip of tongue
- look for jaundice /yellow colour in between venulam and lingual vein

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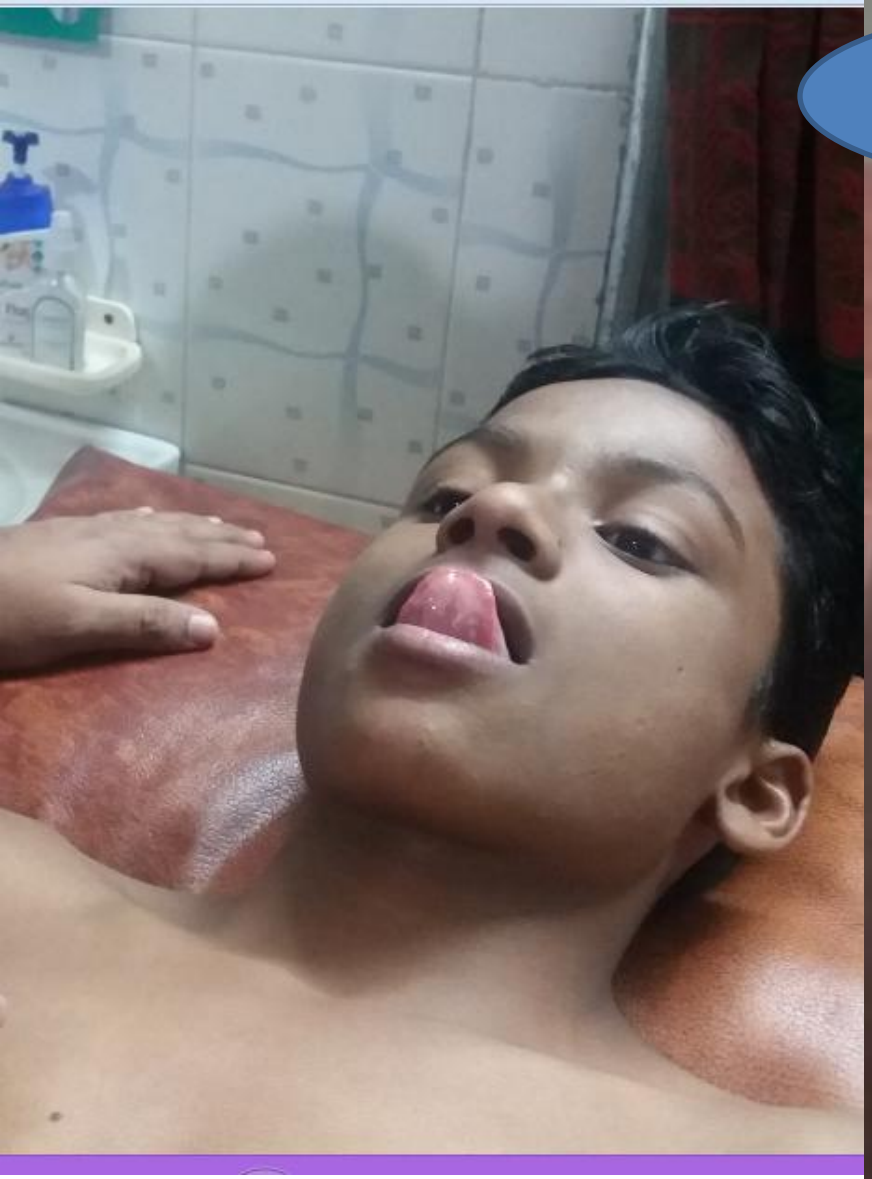

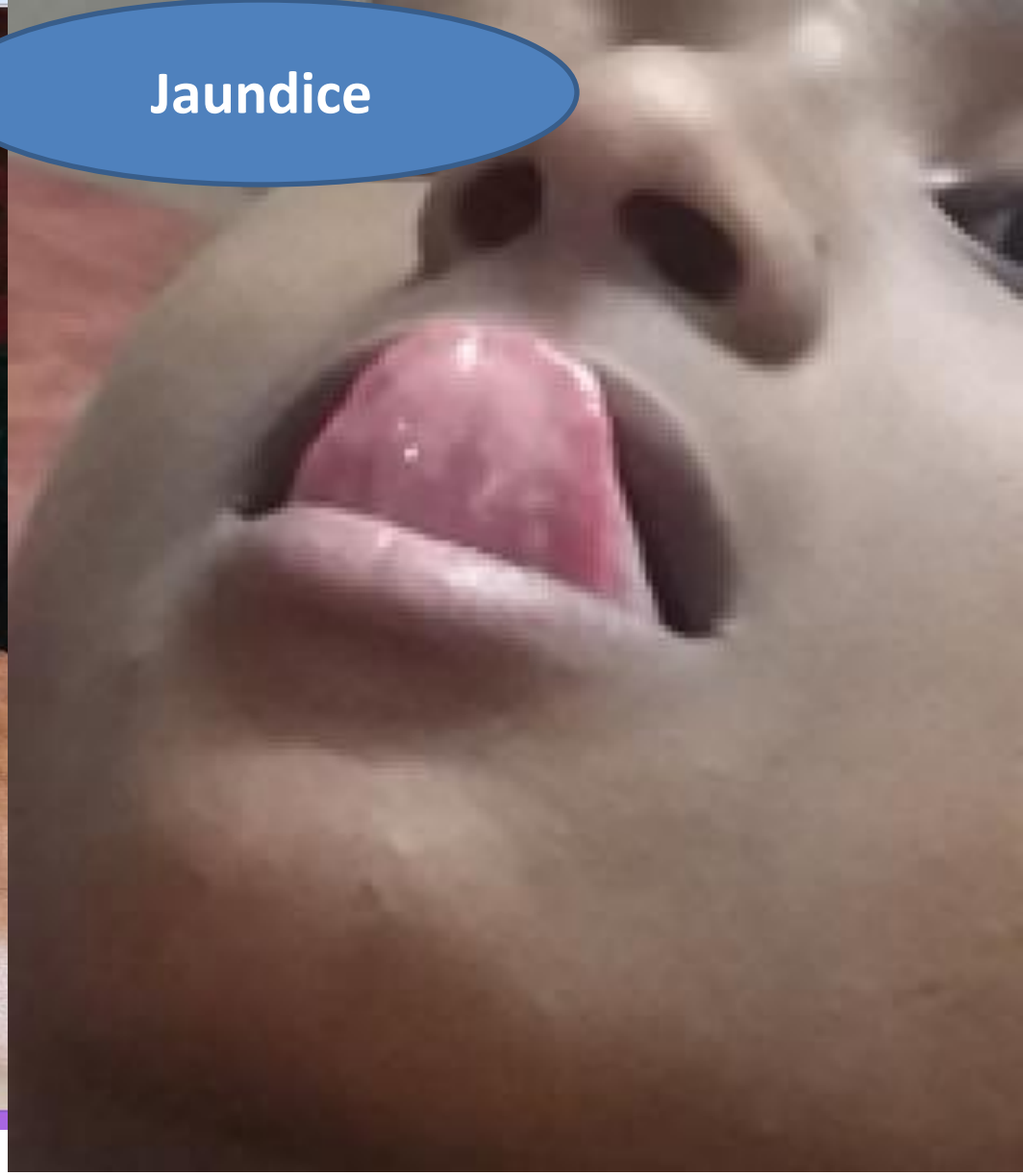

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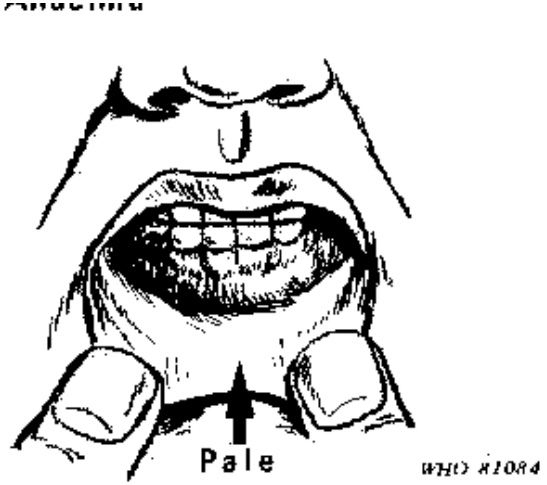
1. now pull the both upper and lower lip and look for
   a. any gum bleeding and
   b. gum hypertrophy
   c. dental caries



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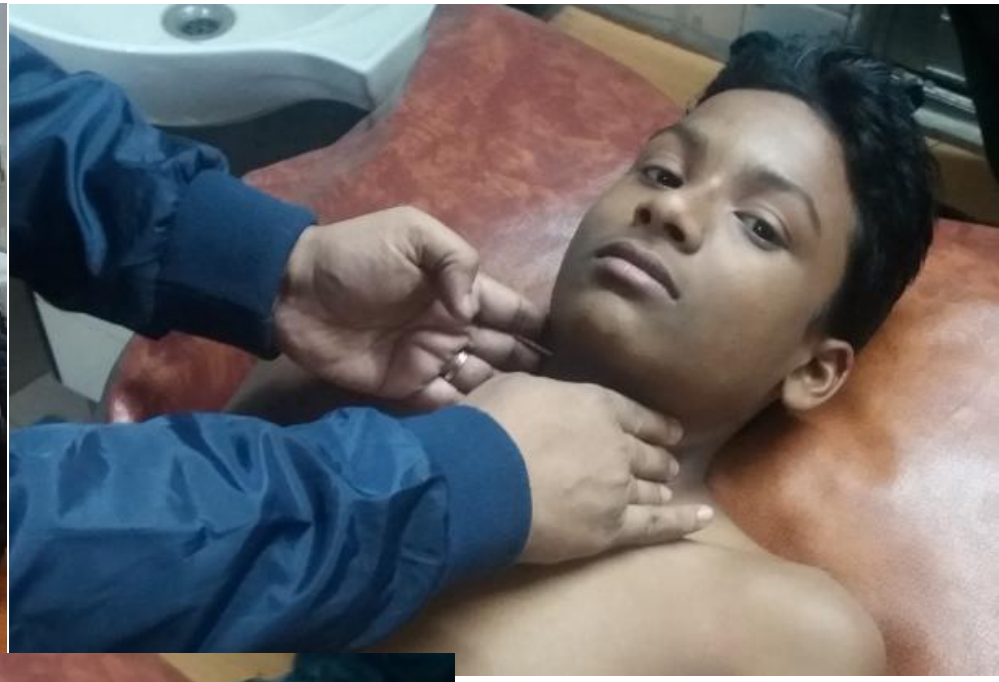
Cervical lymphnode



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Test bony tenderness

By pressing over the manubium sternum with right thumb but look at the face of the patient while pressing.

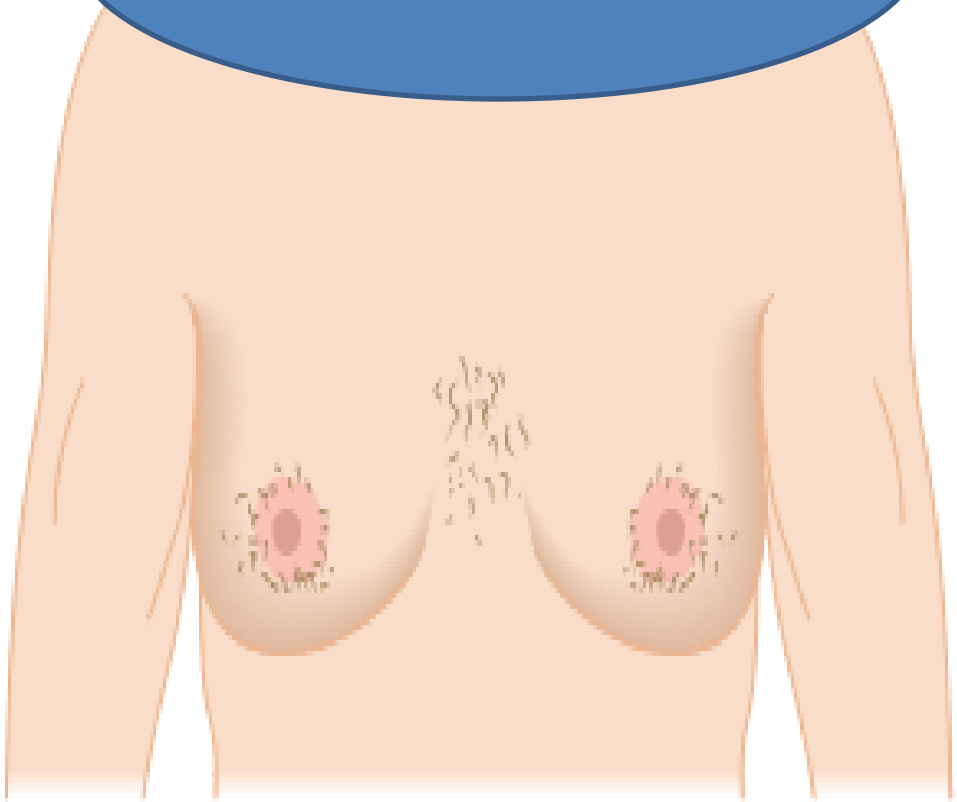
how much pressure apply

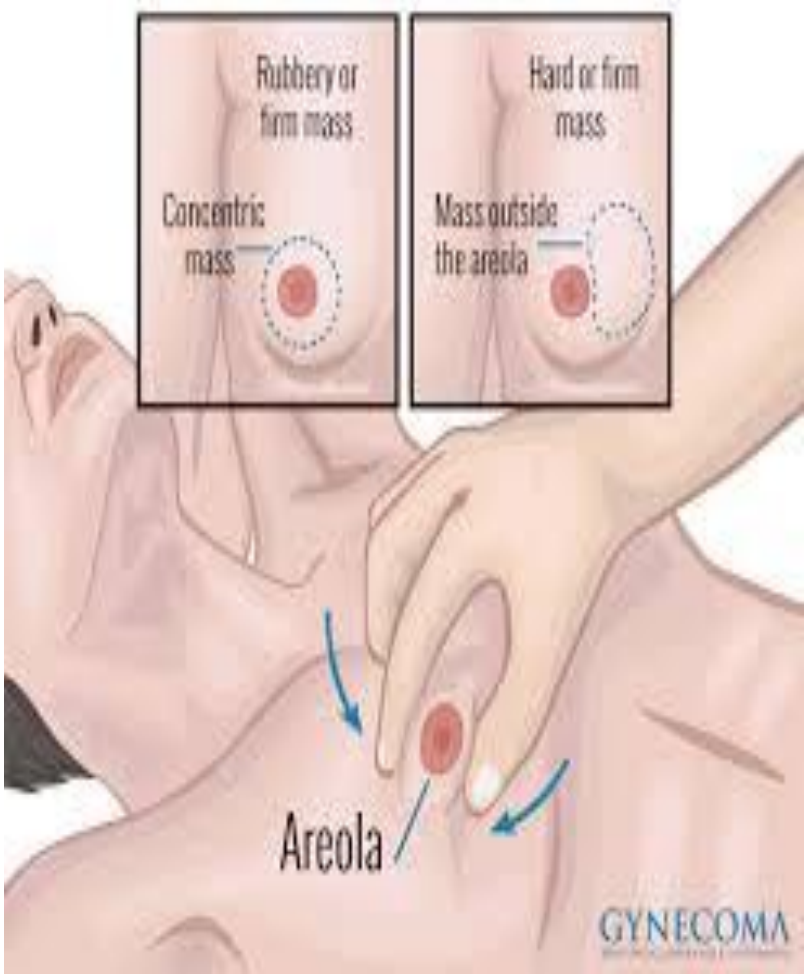
4dyne / or until nail become white

other sites

1. **over clavicle**
2. **scapula**
3. **spine**

gynaecomastia





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gyanecosmastia	

inspection

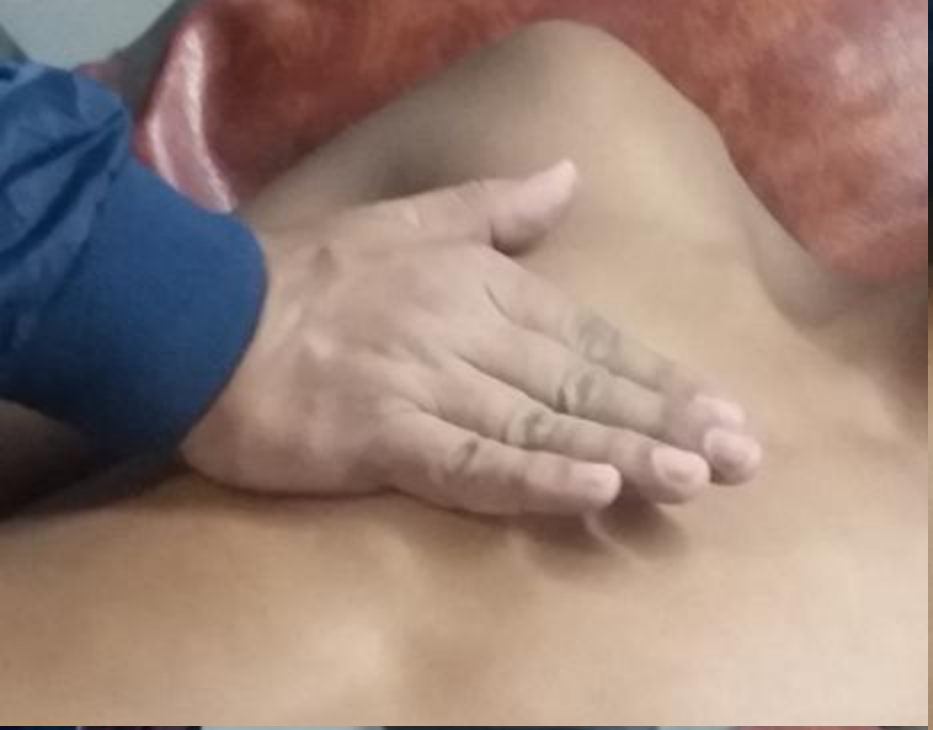
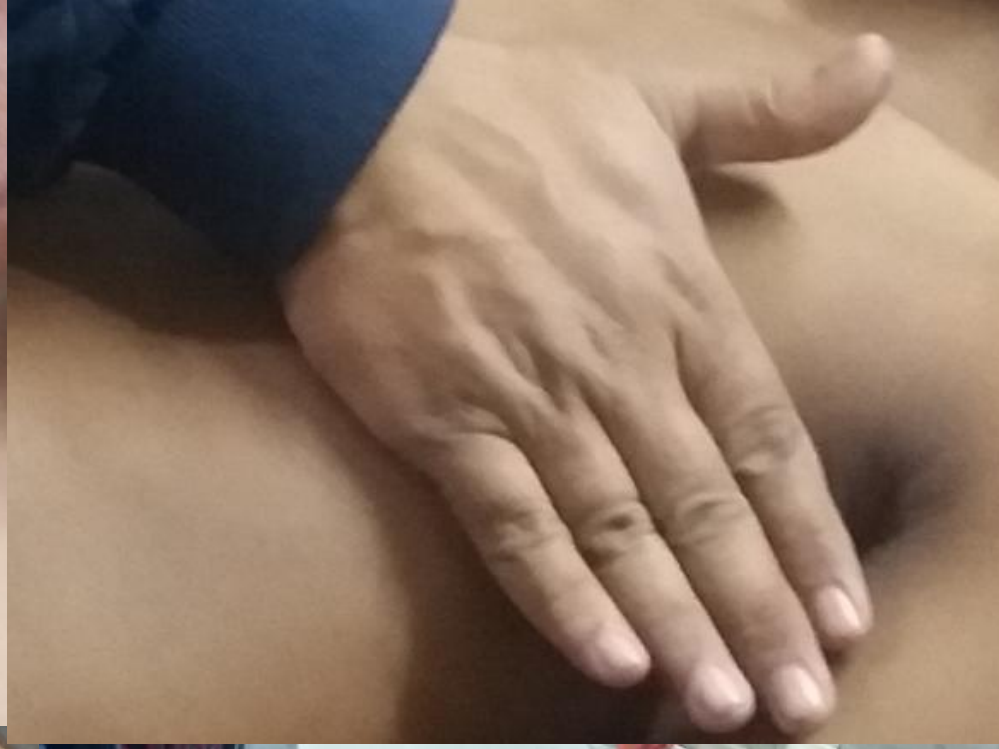
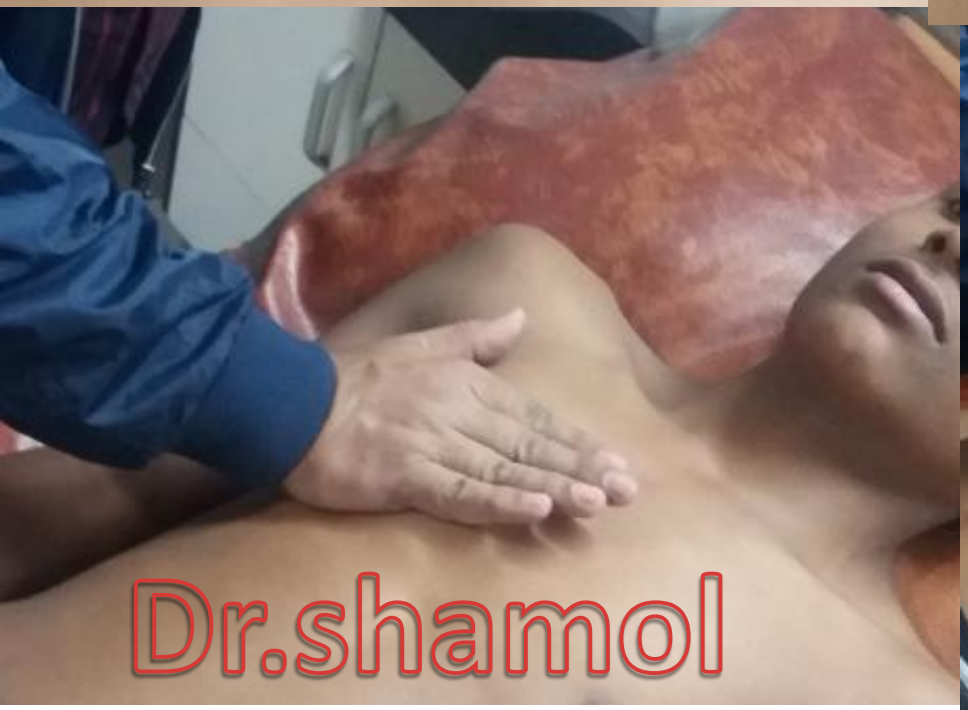
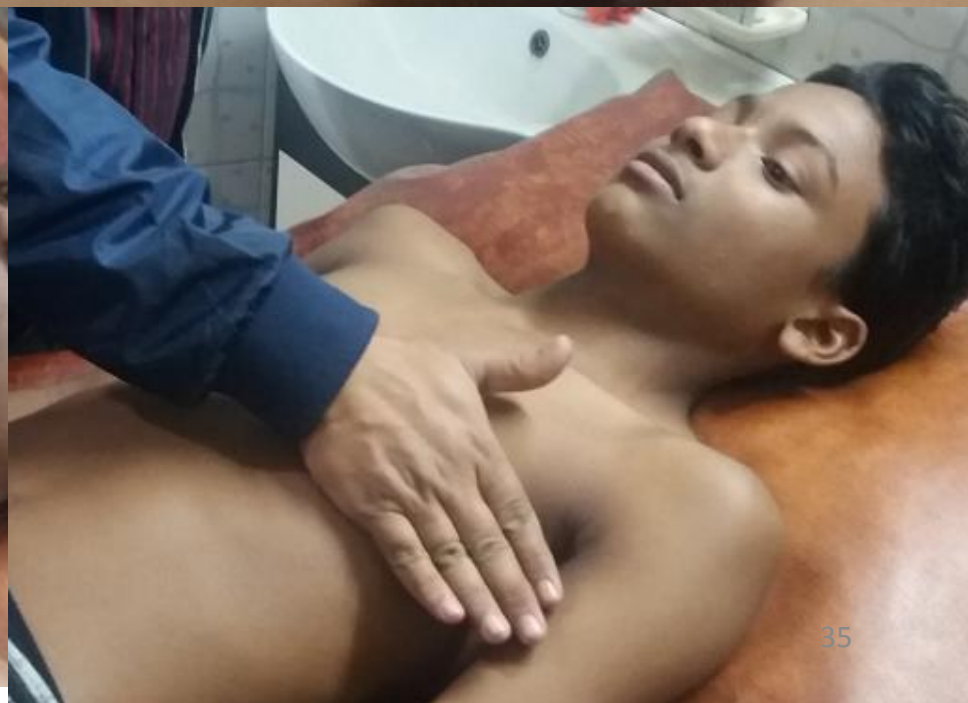
- breast swelling present or not
- if yess
  - symmetrical or asymmetrical
  - unilateral or bilateral

now do **pinch test to**

- This can be examined by pinching breast tissue between the thumb and forefinger –
- It differentiated gynaecomastia (true breast tissue)from pseudogynaecomastia or lipomastia (adipose tissue)
- true gynaecomastia can be felt as distinct disc of glandular tissues and in case lipomastia (fat or adipose tissue)under the skin

Flat hand pressure portion of the examination.

- keep the hand flat with extend finger
- now with middle portion of palmer surface of hand with pressure roll over breast
- **also see tenderness**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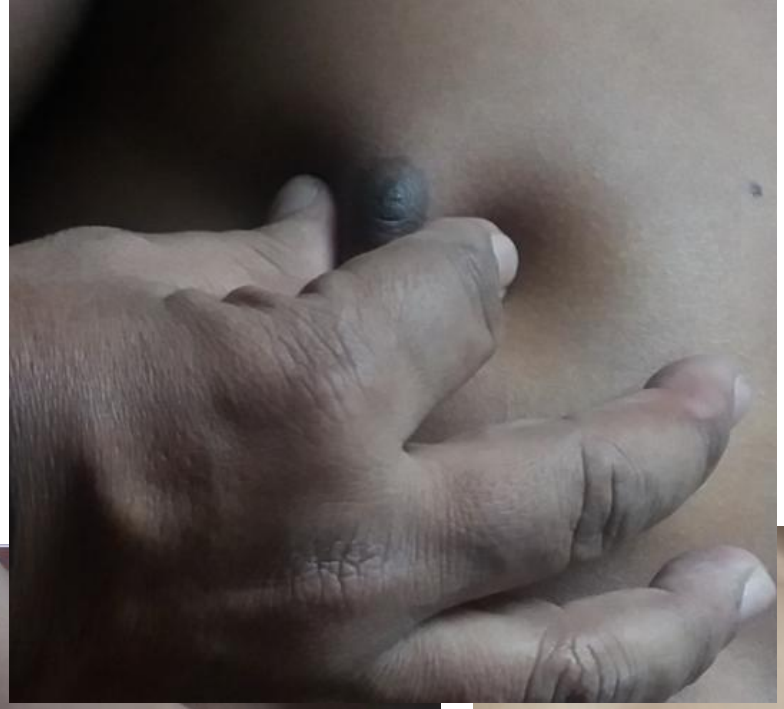


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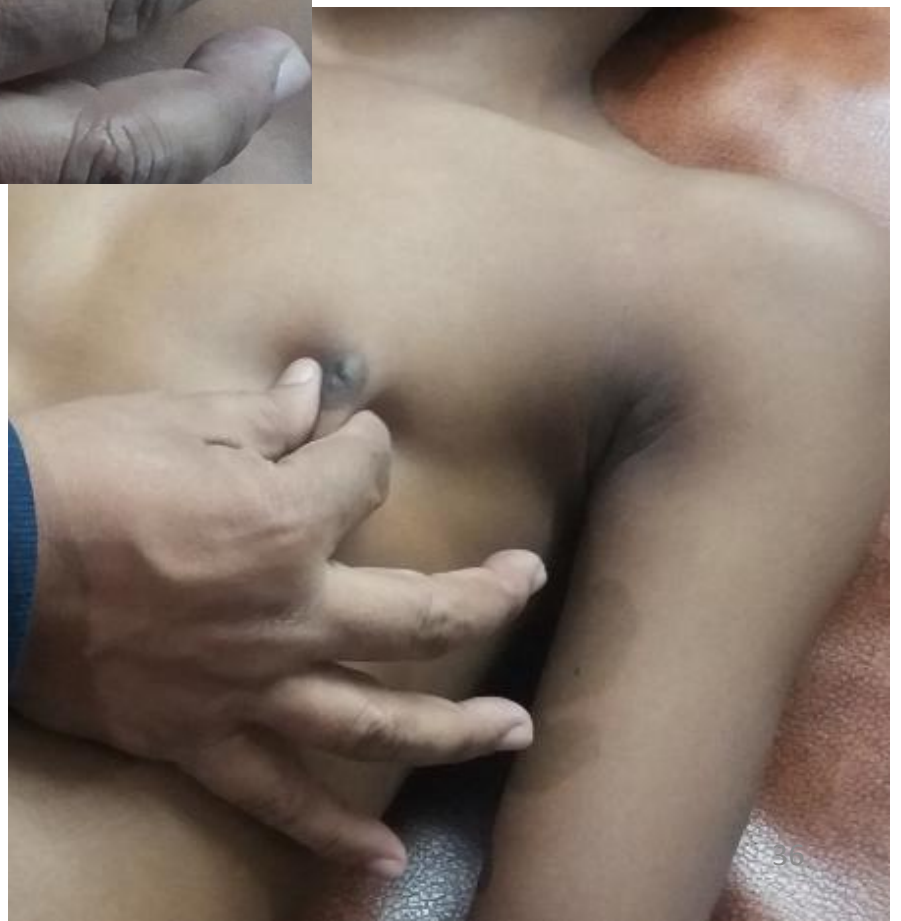


Respiratory rate and rhythm
Spider navei
Chest deformity
Scar mark and pigmentation
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spider nevi

Site : usually found only above the nipples along the area of superior vena cava distribution

if u suspect then see

With the help of pin head or glass slide

How will differentiate between purpura and spider nevi

Purpura does not blanch on pressure (as it extravascular)

Spider nevi : Blanch on pressure and when release the pressure it will reappear

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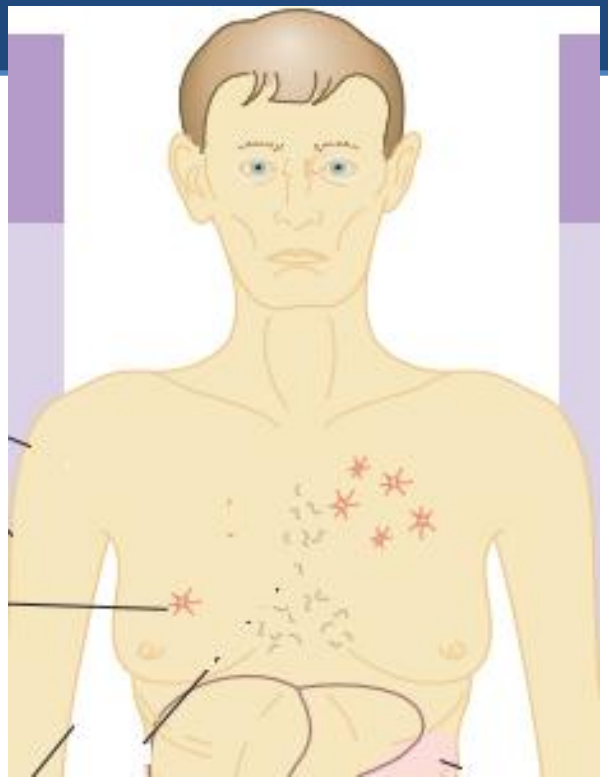


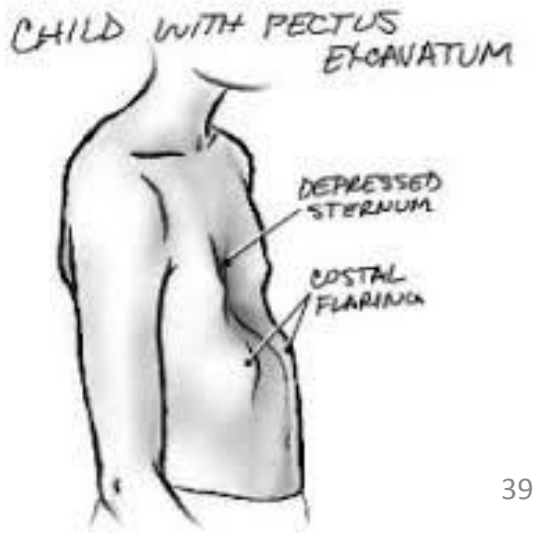
look for any chest deformity

pectus carinatum

pectus excavatum

pectus carinatum

pectus excavatum



Nutritional status
Average and bellow average

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Pinch the skin with right thumb and index finger over tricep

gently pinching a fold of skin on the abdomen (over right iliac fossa) with thumb and index finger,

holding for a few moments


now letting go.
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a

see dehydration

Skin turgor:

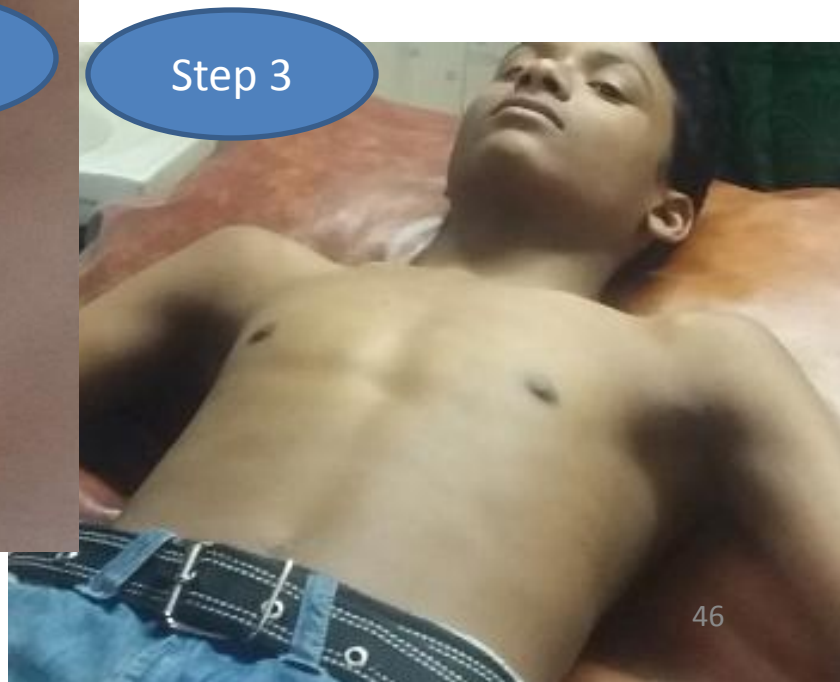
- Assess by gently pinching a fold of skin on the abdomen (over right iliac fossa) with thumb and index finger, holding for a few moments, and letting go.

Respond

- normal hydration
  - →the skin will promptly return to its original position,
- Dehydration-
  - →, skin turgor is reduced and the skin takes longer to return to its original state.
- When unreliable

This sign is unreliable in elderly patients whose skin may have lost its normal elasticity

See dehydration at a glance
Step 1. pinch with thumb & index finger
Step 2: hold for few second
Step 3: release it



Dehydration

Look at hand

keep the hand in three

- Dorsum
- position palmer
- tip of finger upward

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In palmer surface

- **Anaemia**
- **jaundice ,**
- **palmer erythema**

At nail

- cyanosis
- clubbing
- koilonychias
- leuconychia
- onycholysis
- splinter hemorrhage
- Nicotine staining

At dorsum --deformities— see exam of hand (for details)

palm of the hand

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- facing palmer surface upward and compare with your hand for **anaemia**
- then look palmer crease **jaundice**
- thenar and hypothenar prominence to see **palmer erythema , wasting of muscle of hand**
- look for **Dupuytren's** contracture
- other
  - ***Osler's nodes*** –(Small painful, purplish nodules at the finger pulps representing digital microinfarction)
  - **Janeway lesions** (Pink palmar macules)


Hold the hand like
This

Now give your hand in between patient hand to compare paleness of patient palmer surface with your palm

Anaemia

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See creases for jaundice

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ask the patient to hold the hand with pointed the fingertip upward to see the cyanosis

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examination of clubbing

step one :

first inspection ---

sit down and keep the patient both palm on your hand

now you sit or nil down to bring patient hands and your eyes in same horizontal plane look at the angle between nail base and its adjacent skin ---- /


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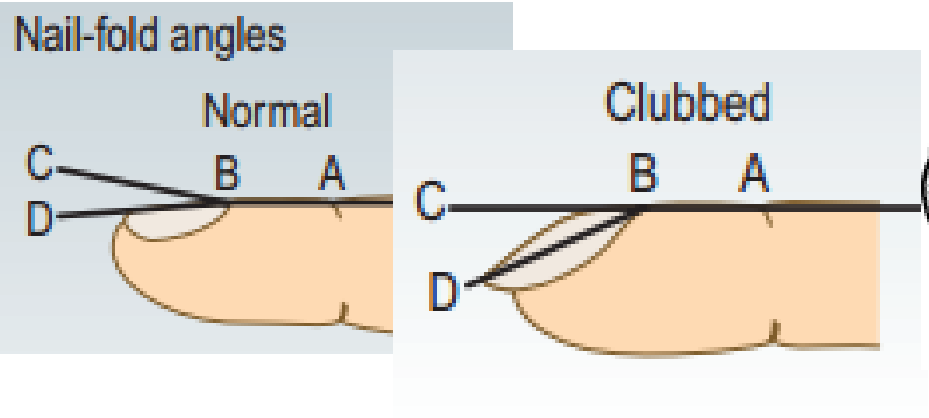
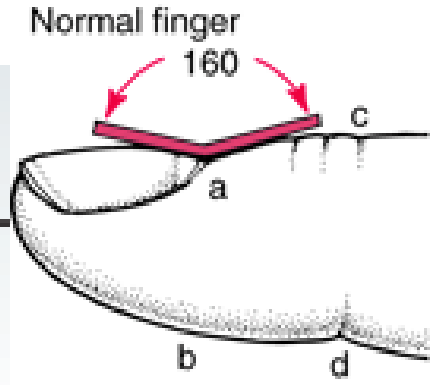
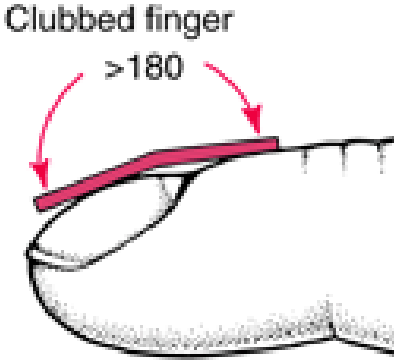
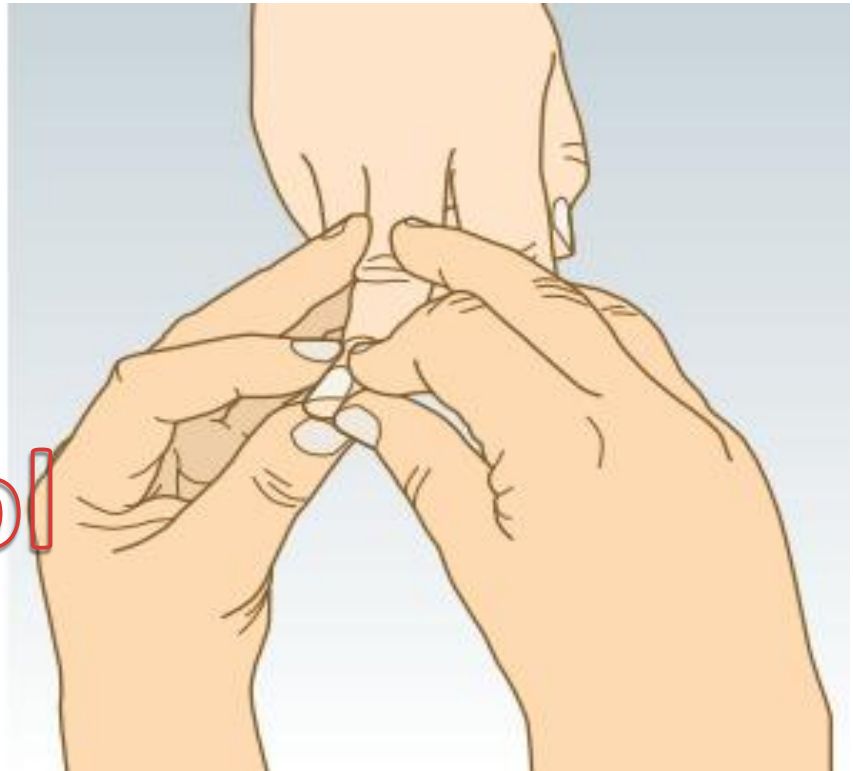

Nail-fold angles
Normal
C
D
B
A
Clubbed
C
D
B
A


Normal finger
160
c
a
b
d


Clubbed finger
>180

now do fluctuation test

- Place (examiner) your thumbs under the pulp of the distal phalanx pts middle finger
- now place you middle finger either side of DIP joint of pt middle fingers to fix the joint
- now place your index fingers at nail bed & press alternately to feel Movement of the nail on the nail bed.

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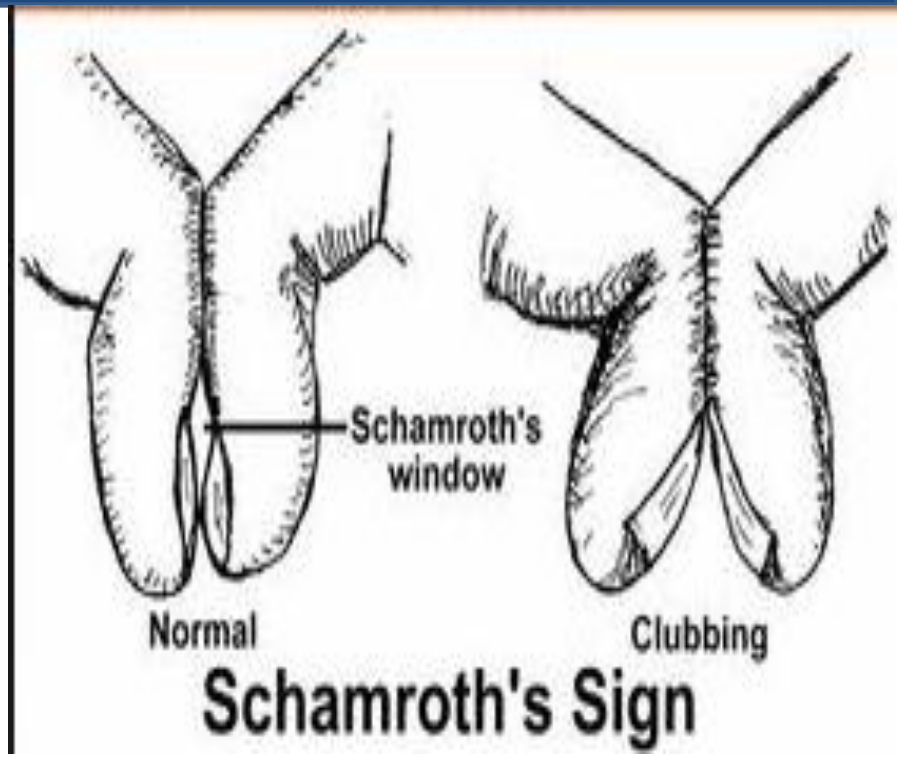
Step 3:

Schamrotb's sign or Schamrotb's window test :

❖place the terminal phalanx / digit of thumb against each other facing the nail

❖normally there is a diamond shape space between two nail bed (schamrotb's sign)

❖in clubbing space is disappear

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Step four

❖do only if clubbing present to see Hypertrophic osteoarthropathy present or not

❖slightly press over distal surface of ulna and radius and patient will feel pain

Now examine the pulse and respiratory rate

hand shake with patient with the right hand

if u do it the hand will automatically remain in semiprone and semiflex position

Place your three middle fingers over the right radial artery .

- ring finger will regulate the pulse
- middle finger will feel the pulse
- index will prevent retrograde pulsation

Count the pulse for 15 seconds and multiply by four to obtain the pulse rate in beats per minute

The *radial pulse* is found at the wrist, lateral to the flexor carpi radialis tendon and medial to the radial styloid process at the wrist.

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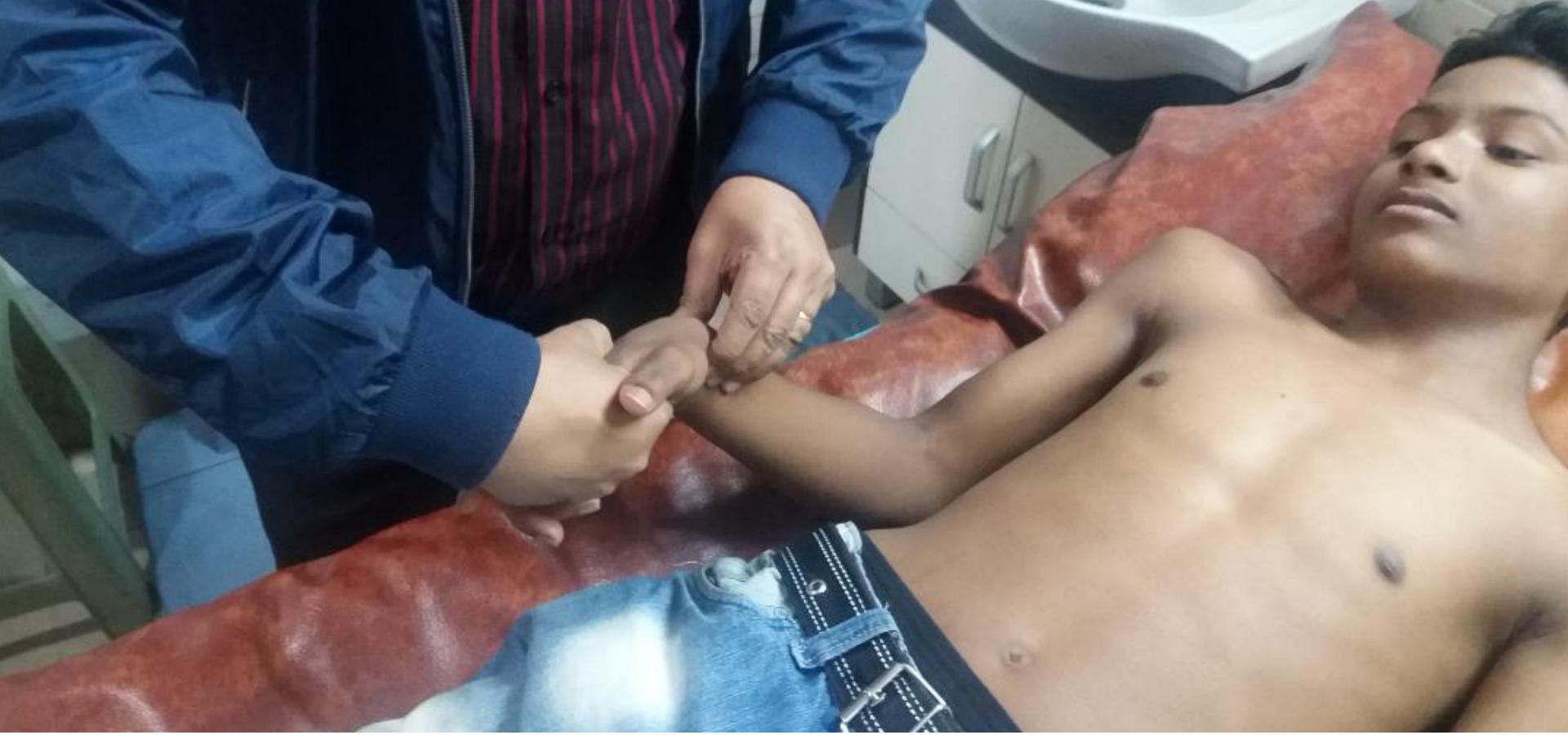

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NOW SEE inguinal and popleteal

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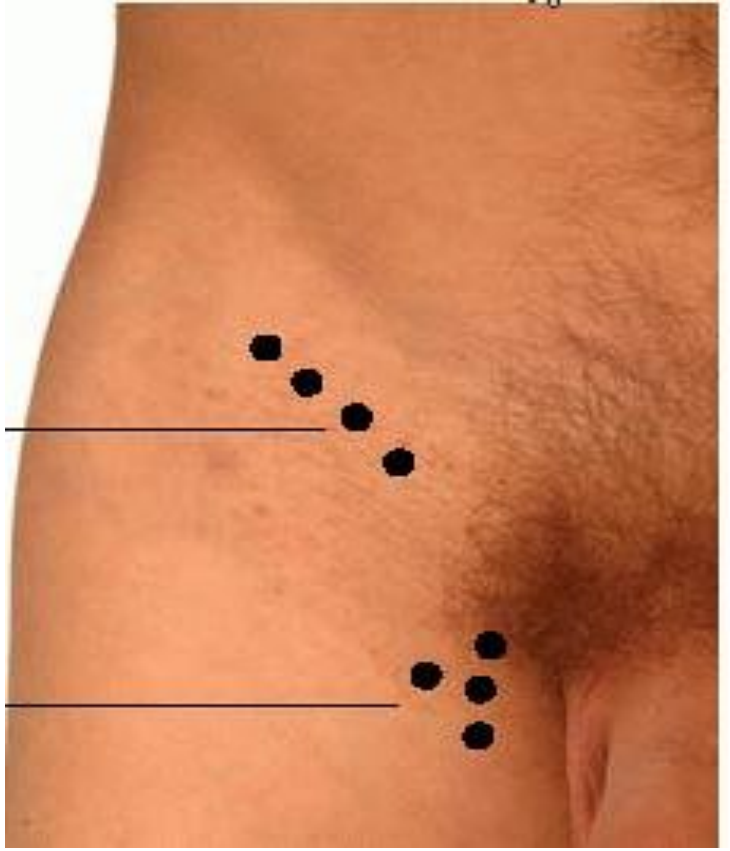
examine inguinal lymph node

- Palpate over the horizontal chain, which lies just below the inguinal ligament, and
- then over the vertical chain along the line of the saphenous vein



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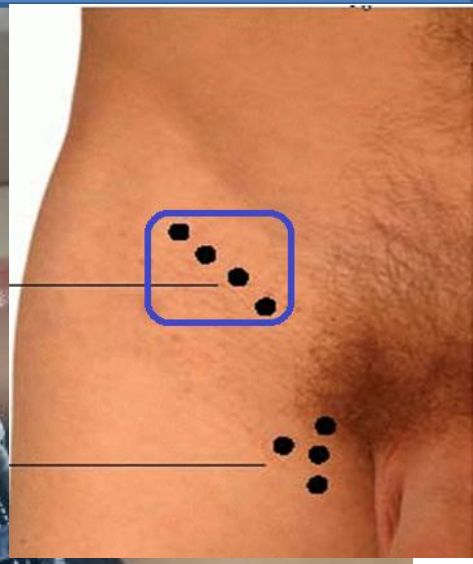
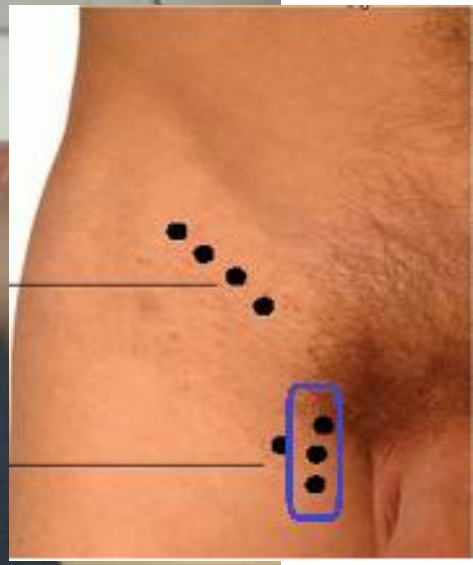
Palpate horizontally just below the inguinal ligament



Now palpate vertically along The femoral vein



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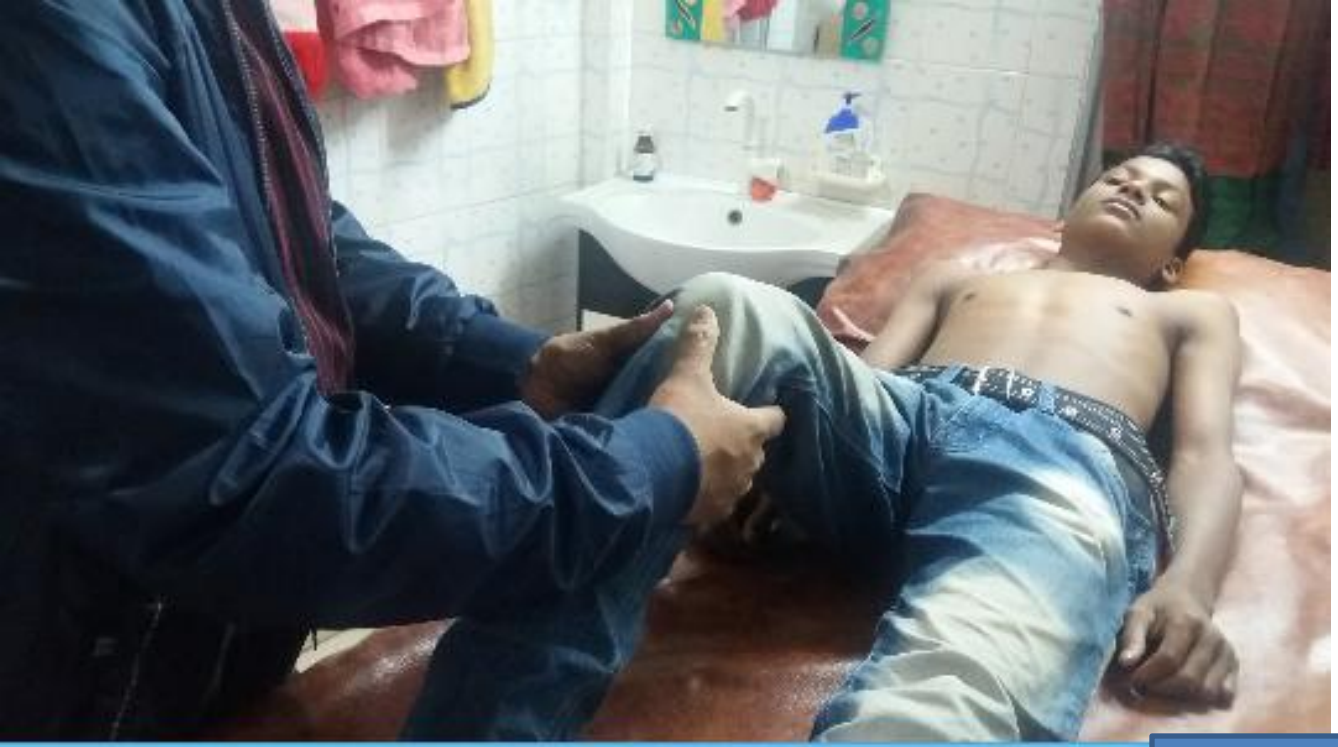
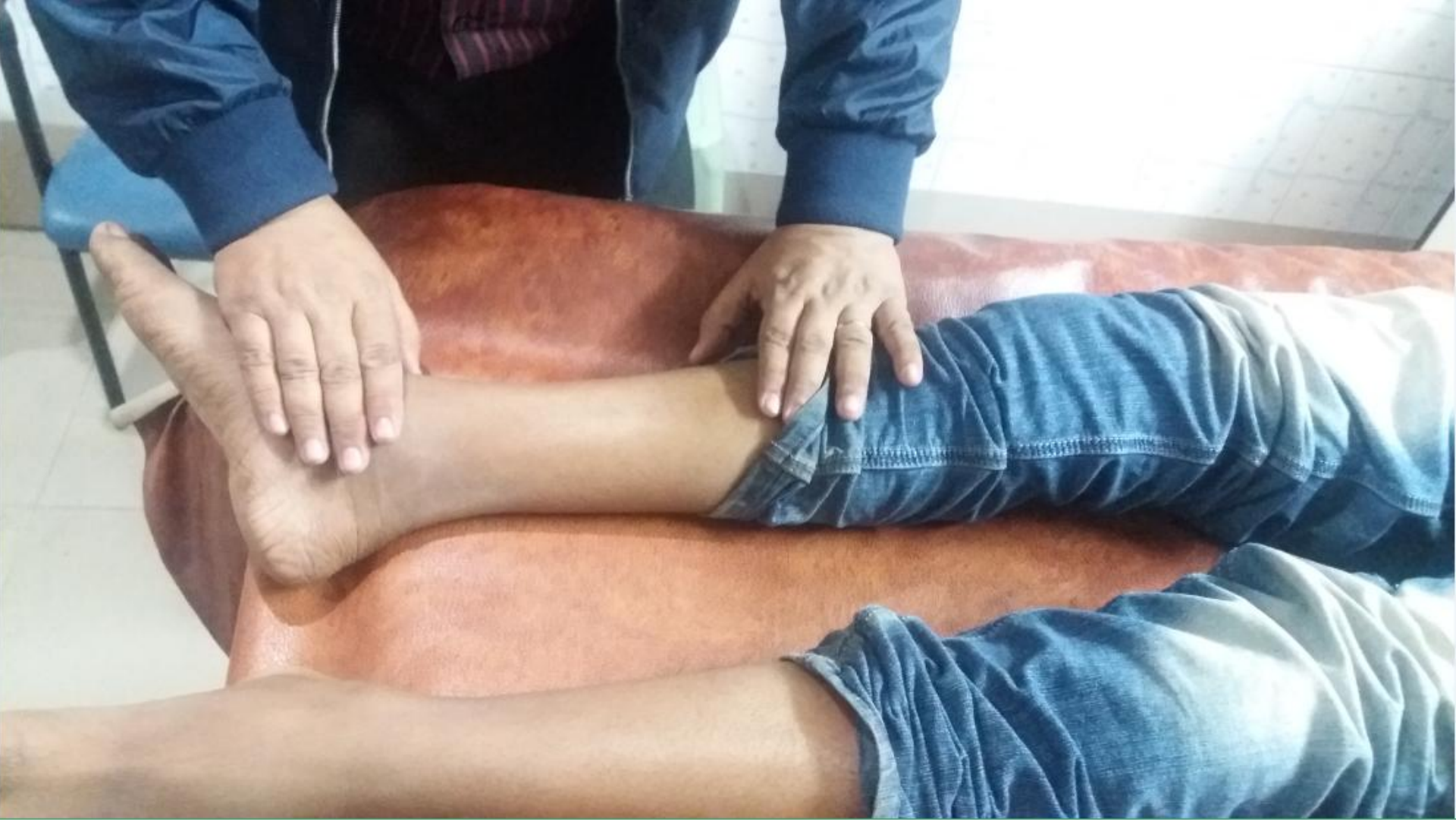


popliteal lymph node at knee

- flex knee joint
- now place both thumbs on tibial tuberosity
- with the forefinger palpate lymphnode in popliteal fossa



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Look for edema

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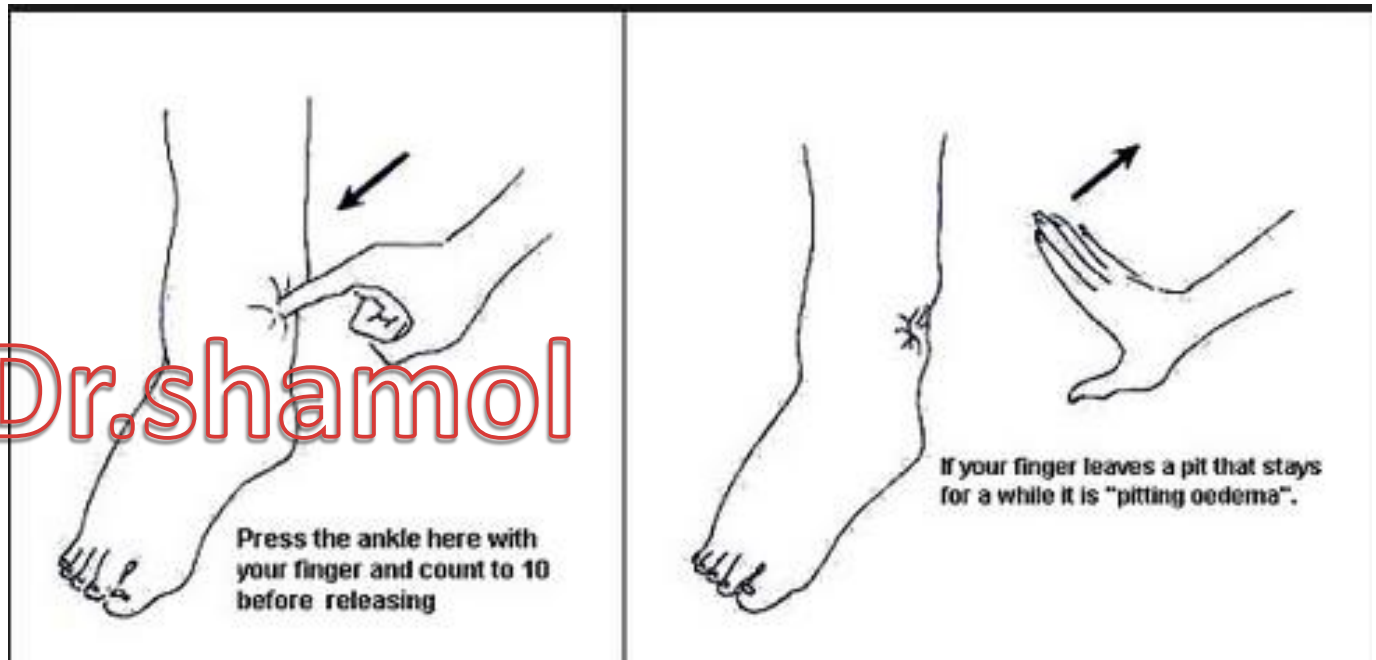
examination of edema / leg swelling	unilateral /bilateral, pitting or non pitting

site:

- at shin of tibia just above the medial melleolus
- Apply firm pressure with boths thumb
- during pressing look at patient face for any tenderness /pain
- looking pitting or depressing present or not
- keep pressure at least for 15 seconds before telling edema is absent
- in lying patient you also have to see edema in pre-sacral area if absent in leg inspection leg are swollen shiny and tense

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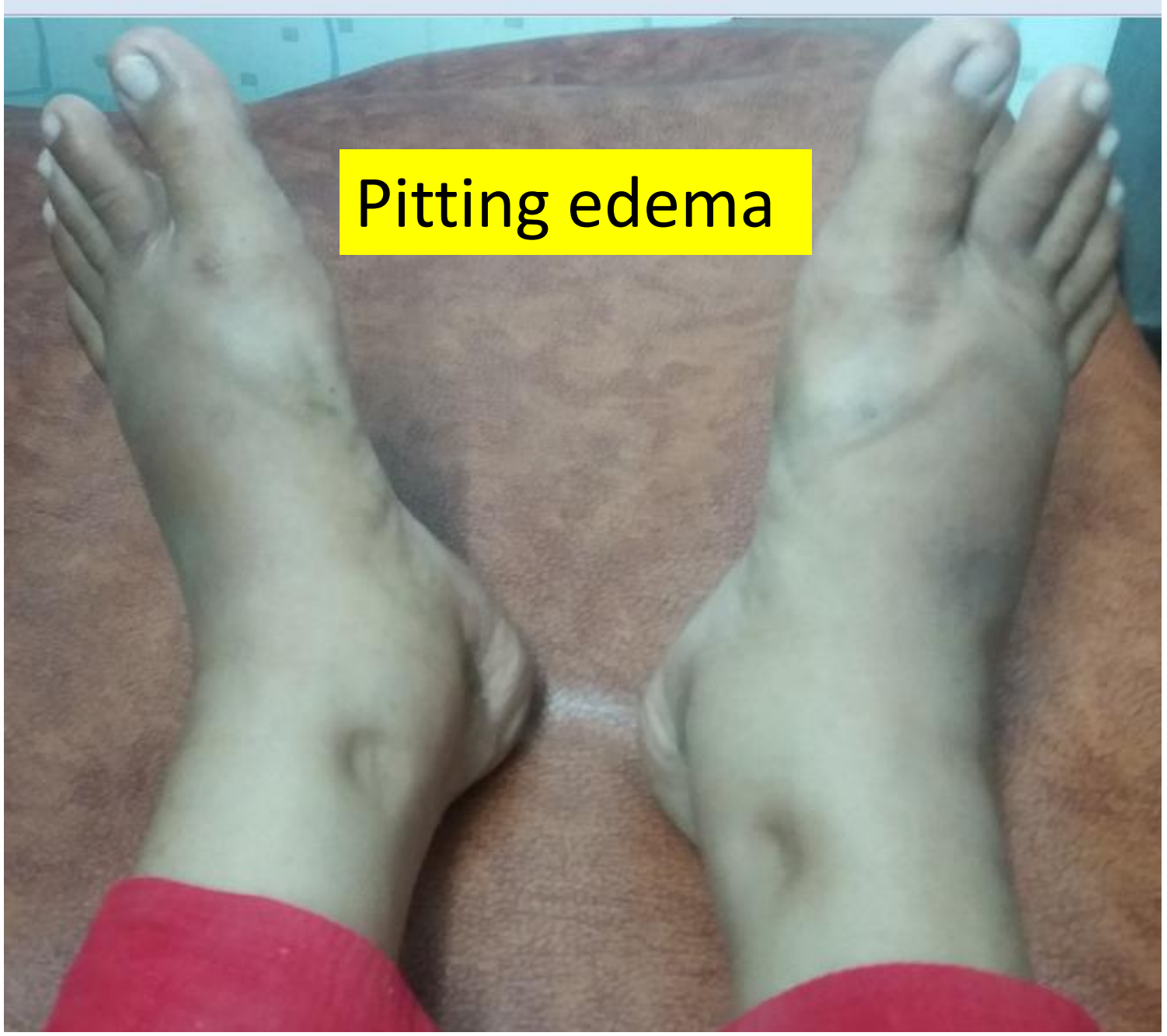
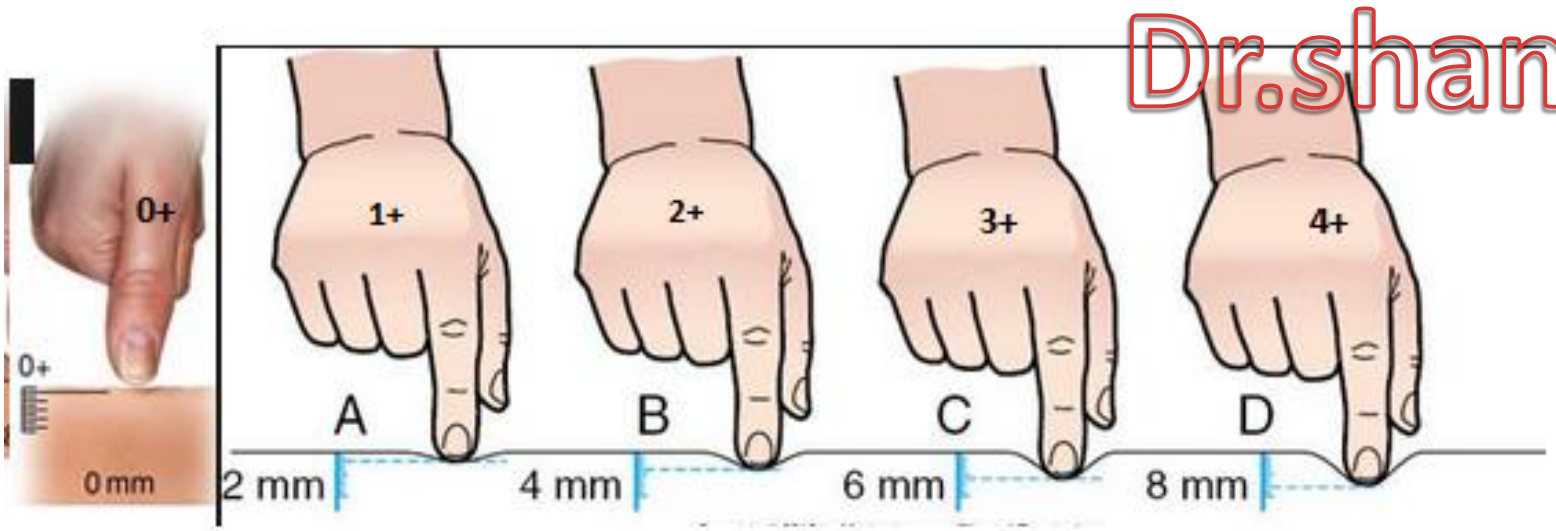

Pitting edema

grading	**definition**
"Absent"	Absent or unilateral
Grade +/ Mild:	Both feet / ankles
Grade ++ Moderate:	plus lower legs, hands or lower arms
Grade +++/ Severe	Generalised
Grade +++/ very Severe	scrotal swelling



0+= no pitting edema
1+= mild pitting edema , 2 mm depression that disappears rapidly
2+= moderate pitting edema ,4 mm depression that disappears in 10-15 second
3+= moderately severs pitting edema ,6 mm depression that may last more than 1 minute
4+= severe pitting edema 8mm depression that can last more than 2 minutes

Look for sole of the foot
And inter-digital space

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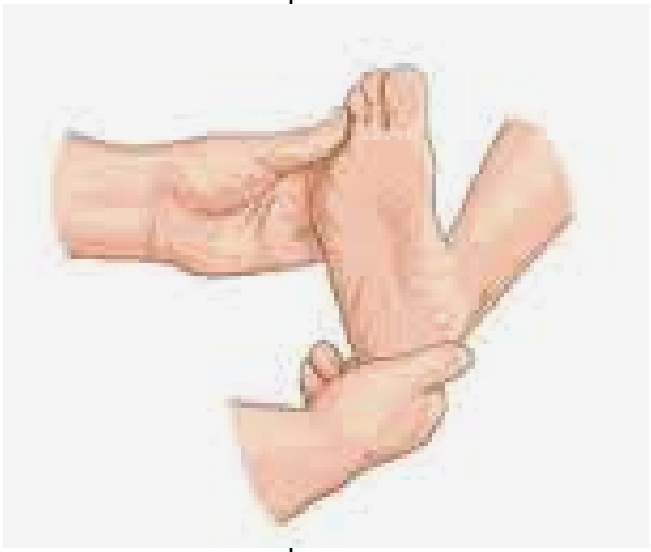
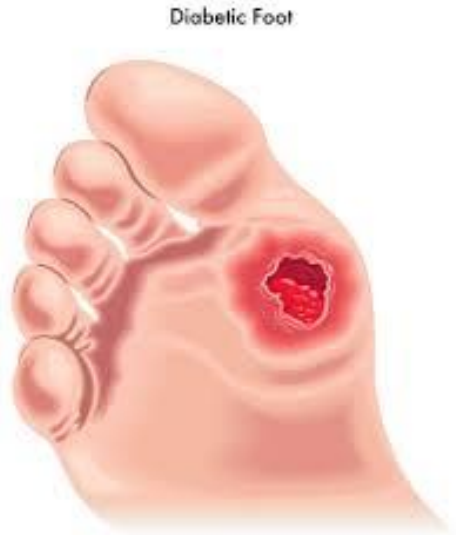
now inspect the foot

1. anterior and lateral surfaces,
2. sole of foot—
3. heel –aks the elevate the foot
4. now spread the toes to expose inter digital space between toes to see fungal infection

look for

1. Ulcers
2. Erythema
3. Discolouration
4. Loss of hair
5. Amputation
6. Varicosities
7. Atrophy
8. Scars
9. gangrene
10. deformities





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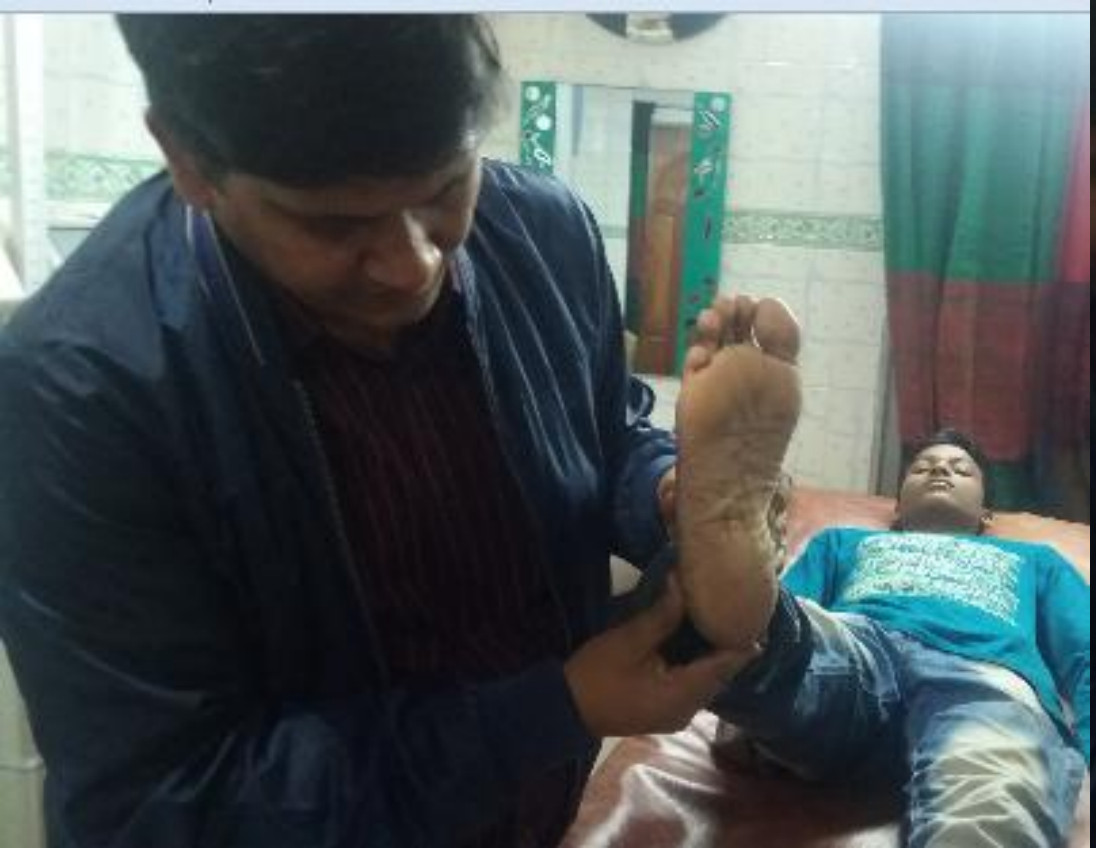

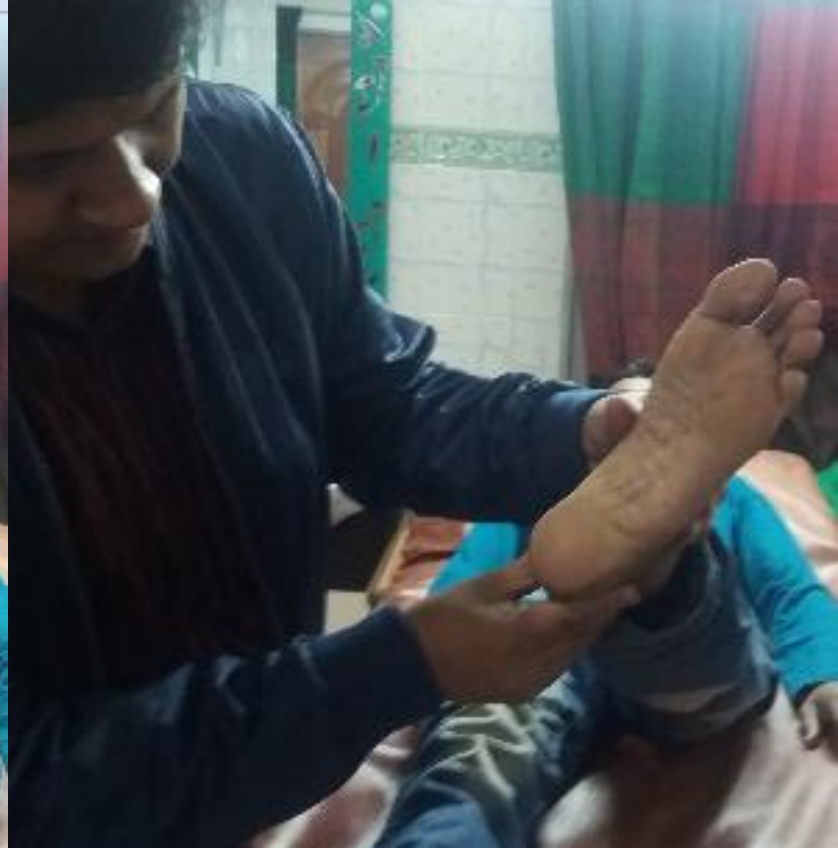

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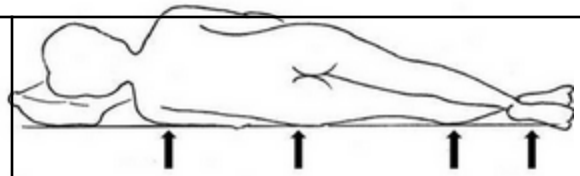
now ask the patient to go semiprone position

1. spine ----look for spinal deformities --- kyphosis , scoliosis, gibbus
2. see pre sacral edema



in lying patient you also have to see edema in pre-sacral area if absent in leg inspection leg are swollen shiny and tense

now ask the patient to sit down
1. look any neck gland swell present thyroid or lymphnode 2. now ask the patient to swallow 3. look for movement if the gland is thyroid then it will move downward during deglutition

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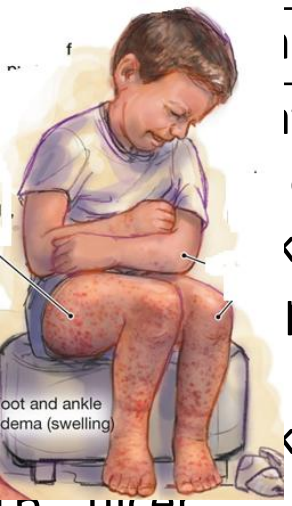

of skin	
ition – or hyper ks purpura ks 6. ulcer	in case of purpura –look the following ✓ palpable or nor (palpable purpura in –vasculitis) ✓ pain full or painless (pain full in -- vasculitis) ✓ blanch on pressure or not (purpura –never blanch on pressure) **examination** take a glass side and with it press over the purpura and observe if disappear ----then it is not purpura –it may be talengectasia if no change occur ---then it is purpura

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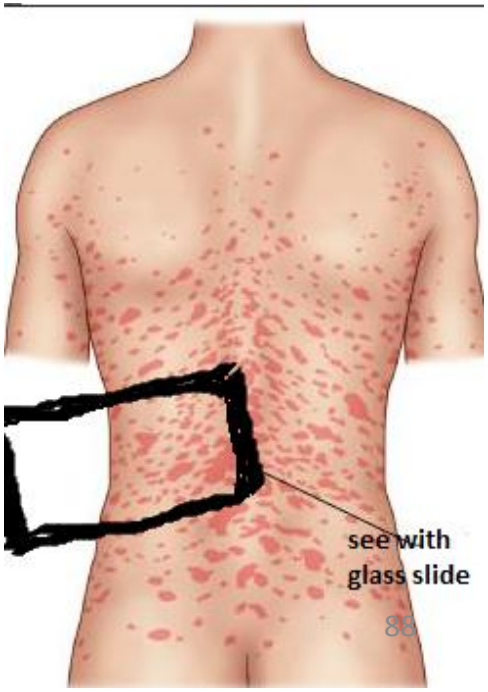
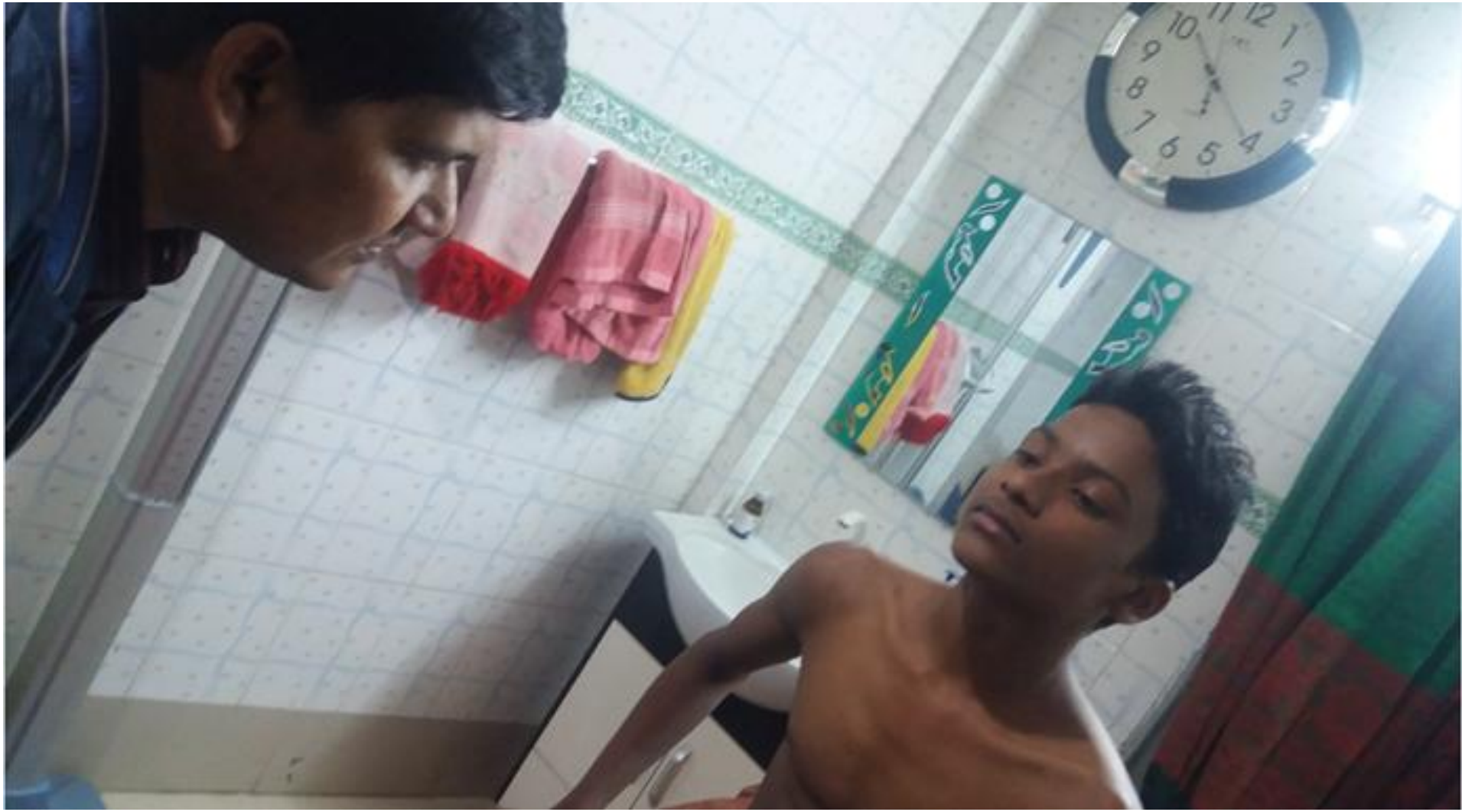
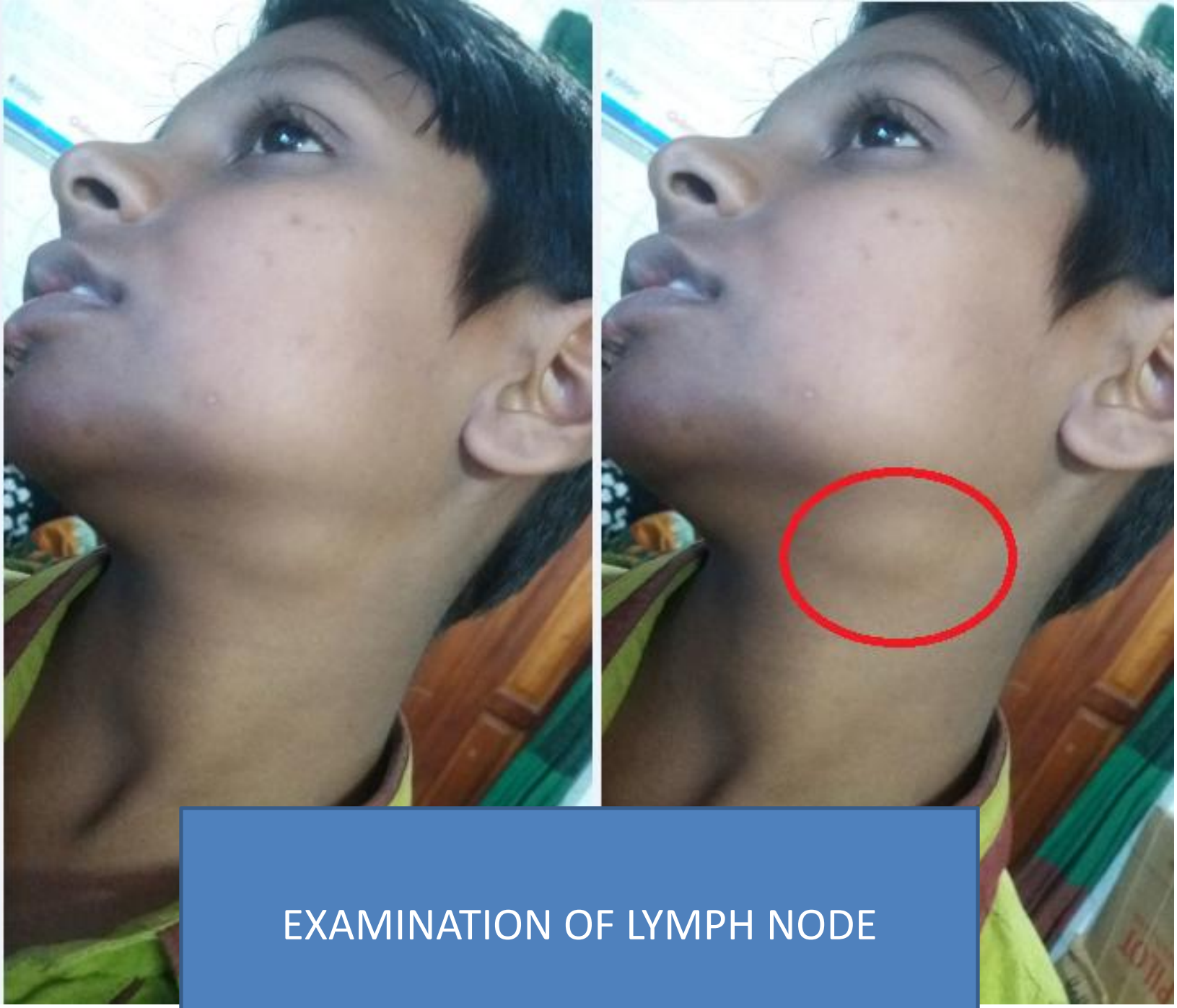
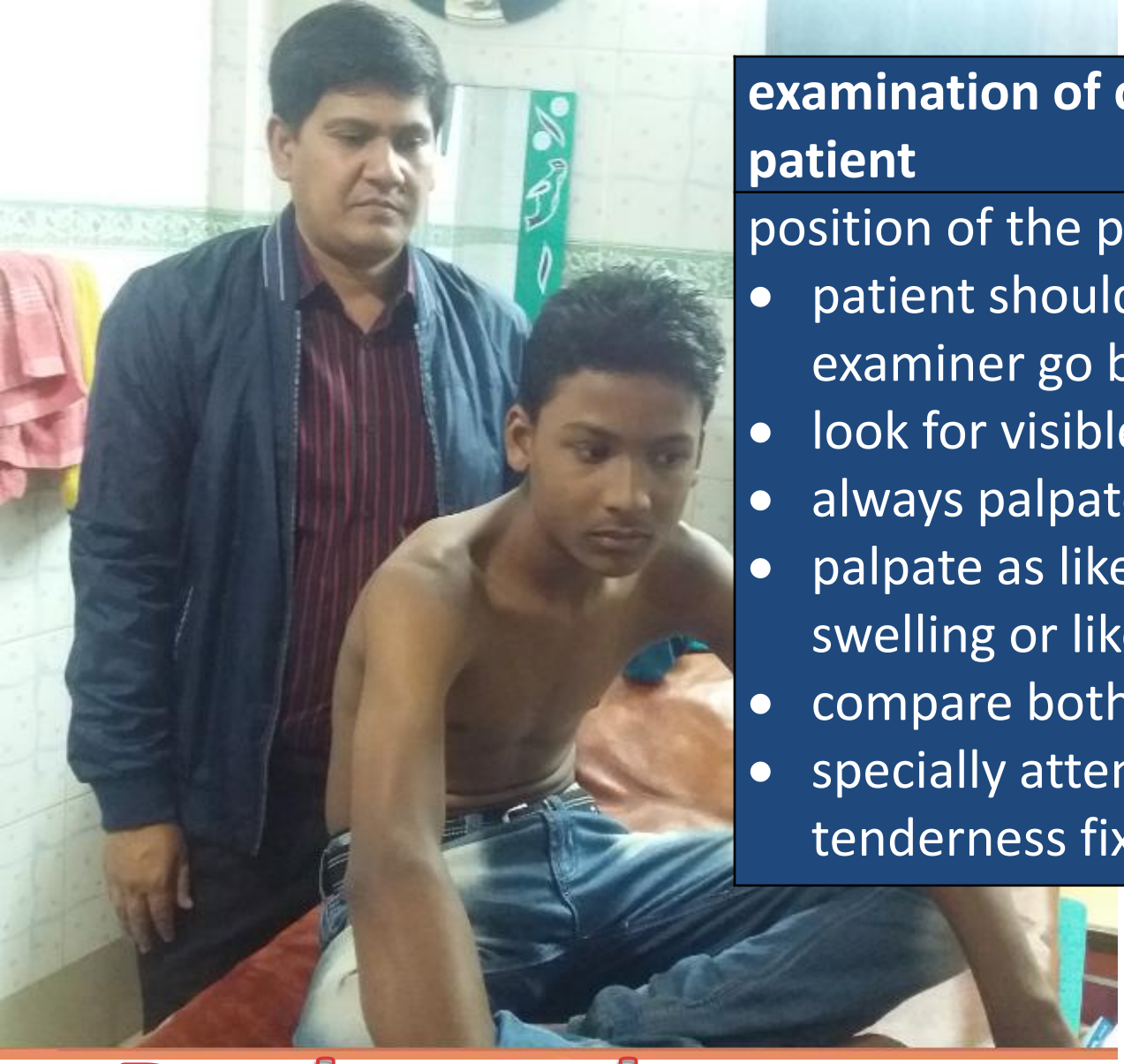


Now ask the patient to sit down and swallow with extend neck to see any enlarged thyroid gland





EXAMINATION OF LYMPH NODE



examination of cervical lymph node of th patient

position of the patient and examiners

- patient should be in sitting position an examiner go behind the patient
- look for visible lymphadenopathy
- always palpate with pulp of finger
- palpate as like you are rolling over swelling or like massaging the muscle
- compare both side symmetrically
- specially attention give on consistency tenderness fixed or not

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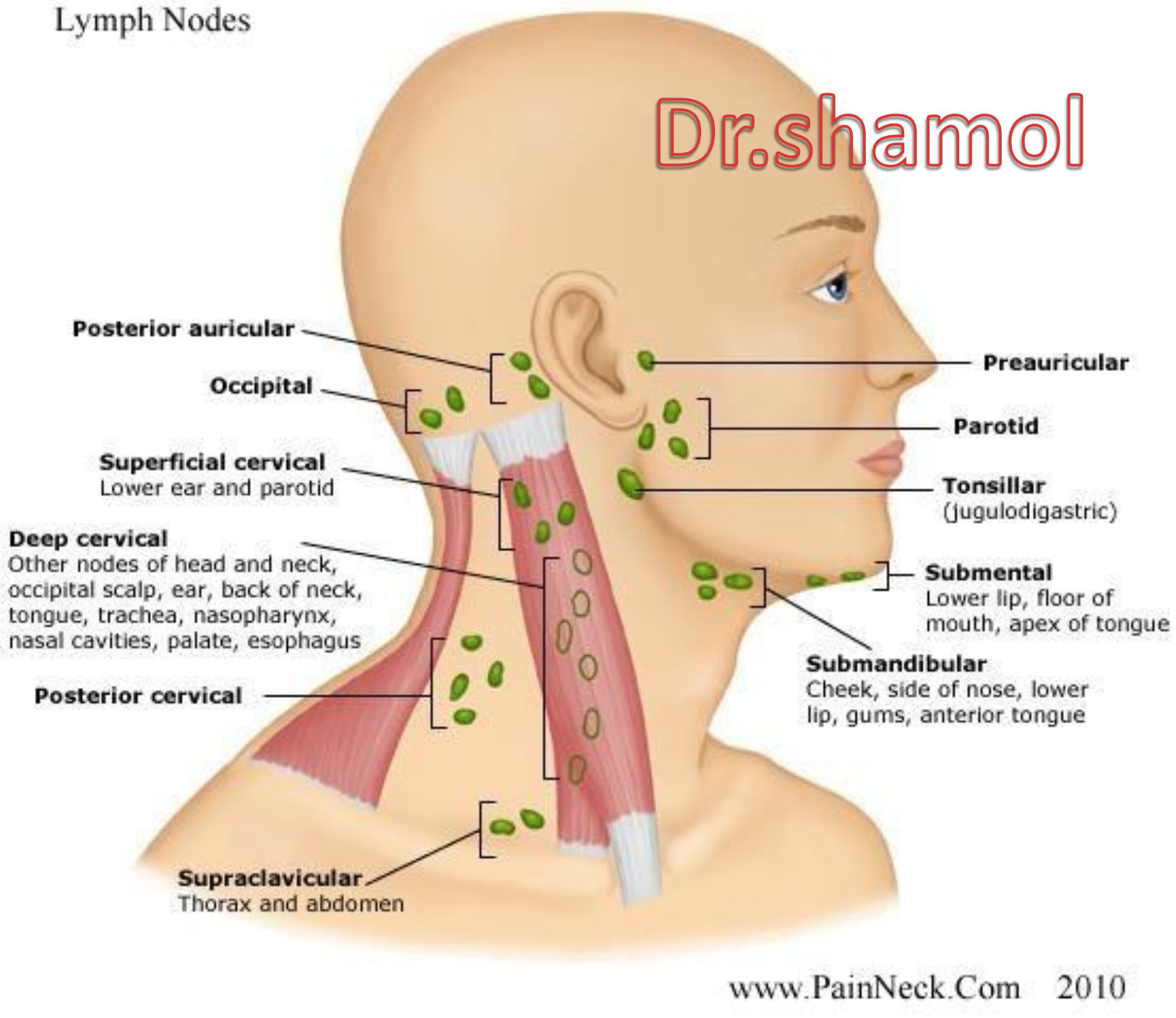
Lymph Nodes
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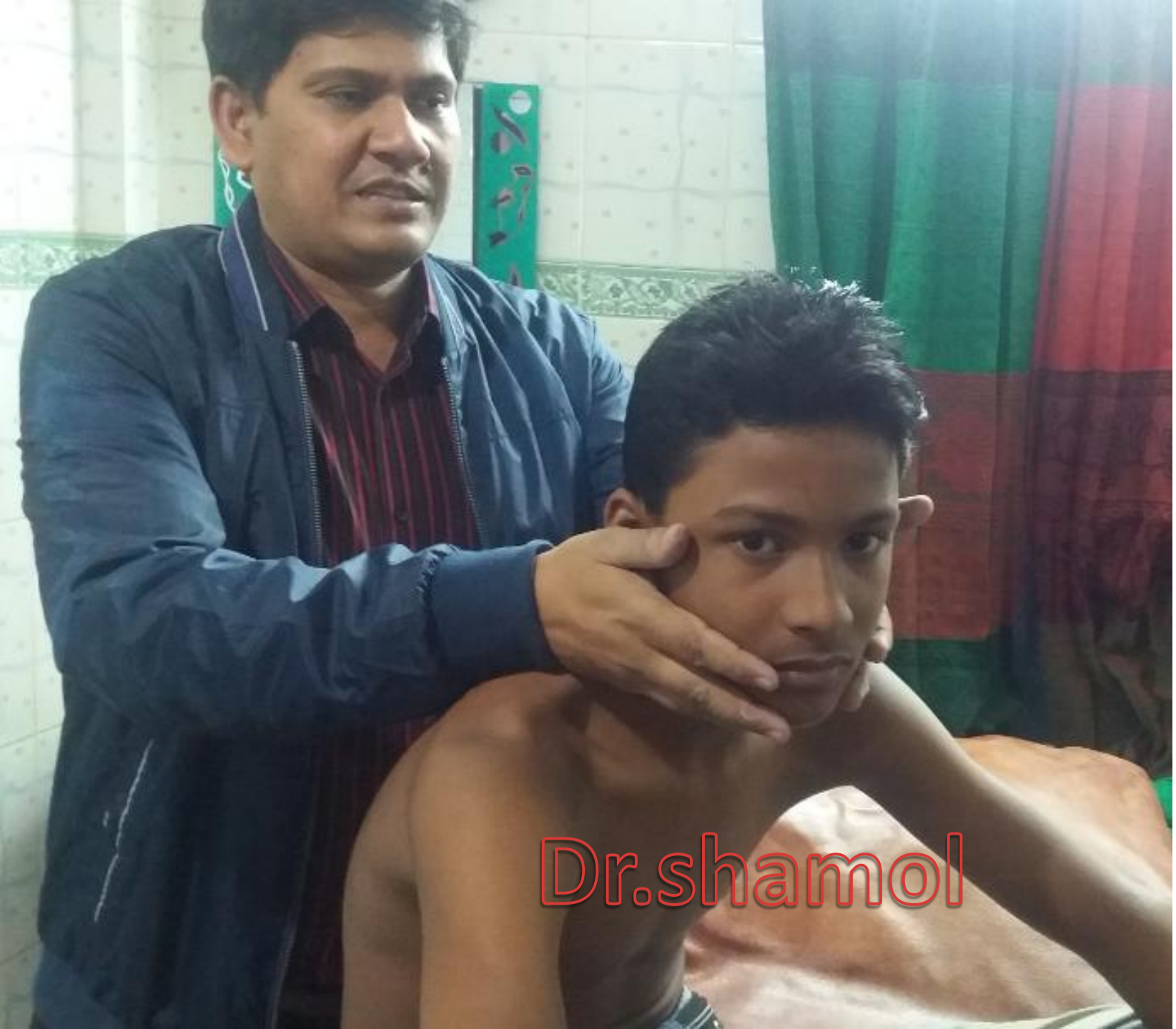
Posterior auricular
Occipital
Superficial cervical
Lower ear and parotid
Deep cervical
Other nodes of head and neck, occipital scalp, ear, back of neck, tongue, trachea, nasopharynx, nasal cavities, palate, esophagus
Posterior cervical
Supraclavicular
Thorax and abdomen
Preauricular
Parotid
Tonsillar
(jugulodigastric)
Submental
Lower lip, floor of mouth, apex of tongue
Submandibular
Cheek, side of nose, lower lip, gums, anterior tongue
www.PainNeck.Com 2010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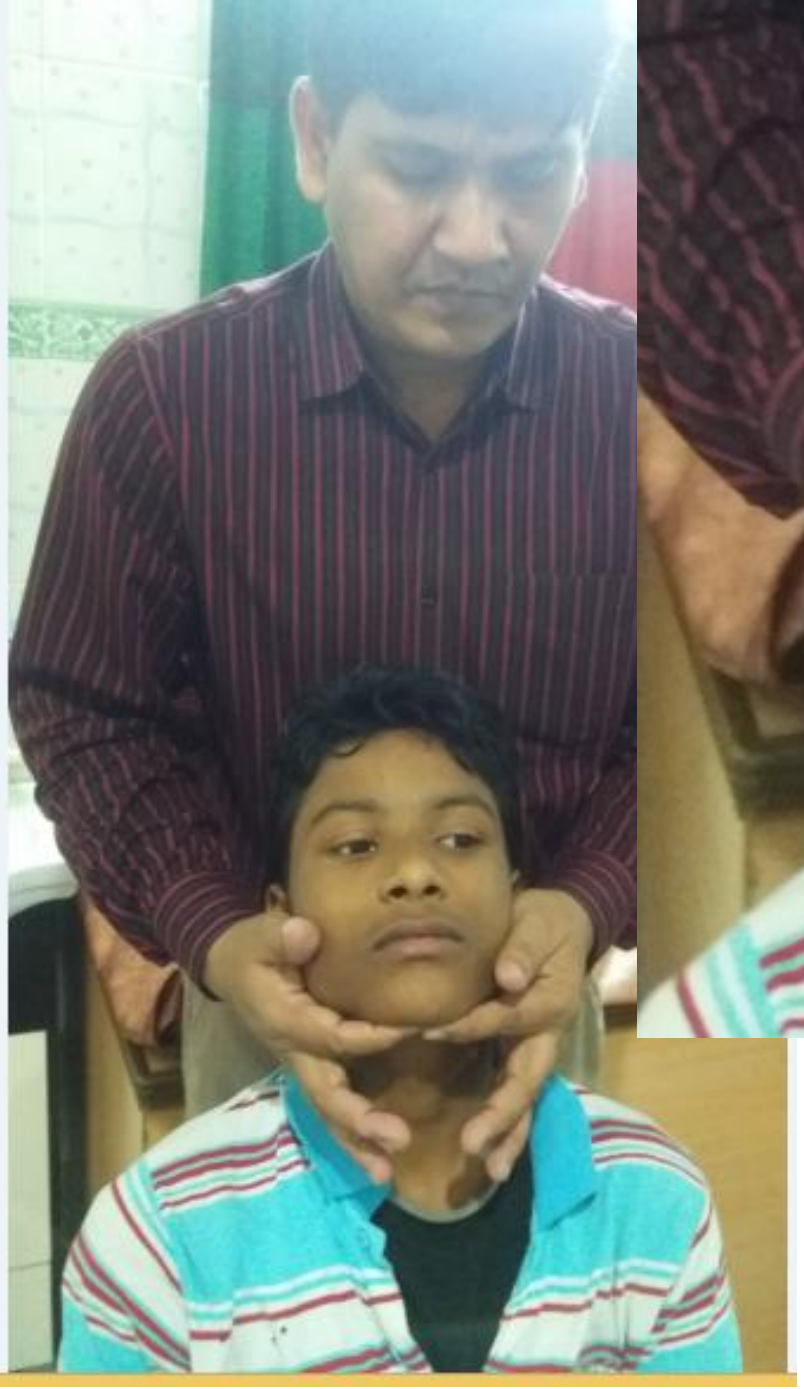
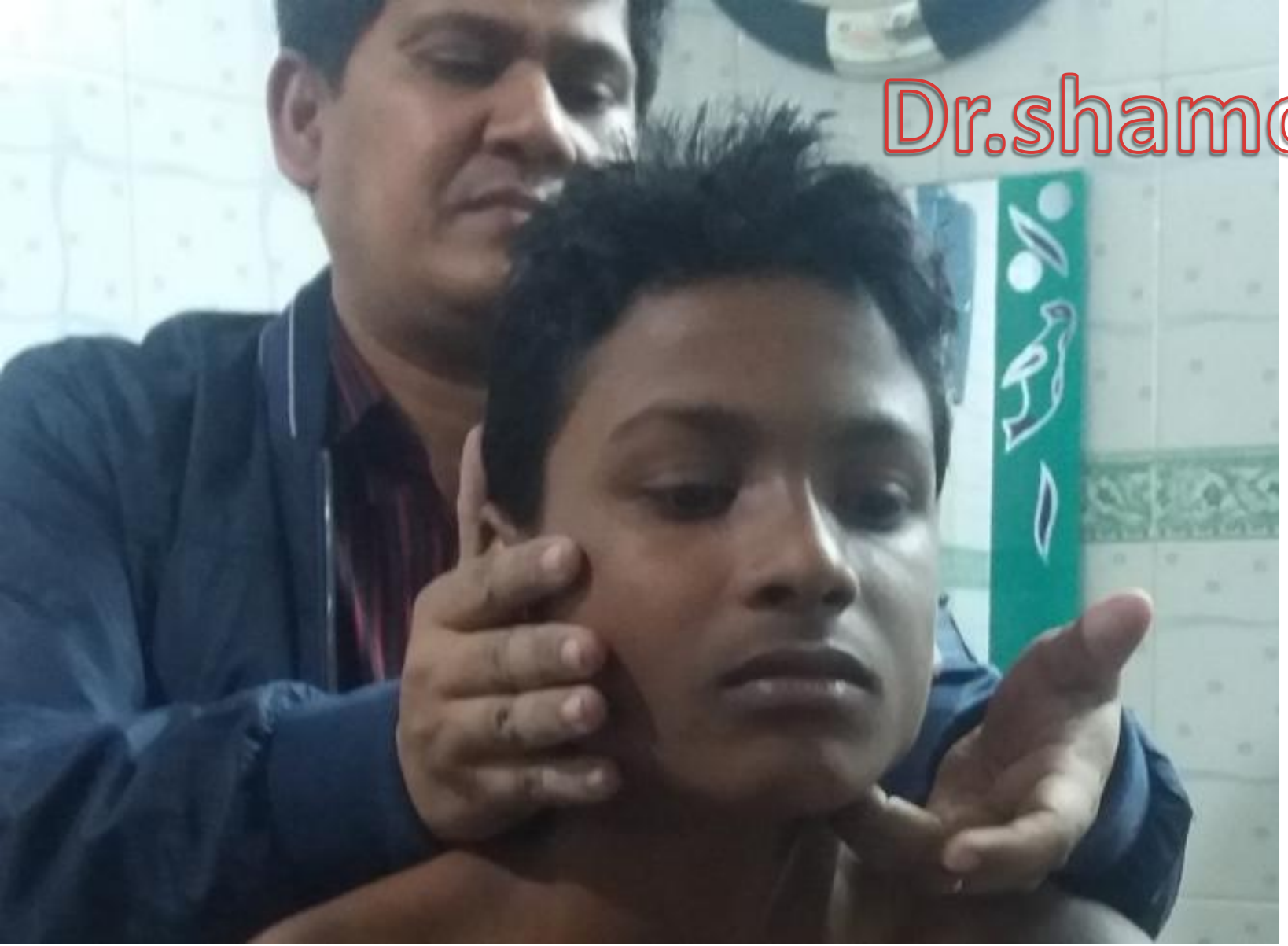
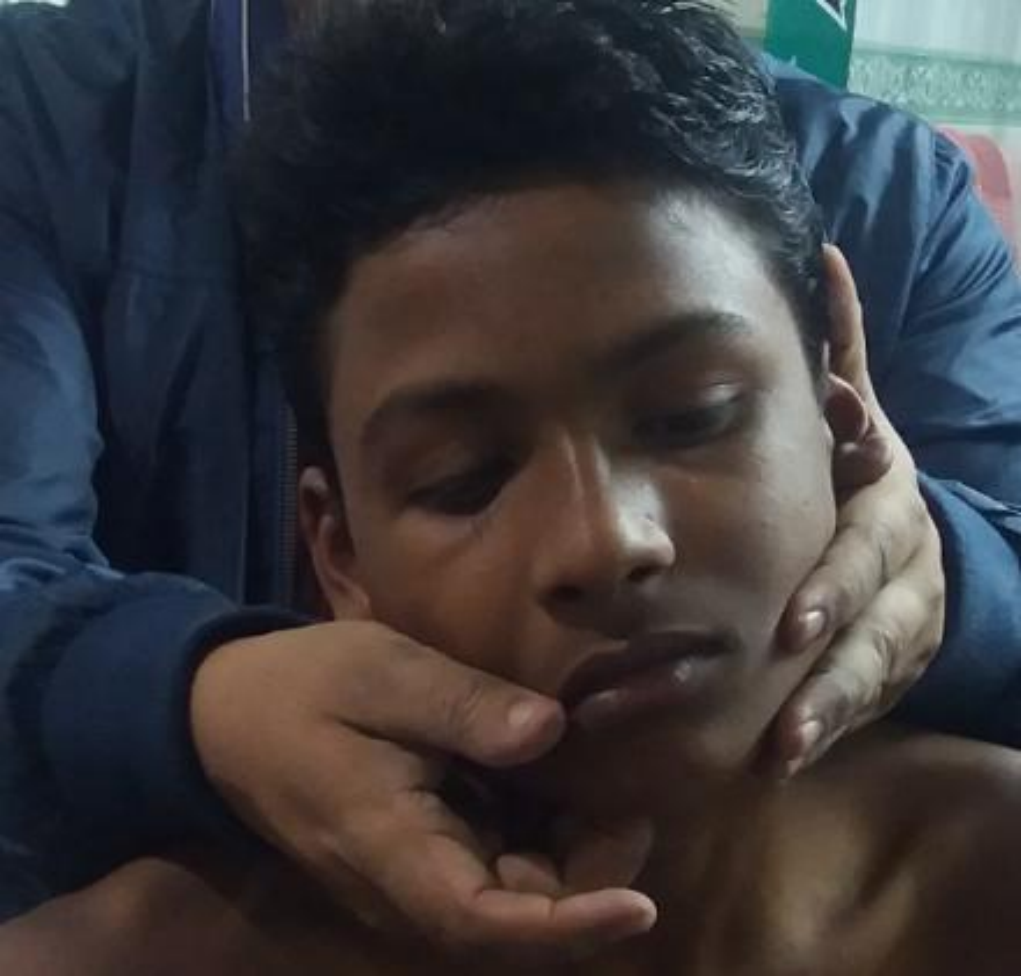


First right sub-mandibular
With three or four fingers of
right hand except thumb



Then left sub-mandibular lymphnode With three or four fingers of left hand except thumb



Alternate way
You keep head straight or
It can be inclined toward side
you gona palpate

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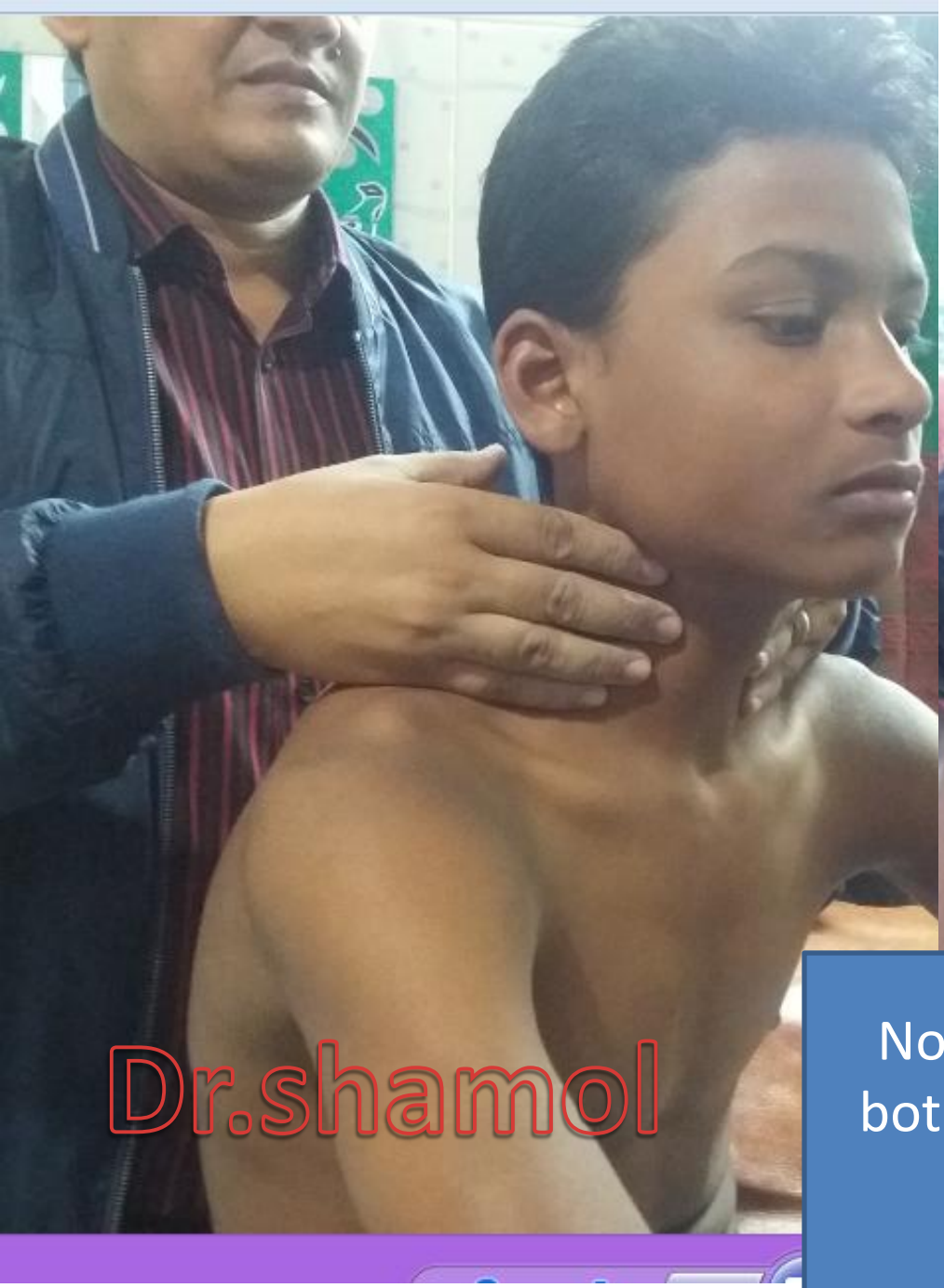
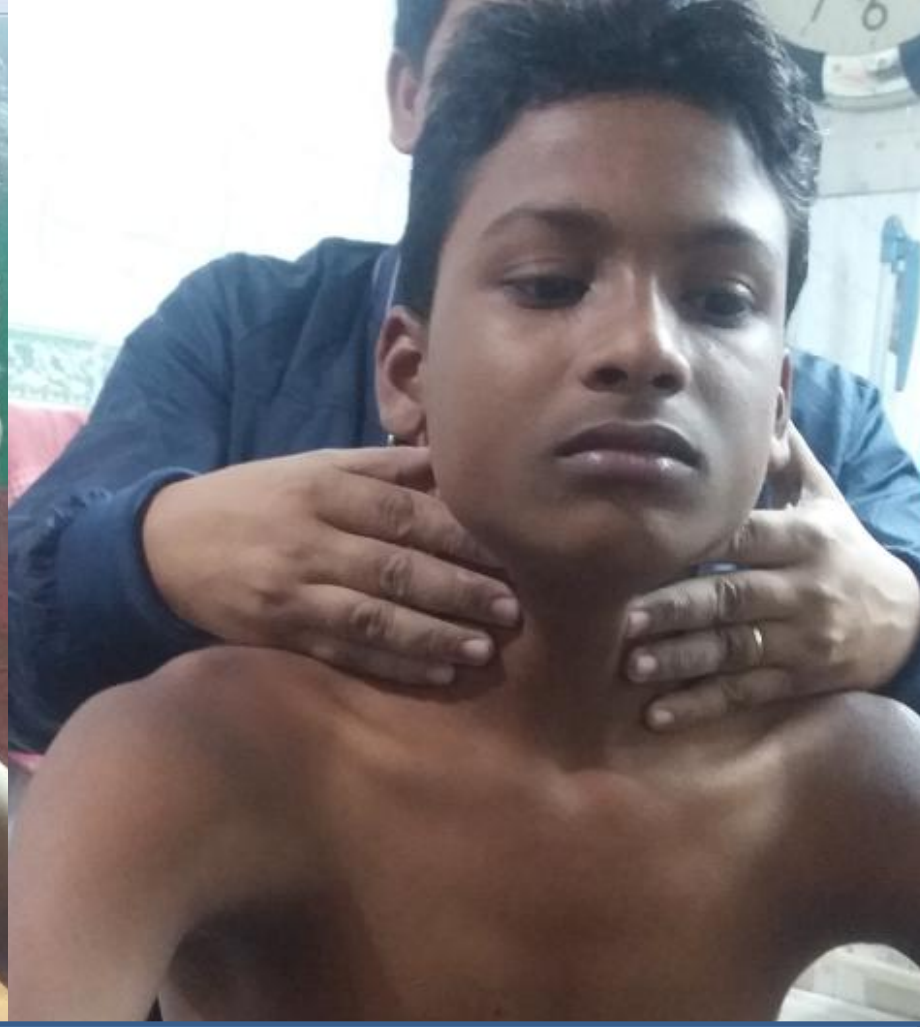
then
jogulo-digestic / tonsillar, palpate it with index finger both side simultaneously

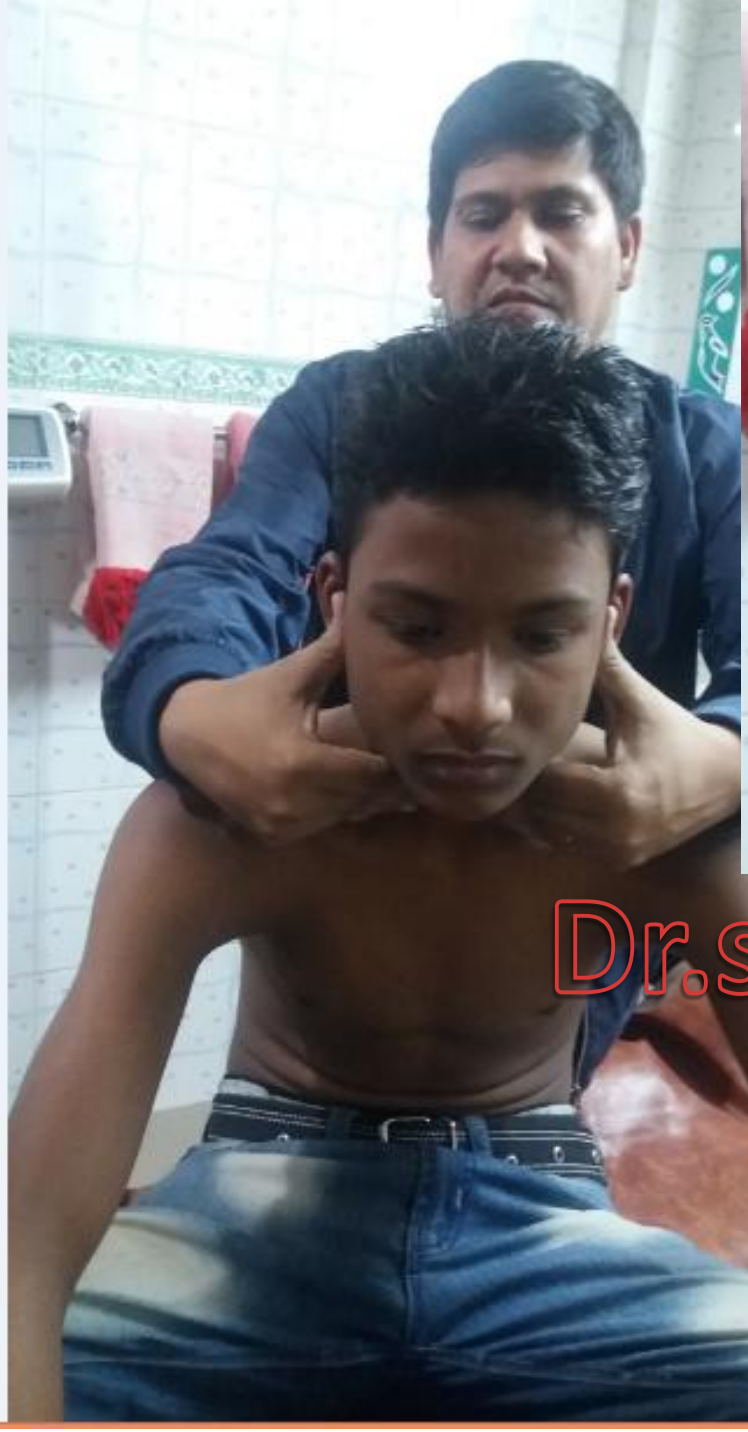




Now palpate ant. Cervical chain of both sides simultaneously with four fingers

now palpate supraclavicular lymph node with two or three fingers in supraclavicular fossa

now palpate the post.cervical chain with four and ascend upward



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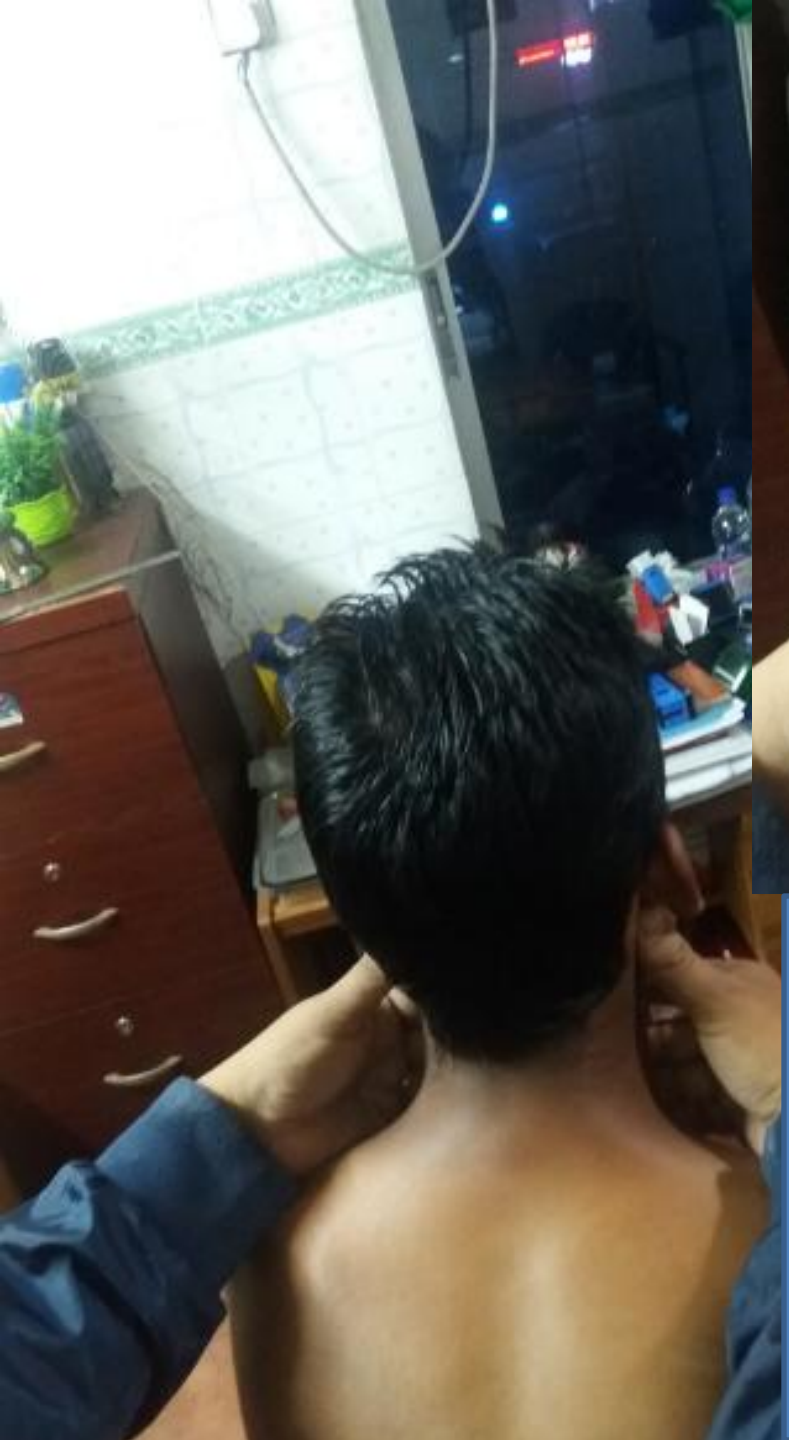
now palpate pre-auricular with thumb or two or three fingers in front of ear of both side simultaneously



now post auricular just behind the ear with thumb both side simultaneously

lastly with the both thumb palpate sub occipital nodes just below the occipital prominence

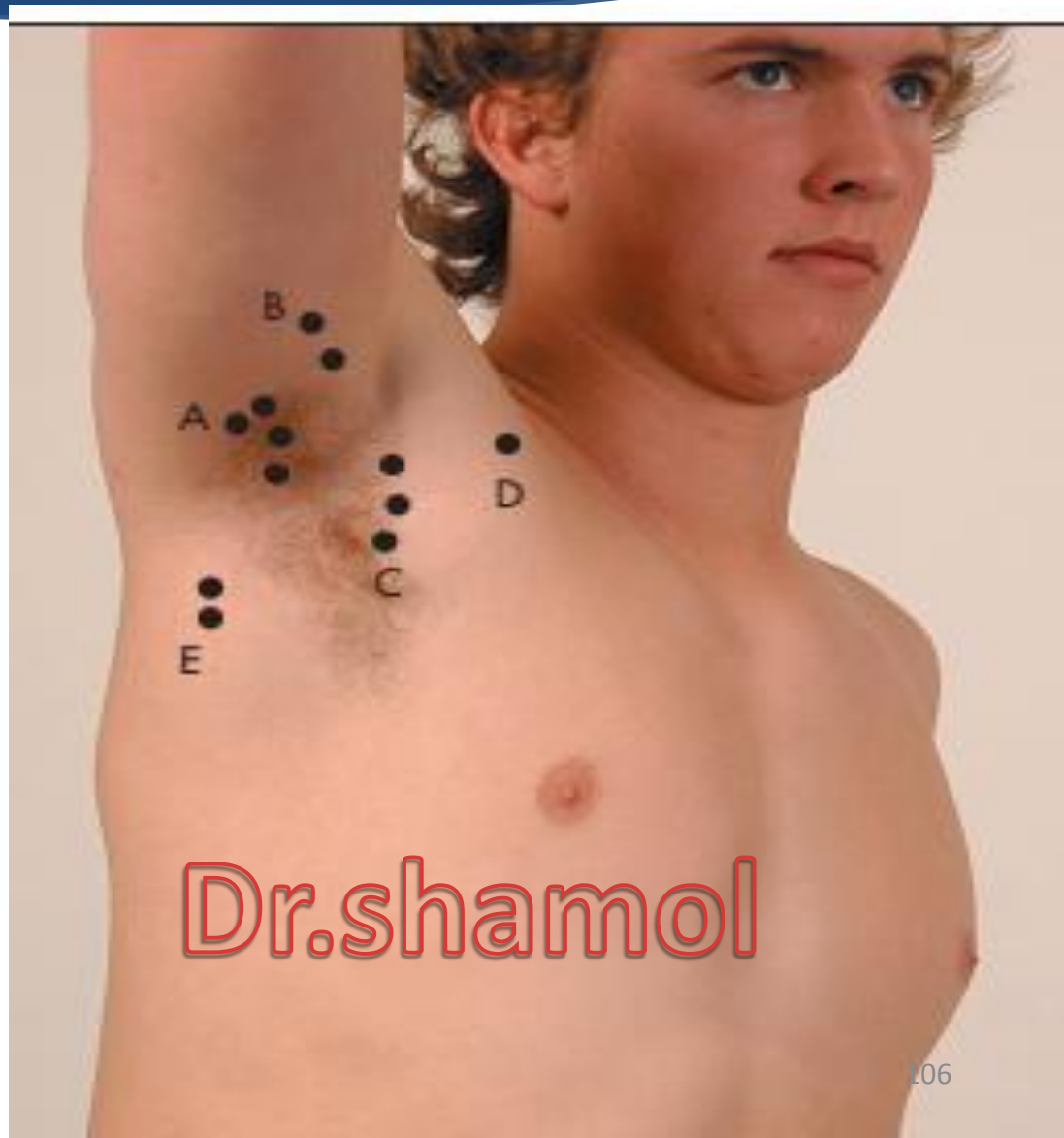
Now examination of Axillary lymph node

C=Anterior

B=lateral

A= apical & central /medial

E= posterior



- From the patient's front or side, palpate the right axilla with your left hand and vice versa

if your r confused which hand u will RT or left group of lymph node.
just hand shake with the patient free hand will use for that side of lymph node

ask the patient to keep his right forearm over examiner (your) left forearm

Ant. Axillary lymph node:

❖ask the patient to keep right forearm over examiner (your) left forearm .

❖ Using the left finger feel the right anterior lymph node behind the ant.fold of axilla and give support with left thumb

❖Using the left finger feel the right anterior lymph node behind the ant.fold of axilla and give support with right hand

Now palpate the medial surface of axilla with left four fingers against scapula for medial group of lymhnode

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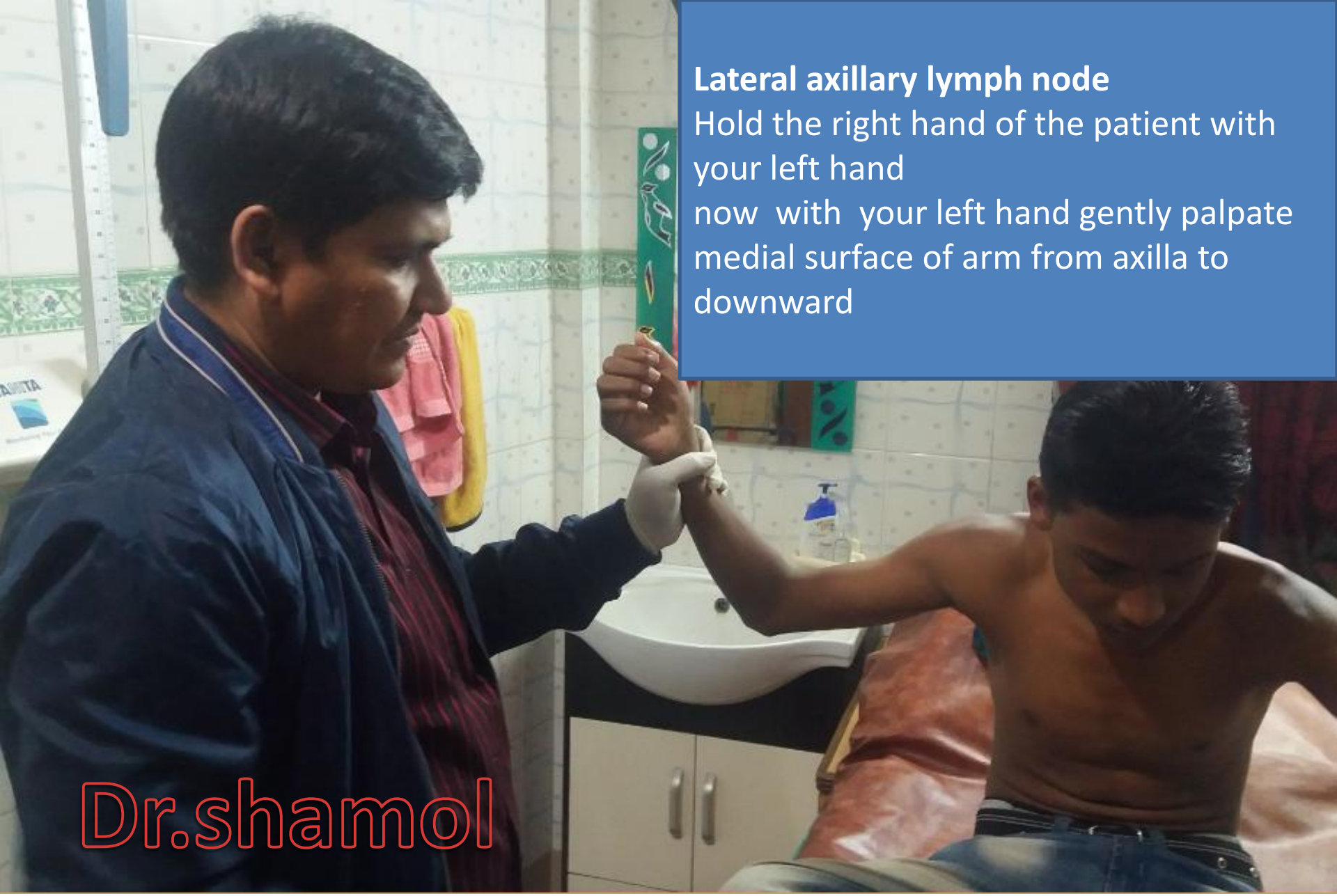
apical lymph node

- ✓ Gently place your fingertips of left into the apex of the axilla
- ✓ Give support with right hand at tip of shoulder joint

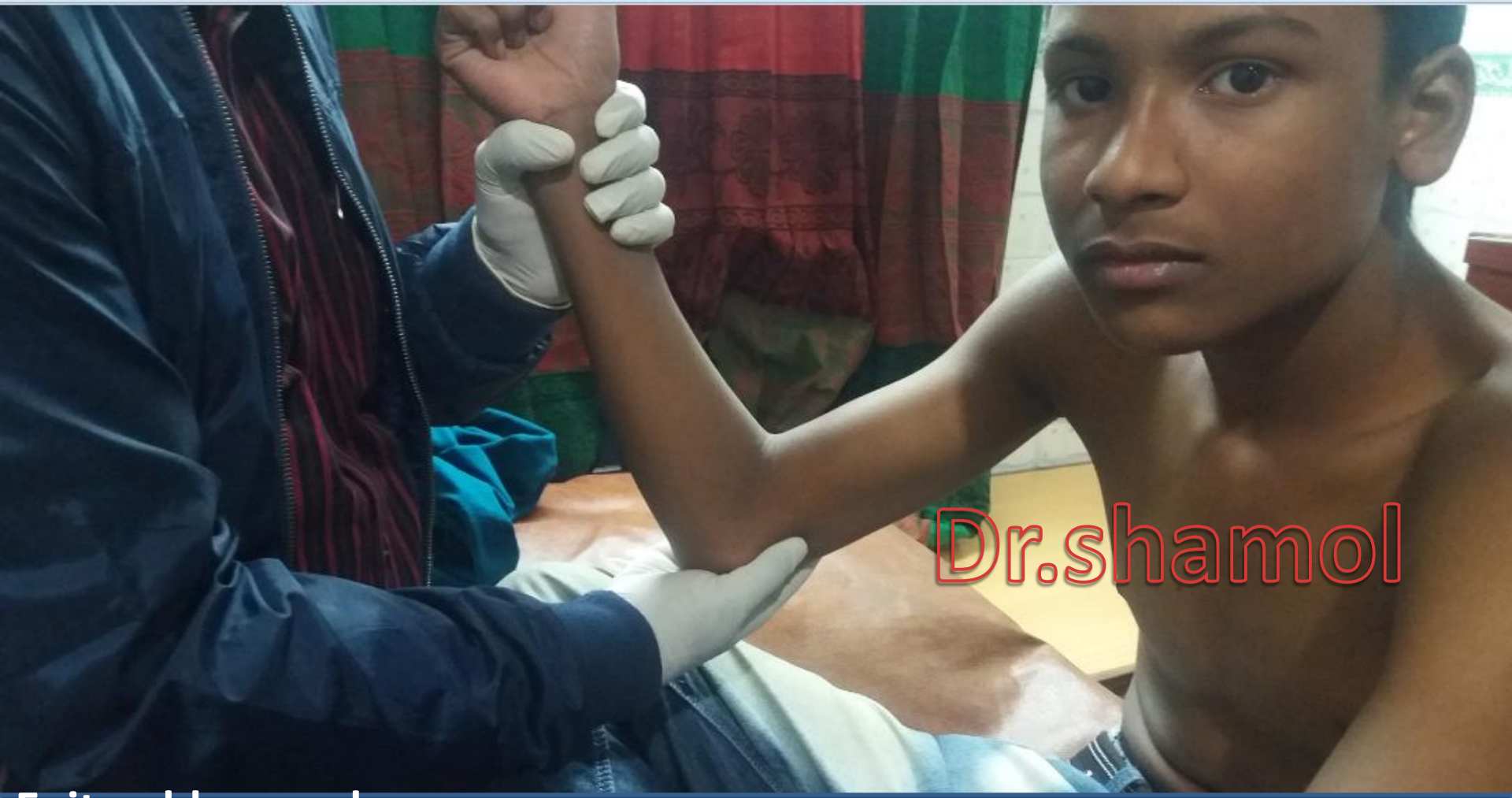


Lateral axillary lymph node

Hold the right hand of the patient with your left hand

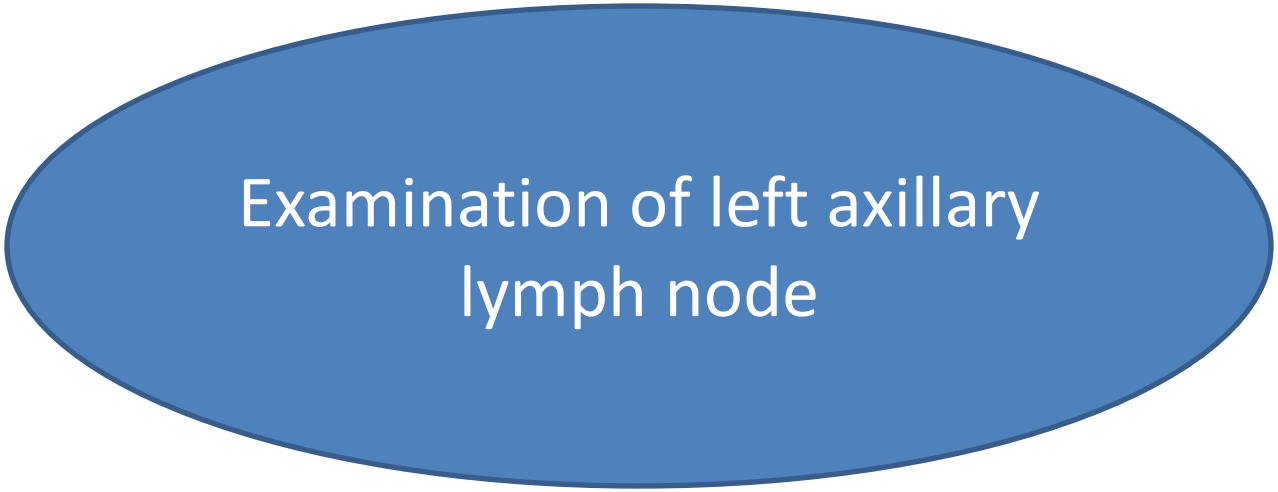
now with your left hand gently palpate medial surface of arm from axilla to downward

now with your left hand gently palpate medial surface of arm from axilla to downward



Epitrochlear nodes

■ Support the patient's right wrist with your left hand, hold his partially flexed elbow with your right hand and use your thumb To feel for the epitrochlear node.


Examination of left axillary lymph node


if your r confused which hand u will RT or left group of lymph node.
just hand shake with the patient free hand will use for that side of lymph node
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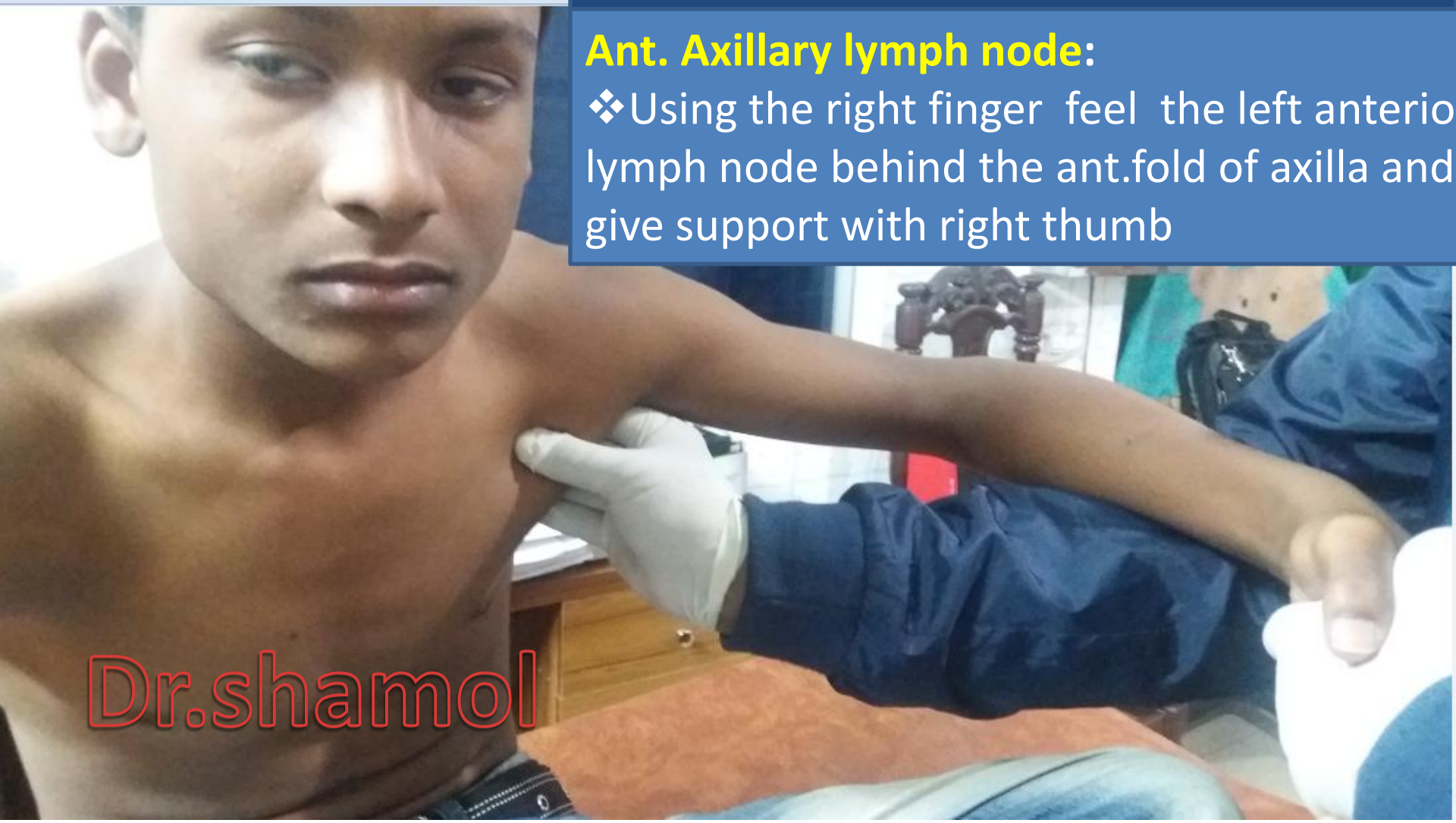
ask the patient to keep his left forearm over examiner (your) right forearm

Ant. Axillary lymph node:

❖Using the right finger feel the left anterio lymph node behind the ant.fold of axilla and give support with right thumb



Or

Ant. Axillary lymph node:

❖Using the right finger feel the left anterior lymph node behind the ant.fold of axilla and give support with finger of left hand

Now palpate the medial surface of axilla with right four fingers against scapula for medial group of lymhnode

apical lymph node

- ✓ Gently place your fingertips of right hand into the apex of the axilla
- ✓ Give support with left hand at tip of shoulder joint

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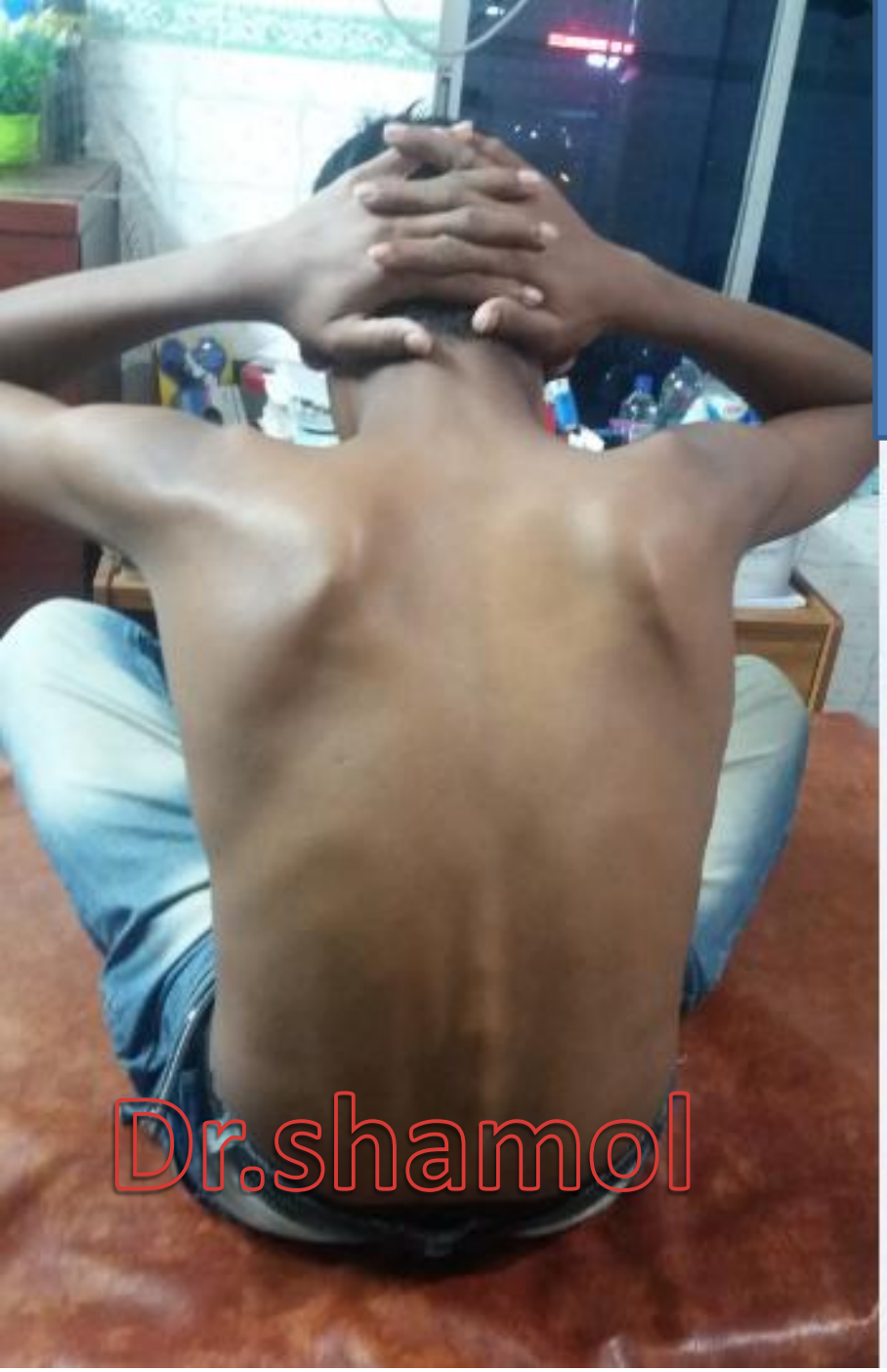
Lateral axillary lymph node

Hold the left hand of the patient with your right hand

now with your left hand gently palpate medial surface of arm from axilla to downward

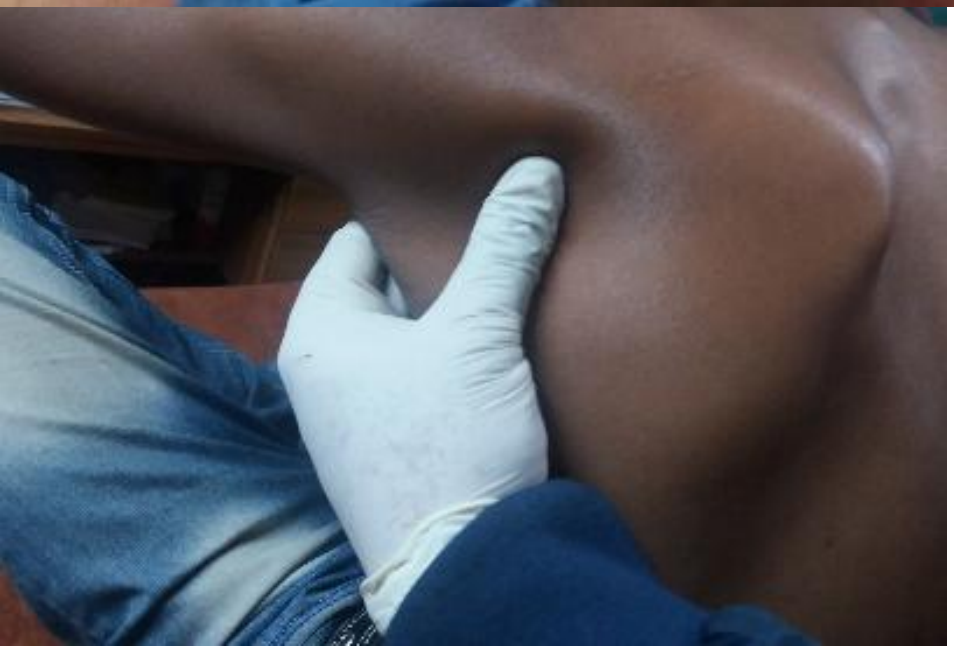
Epitrochlear nodes

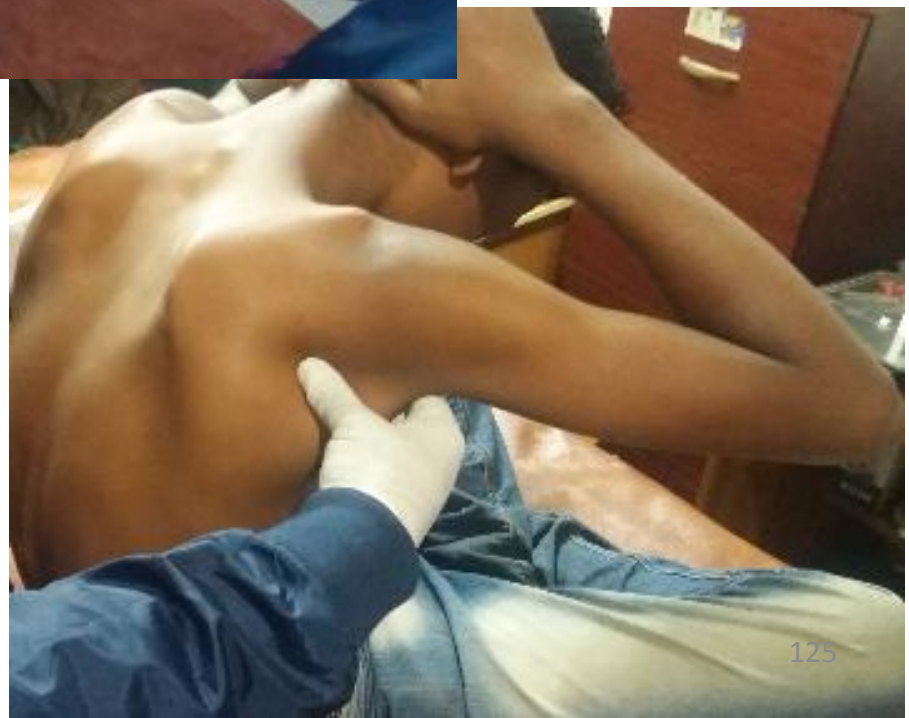
■ Support the patient's left wrist with your right hand, hold his partially flexed elbow with your left hand and use your thumb To feel for the epitrochlear node.



- After palpation of rt and left axillary group.
- go behind the patient .
- Ask her keep both hand behind his head.

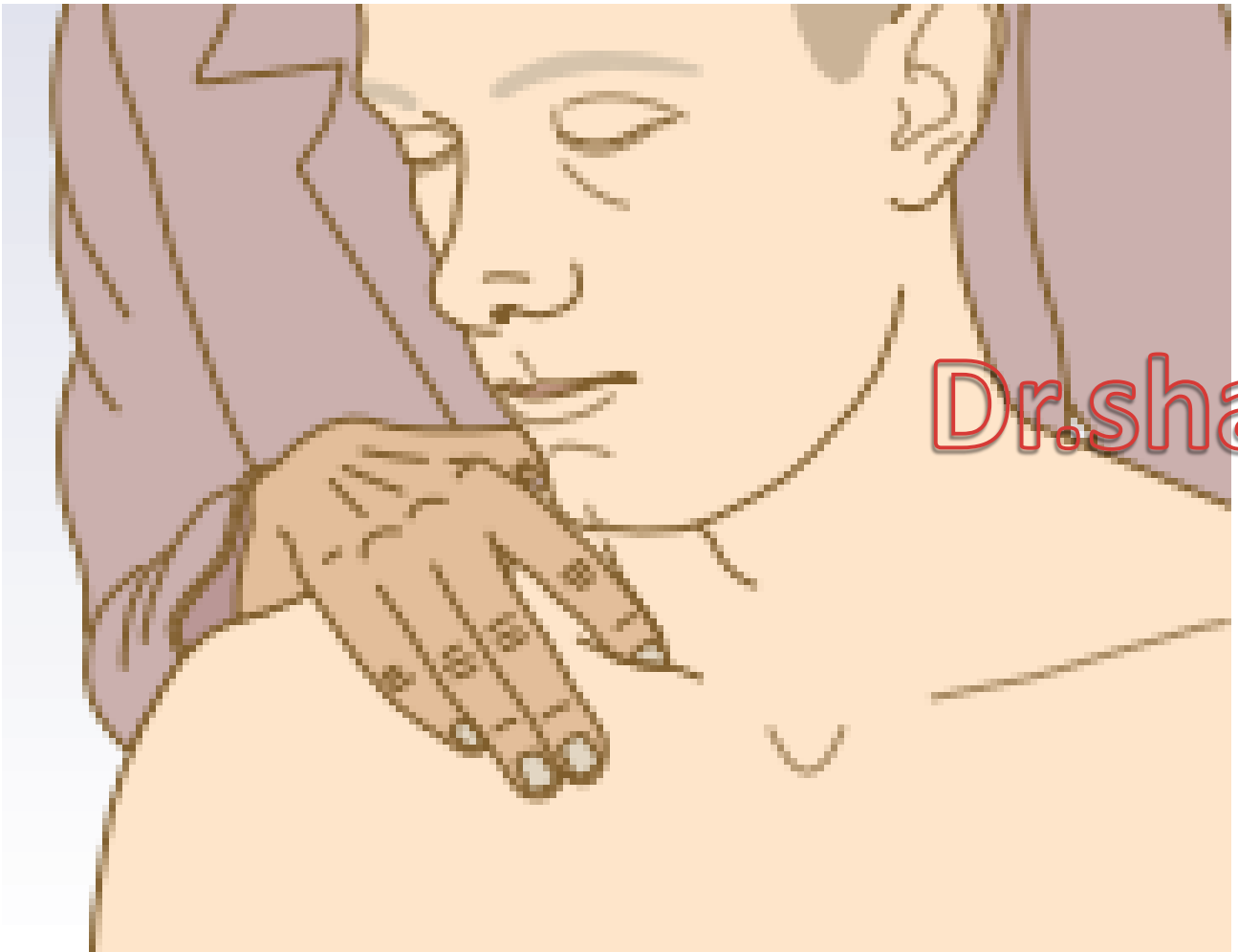
now palpate both post .group at a time with tips of four finger and give support with thumb





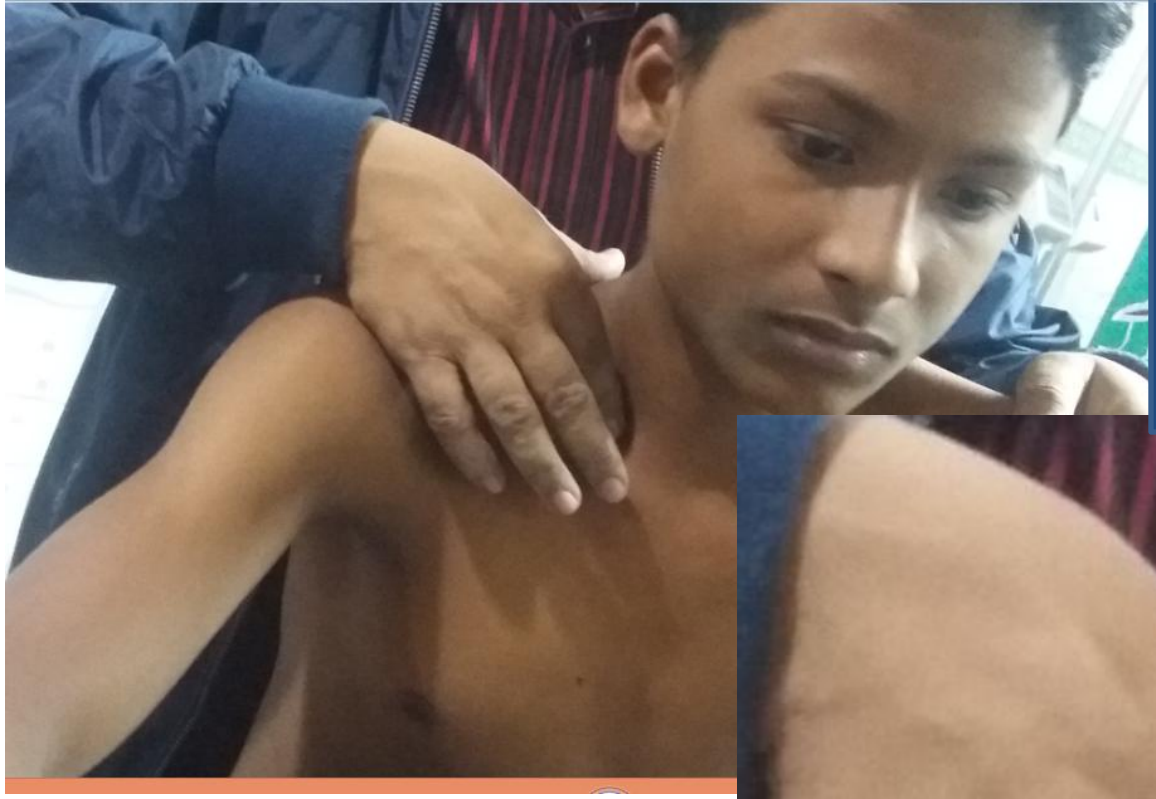
at last scalene nodes

- Palpate for the scalene nodes by placing your index finger between the sternocleidomastoid muscle and clavicle.
- Ask the patient to tilt his head to the same side and
- press firmly down towards the first rib



First identify the sternal head of sternocleidomastoid muscle

Now identified the clavicular head of sternocleidomastoid muscle



Now insert the index finger in between two head downward direction behind the clavicle

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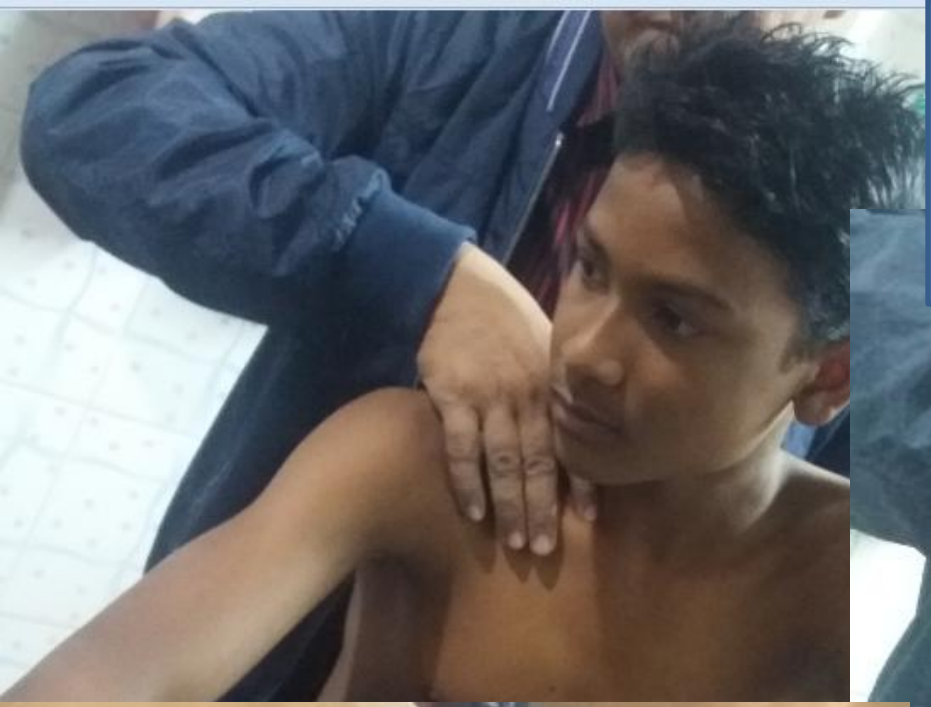
Now ask the patient to turn his head toward the direction of palpating lymphnode (in case rt scalene turn the head right side)



Inguinal lymphnode

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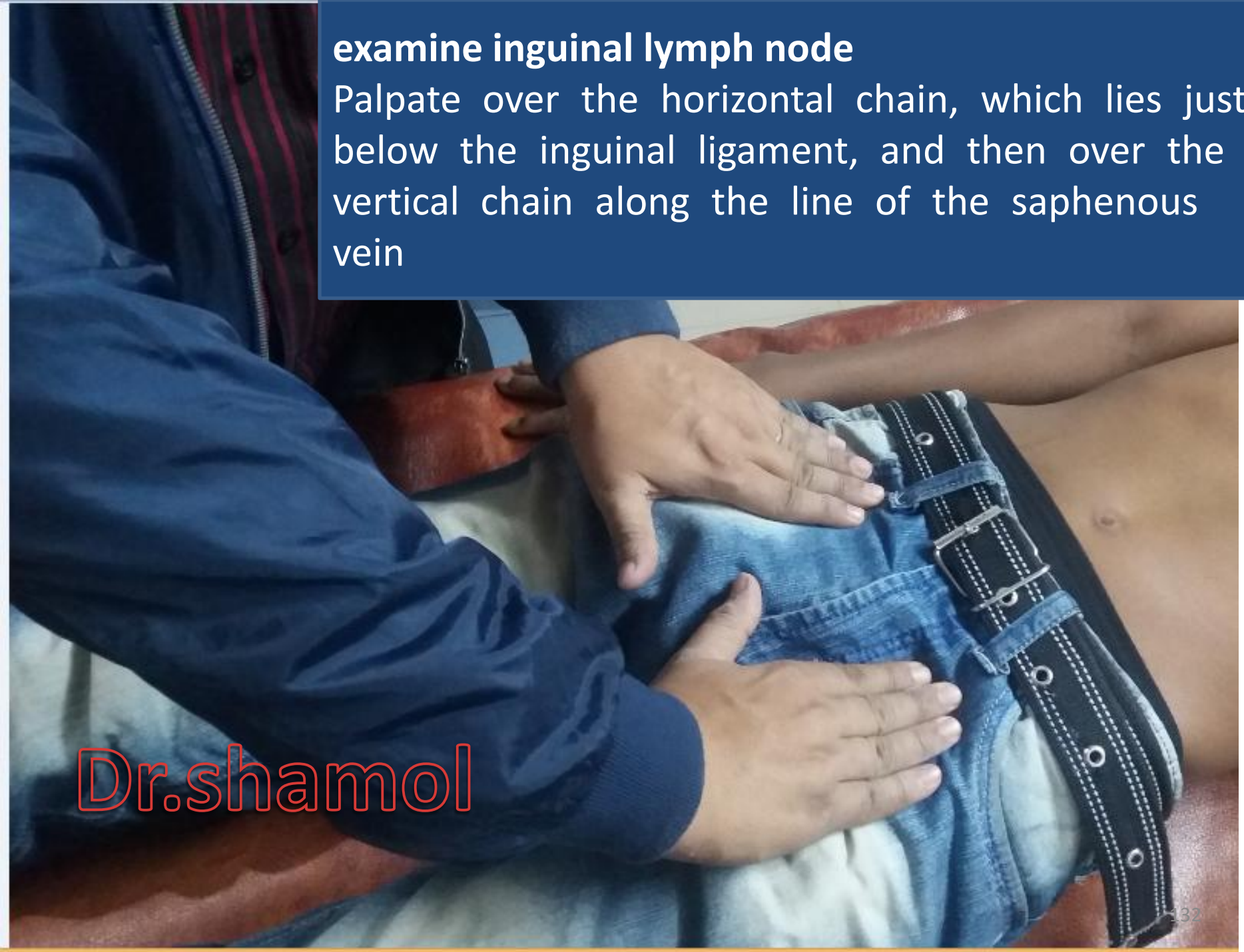
examine inguinal lymph node

Palpate over the horizontal chain, which lies just below the inguinal ligament, and then over the vertical chain along the line of the saphenous vein

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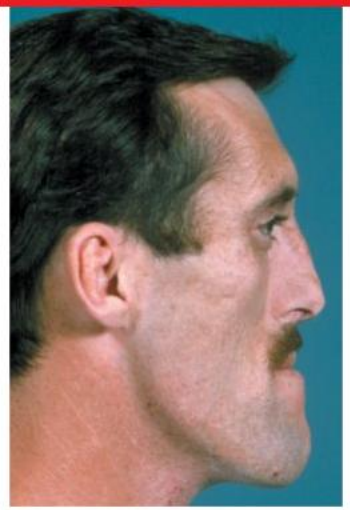
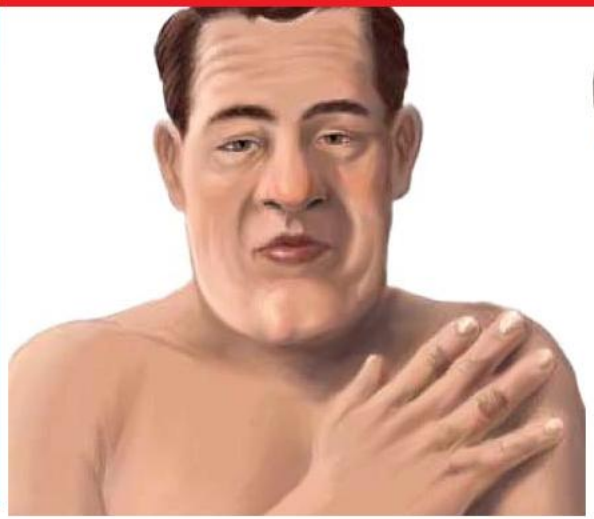
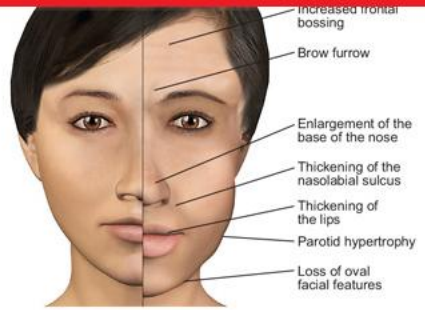
Q
&
A

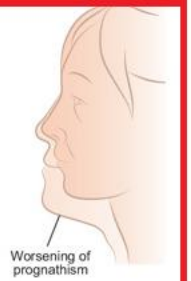
Name some disease can be identified by only facial expression

A	acromegaly	
	anxiety	Agitated expression
B—blood	thalassaemia	haemolytic faces--
C	CLD/hepatic faces	sunken eye ball and malar prominence
D	Depression	
E-Endocrine	hypothyroid	puffy face
	hyperthyroidism	
	Cushing	moon face ,plethoric and acne
F --Failure	RENAL FAILURE NS	----puffy face
G--Genetic disease	Down syndrome	
	Turner's syndrome	
	Marfan's syndrome	
H-Heart	Mitral facies	
I--immune – autoimmue disease	SLE facies Systemic sclerosis	
M	Myotonic dystrophica	
P	Parkinson's disease	Poverty of expression/ mask face

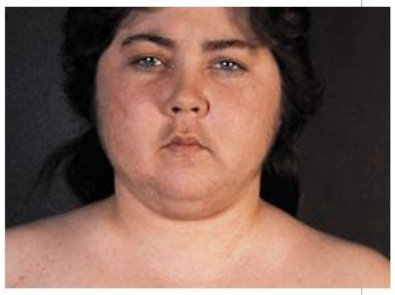


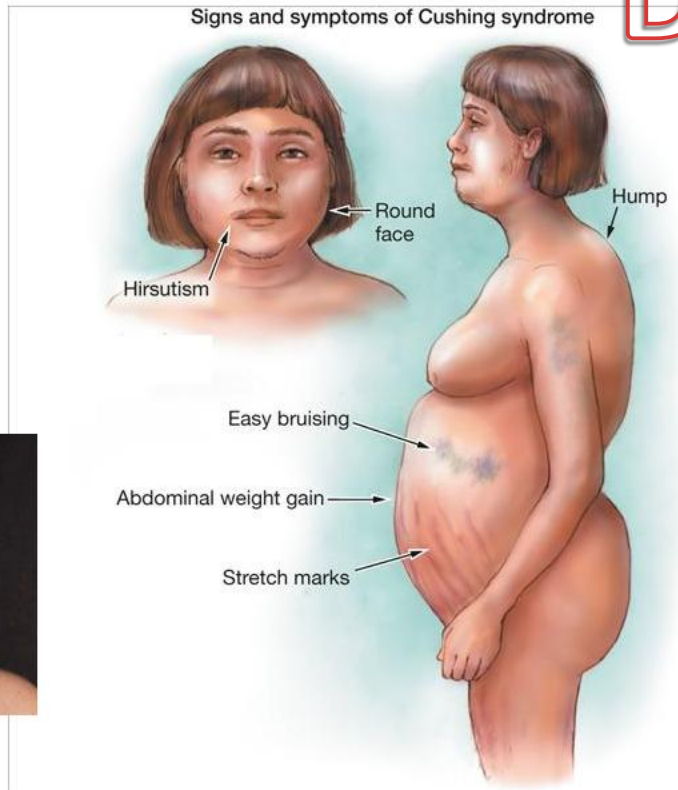


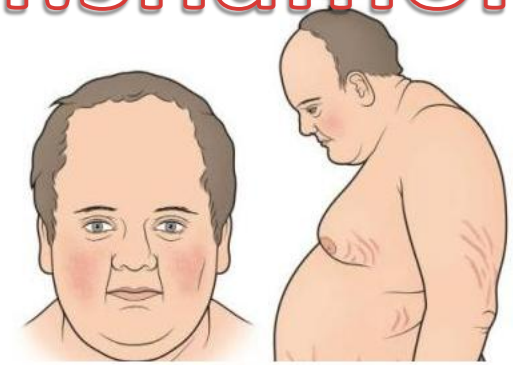


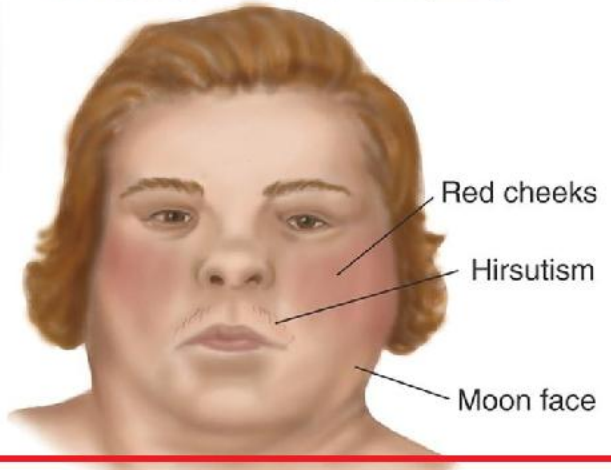


acromegaly

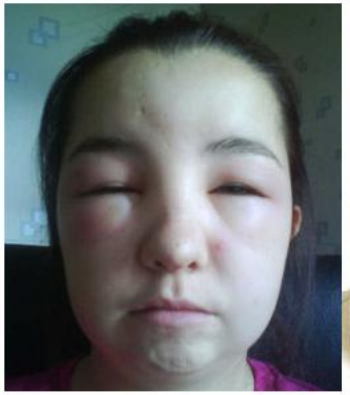


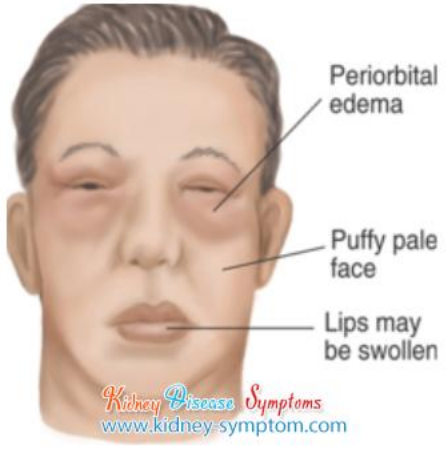




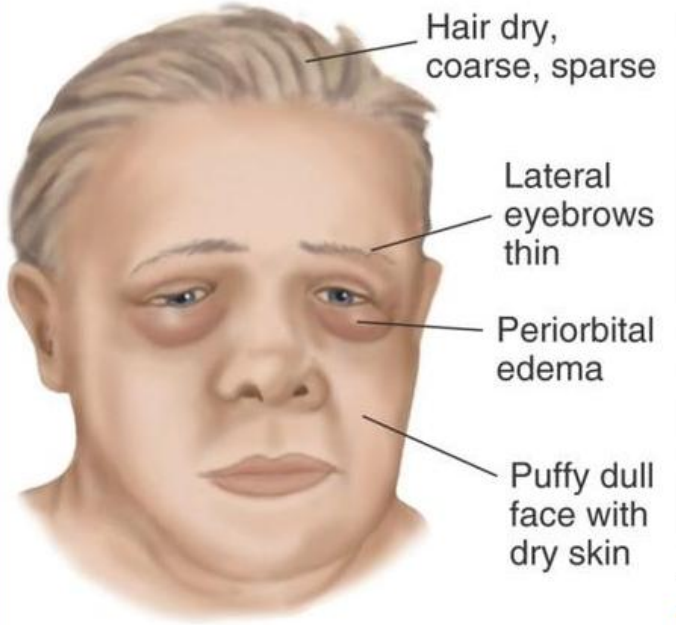


CUSHING SYNDROME

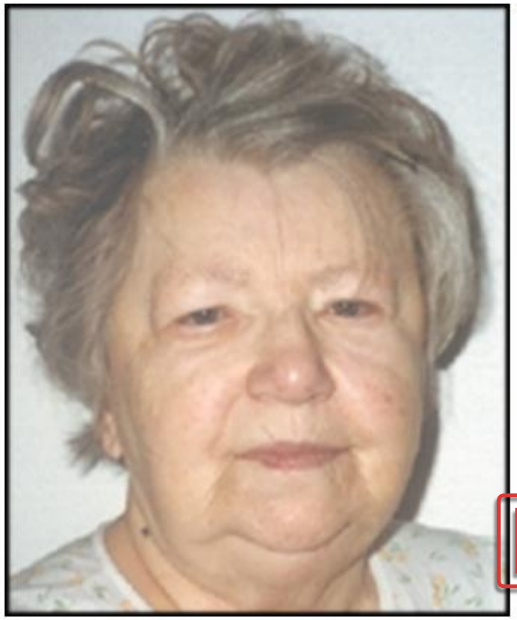


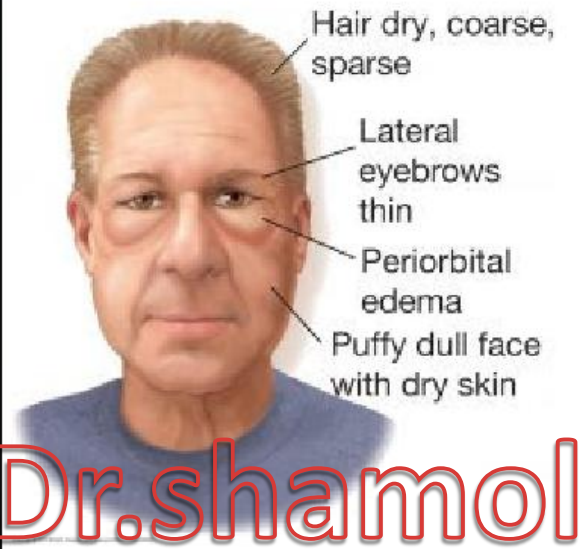


Nephrotic syndrome

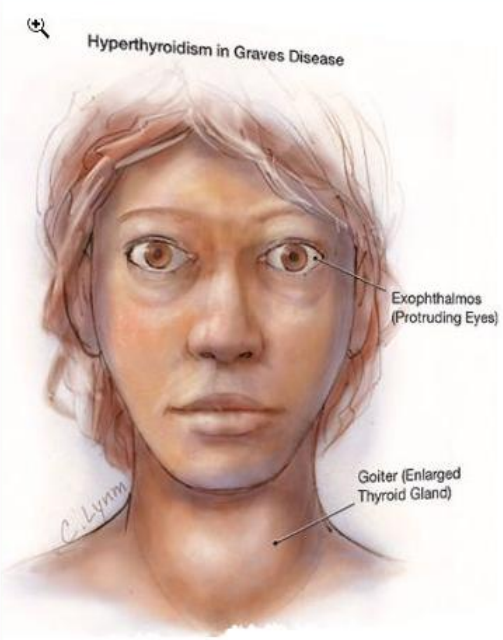


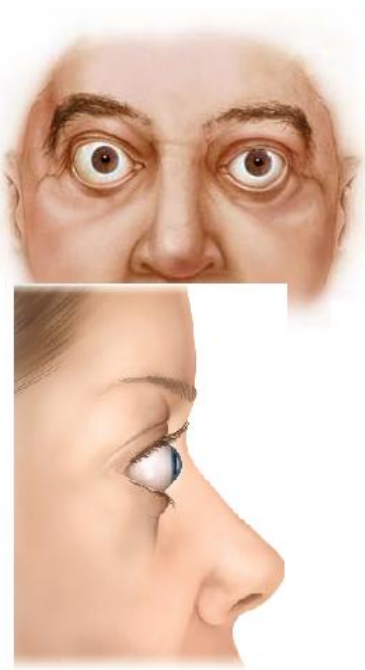
Myxedema

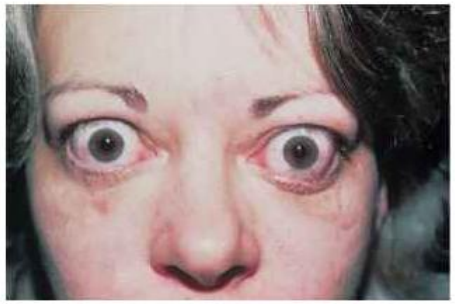




HYPOTHYROIDISM







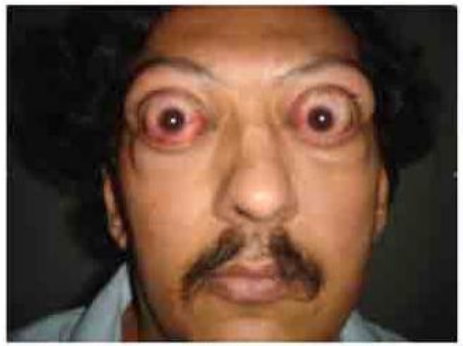
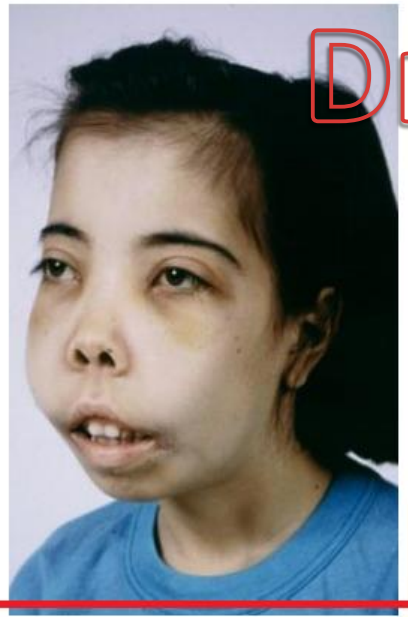


Fig. 4 : Exophthalmos, proptosis

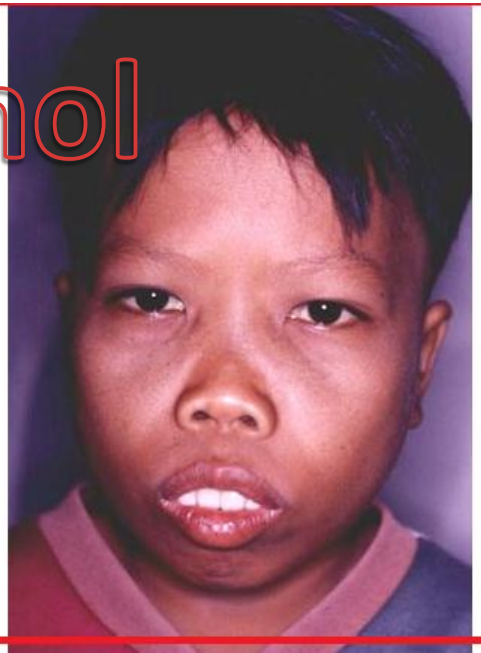
hyperthyroidism

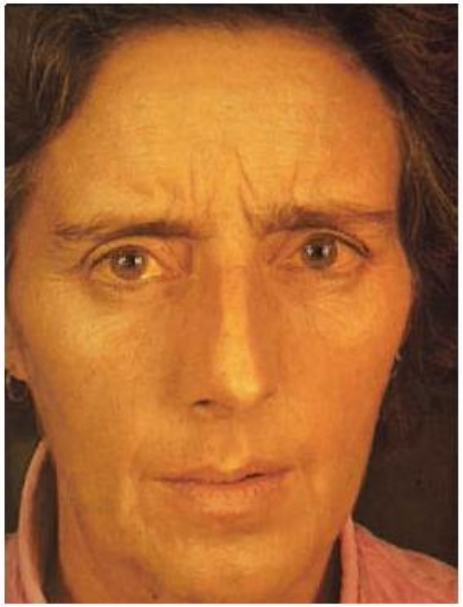


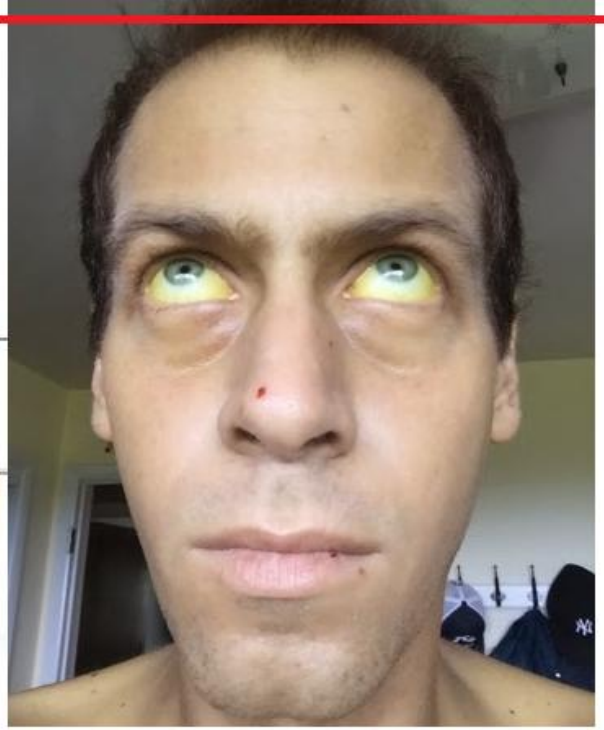
Mongoloid facies

↓

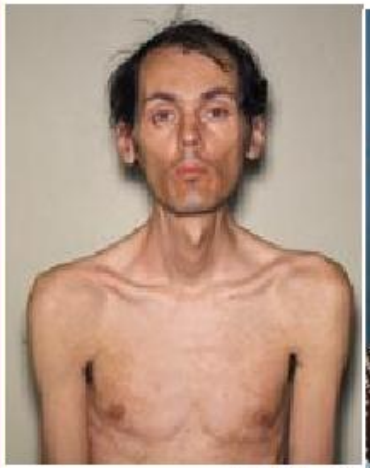
Thalassemia

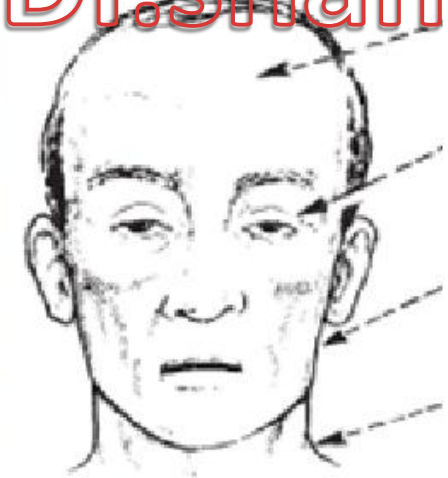


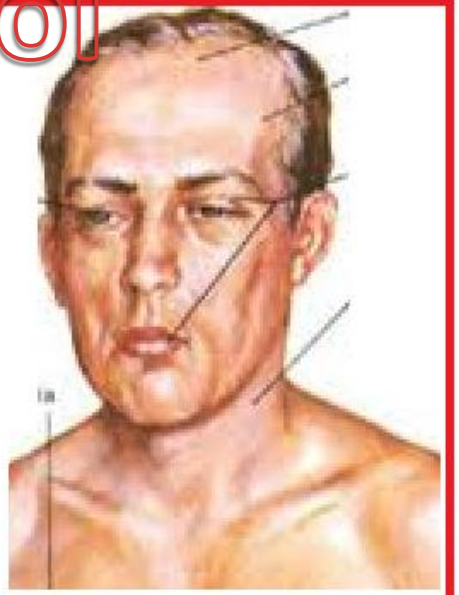




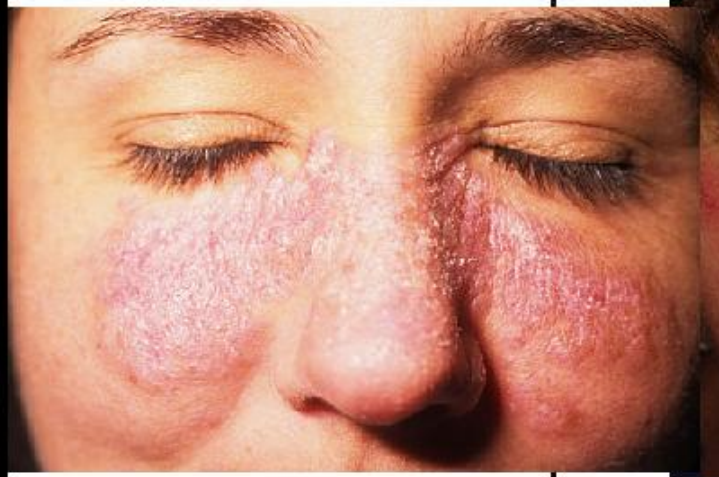
hepatic face

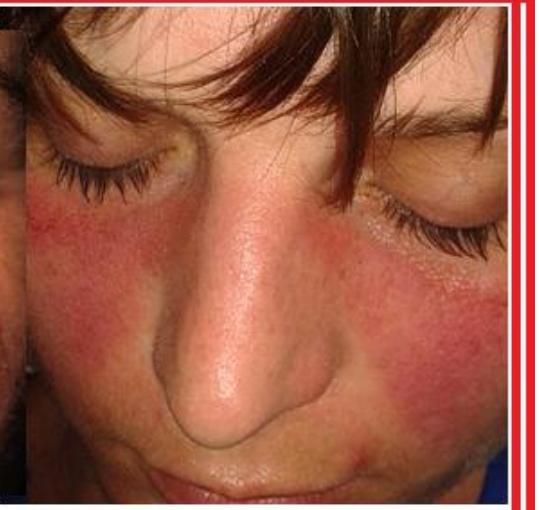




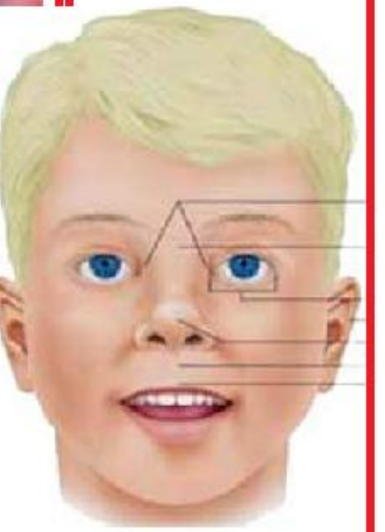


myotonic dystrophy





LUPUS/ SLE

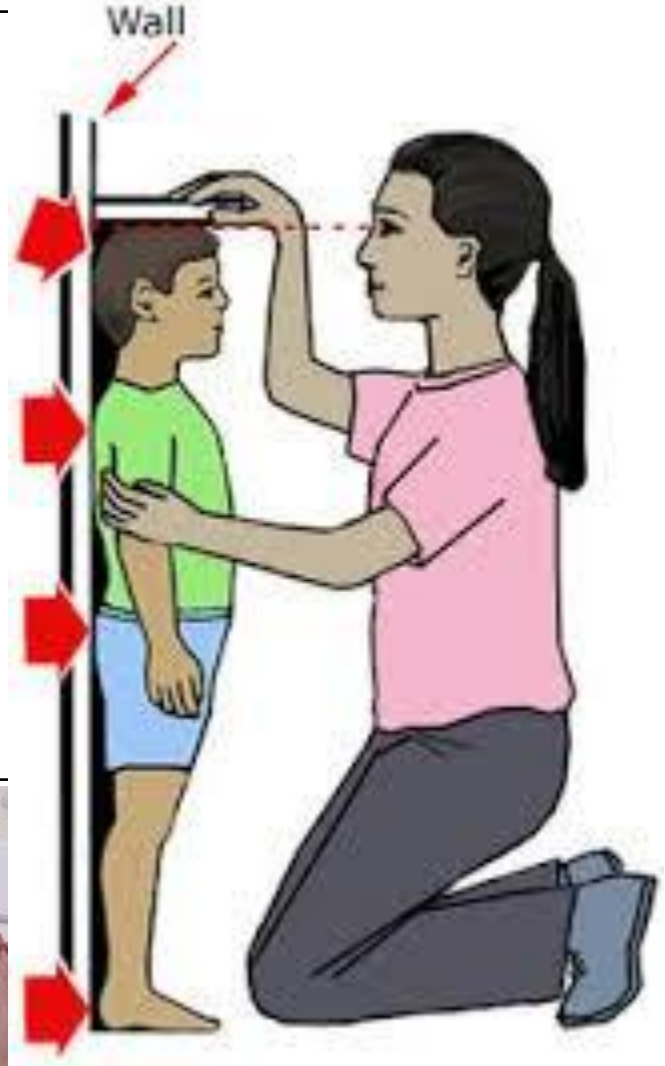


DOWN SYNDROME

Body build and nutritional status

body build	rough estimate or visual estimation about body configuration
	it express usually ■ average or below average ■ obese or chachetic ■ tall or short stature
nutritional status	undernourished or not
both of this are seen anthropometric measurement like	1. Body mass index 2. waist: hip circumference 3. Skin fold thickness 4. Mid-arm circumference

BMI **Body mass index**		**usually seen generalized obesitv**
How will you calculate the **Weight in Kg** BMI ==---------- = **kg/m²** **(Height in meter)** ²		
WHO Classification		
< 18.5	Underweight	
18.5-24.9	Normal	
25-29.9	Overweight	
30-39.9	Obese	
≥40	Morbid obesity	



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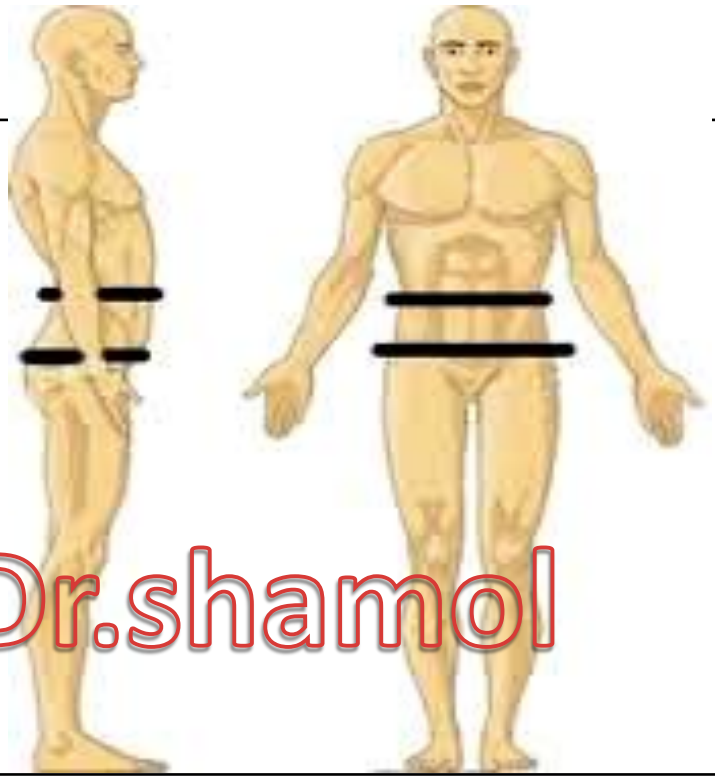
waist: hip circumference

to see central or abdominal obesity



it is the ratio of the circum ference measurement of the waist and the hip

the waist → measure circumference at the midpoint between the costal margin and the iliac crest.

HIP-- measure circumference at the widest part around the buttocks.

$$\text{waist: hip} = \frac{\text{waist circumference}}{\text{Hip circumference}}$$

waist : hip in male	= 1.0
waist : hip in female	=0 .9
waist circumference male	=94 cm
waist circumference female	=80cm

what is significance of waist and hip ration

high value is associated with a higher risk of morbidity and mortality from cardiovascular disease

Indication of t the risk of metabolic and cardiovascular in obese?

if A waist circumference of

> 102 cm in men or

> 88 cm in women

Skin fold thickness

It is seen over the triceps with slide calipers

It is usually seen midway between the olecranon and acromial processes

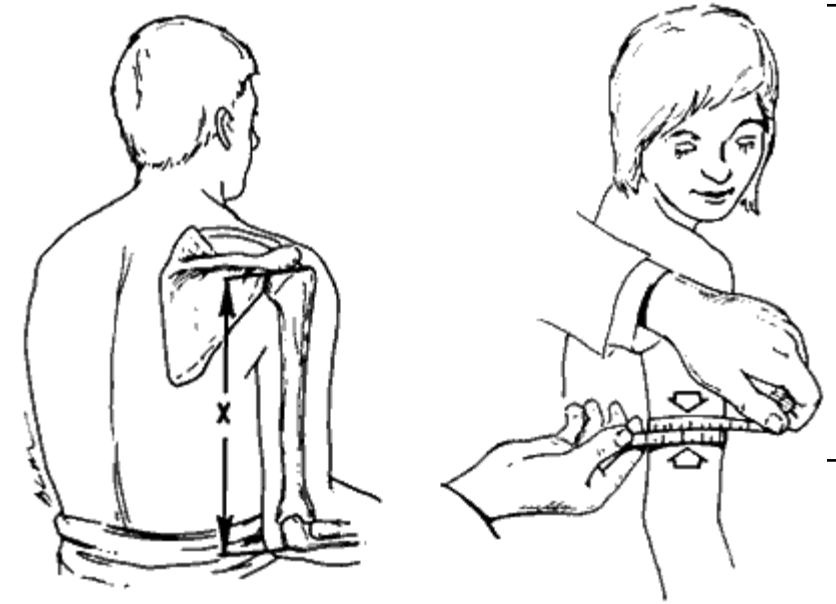
normal values are

- in male : 20 mm
- in female : 30 mm

Mid-arm circumference

Mid-arm muscle circumference is measure at the midpoint between the tip of the olecranon and acromial with measuring tape.

muscle mass is estimated by subtracting triceps skin fold thickness from mid-arm circumference



Determining mid-point of arm

Arm circumference

What is the type of obesity in male and female? Which one is more dangerous?

In male

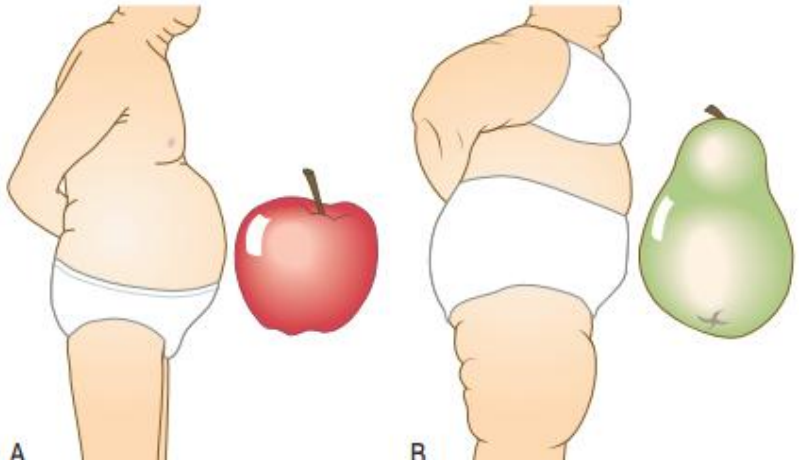
- intra-abdominal fat causes 'central' ('abdominal', 'visceral', 'android' or 'apple-shaped') obesity

In female

- subcutaneous fat accumulation causing 'generalised' ('gynoid' or 'pear-shaped')

central obesity is more dangerous :

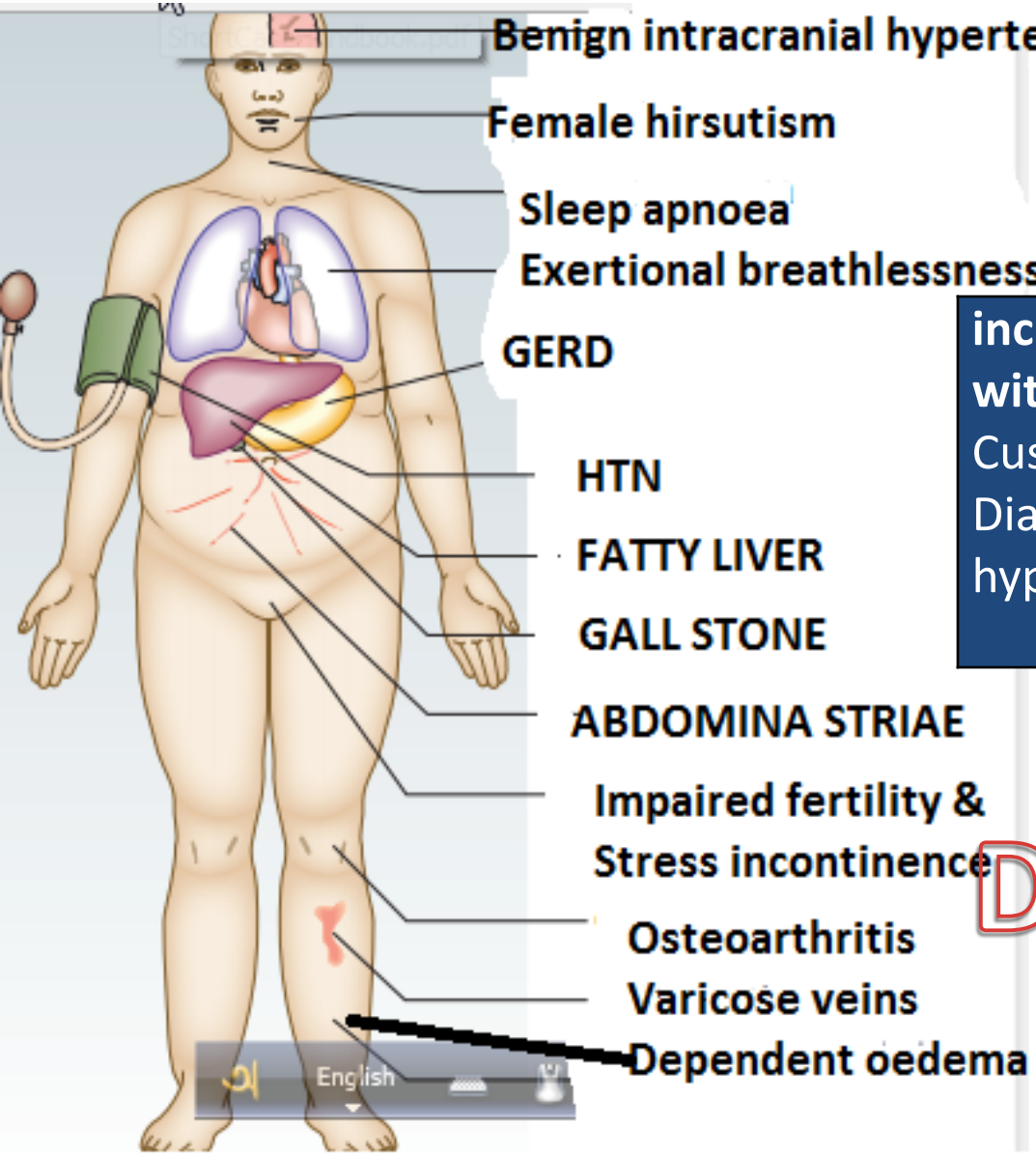
- it closely associated with type 2 diabetes, the metabolic syndrome and cardiovascular disease



A) Abdominal obesity (apple shape).
(B) Generalised obesity, where fat deposition is mainly on the hips and thighs (pear shape).

	obesity is two type 1. Abdominal obesity 2. Generalised obesity • abdominal obesity is more risk for heart disease
	medical causes of obesity 1. hypothyroidism 2. Cushing 3. metabolic syndrome 4. type II DM 5. hypothalamic lesion /tumor 6. drug –steroid
Drug causing weight gain	**COST-B** **C— Corticosteroids** **O— Oestrogen**-containing contraceptive pill **S— Sulphonylureas** S**— Sodium** valproate T**— Tricyclic** antidepressants **B— β**-blockers

what is complication of obesity



increased appetite with weight gain	loss of appetite with weight gain
Cushing's syndrome Diabetes(type--II) hypothalamic disease	hypothyroidism

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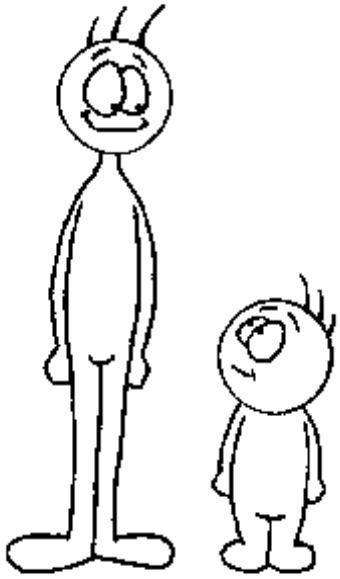
weight loss	weight loss with normal appetite
THAT—DM T--TB H—HIV A--Anorexia nervosa T--Thyrotoxicosis D--Diabetes mellitus(type--I) M--Malignancy M--Malnurtrition M--MND Dr.shamol	• DM(type--I) • Thyrotoxicosis • phaemchromocytoma • MND • malabsorption **loss of appetite with weight loss** • Addison • anorexia nervosa • gastrointestinal malignancy

CSF --GES	SHORT SATURE	TALL STATURE
C--Constitutional	**Constitutional**	**Constitutional**
F—familiar	**familiar**	**familiar**
S—skeletal	achrondroplasia	marfans
G-genitics	Down turner's	Klinefelter's syndrome
Endocrine	pituitary Dwarfism juvenile hypothyroidism (Cretitism) hypoparathyroidism	Gigantism Thrytoxicosis Kallmanns **:** homocystinuria
systemic illness 	asthma, malabsorption, renal failure cystic fibrosis Anorexia nervosa	x
	short stature is typically defined as an adult **height** that is more than 2 standard deviations below the **mean** for age and gender	**Tall stature** is **defined** as height above 97th percentile for age and sex or more than 2SD above the mean for a **defined** population

How height is measure?	
skeletal height is measure from crown to heel upper segment = crown to pubis lower segment = pubis to heel normal upper segment : lower segment is 1.8: 1---at birth , 1:1 at age 10 and 0.9: 1 in adult	
name tall and short stature according to upper and lower segment	
short stature	**tall stature**
upper= lower segment	**upper= lower segment**
constitutional familiar pituitary dwarf	constitutional familiar gigantism / hyperpituitary
upper segment > lower segment	**upper segment > lower segment**
achondroplasia cretinism juvenile myxoema	precocious puberty adrenal cortical tumor
lower segment > upper segment	**lower segment > upper segment**
spinal deformity	marfan's klinefelter's syndrome homocystinuria kallman / hypogonadism

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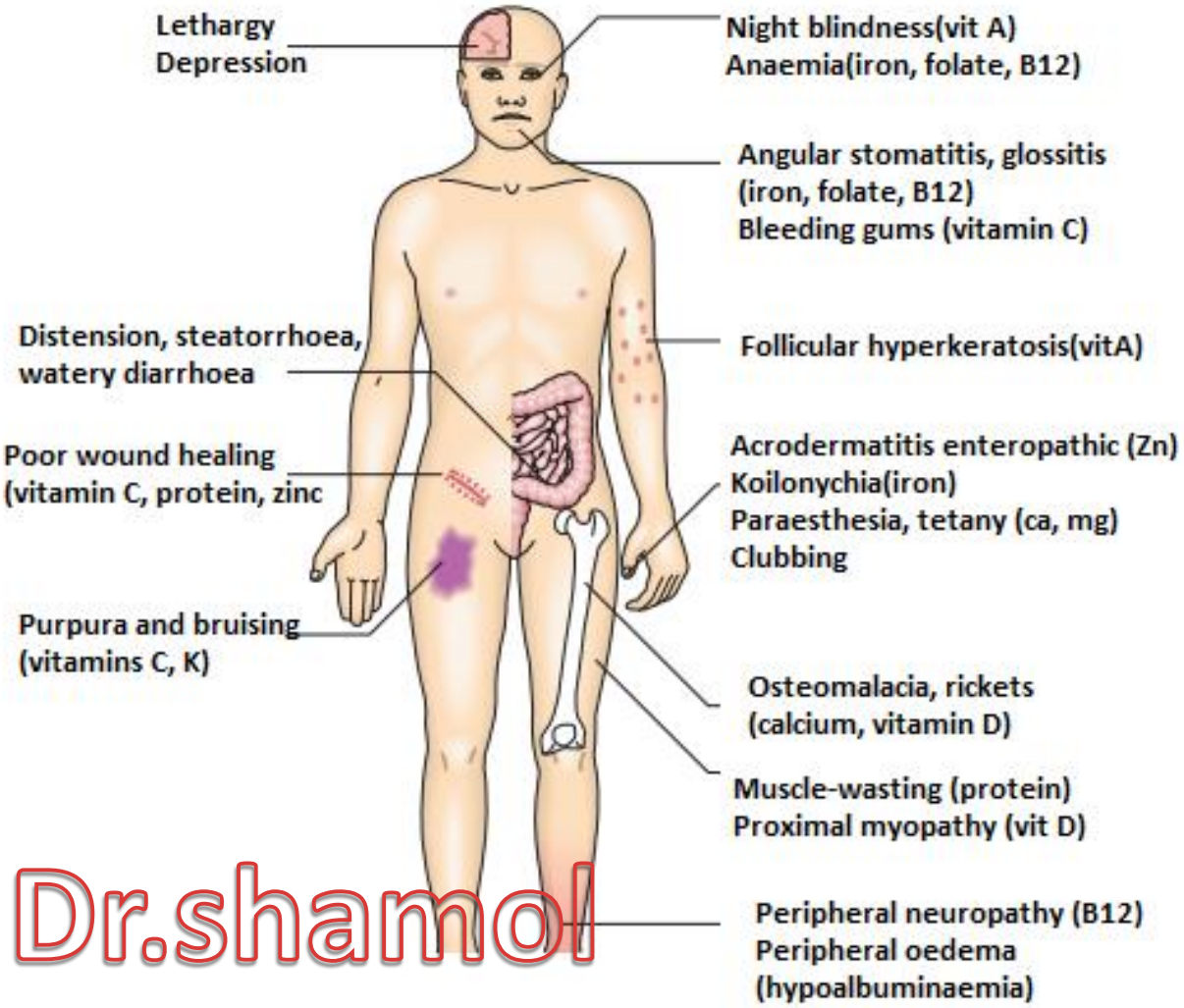

skin manifestation of malnutrition

- cracked skin,
- loss of scalp and body hair
- bruise
- poor wound healing
- oedem (low albumin)
- atrophic glossitis== A smooth, often sore tongue without papillae --vitamin B deficiencies
- **Angular stomatitis /cheilosis,** --- a softening of the skin at the angles of the mouth followed by cracking-→ iron or B vitamins
- skin changes of pellagra--- Niacin deficiency

difference between cretinism and pituitary dwarf	
cretinism	**pituitary dwarf**
Depressed nasal bridge , idiotic , coarse face	Juveniles face or chubby face
Decrease IQ / lack of intelligence	Normal intelligence
Normal genitalia	Sexual infantilism / hypogonadism present
Upper segment > lower segment	Upper segment = lower segment

how will differentiate bleeding from VitK and scurvy
vitamin C deficiency causes scurvy, which is characterised by small bleeds around the hair follicles (perifollicular haemor rhages) as well as bruising. Vitamin K deficiency also causes bruising but not perifollicular haemorrhages

ANEMIA

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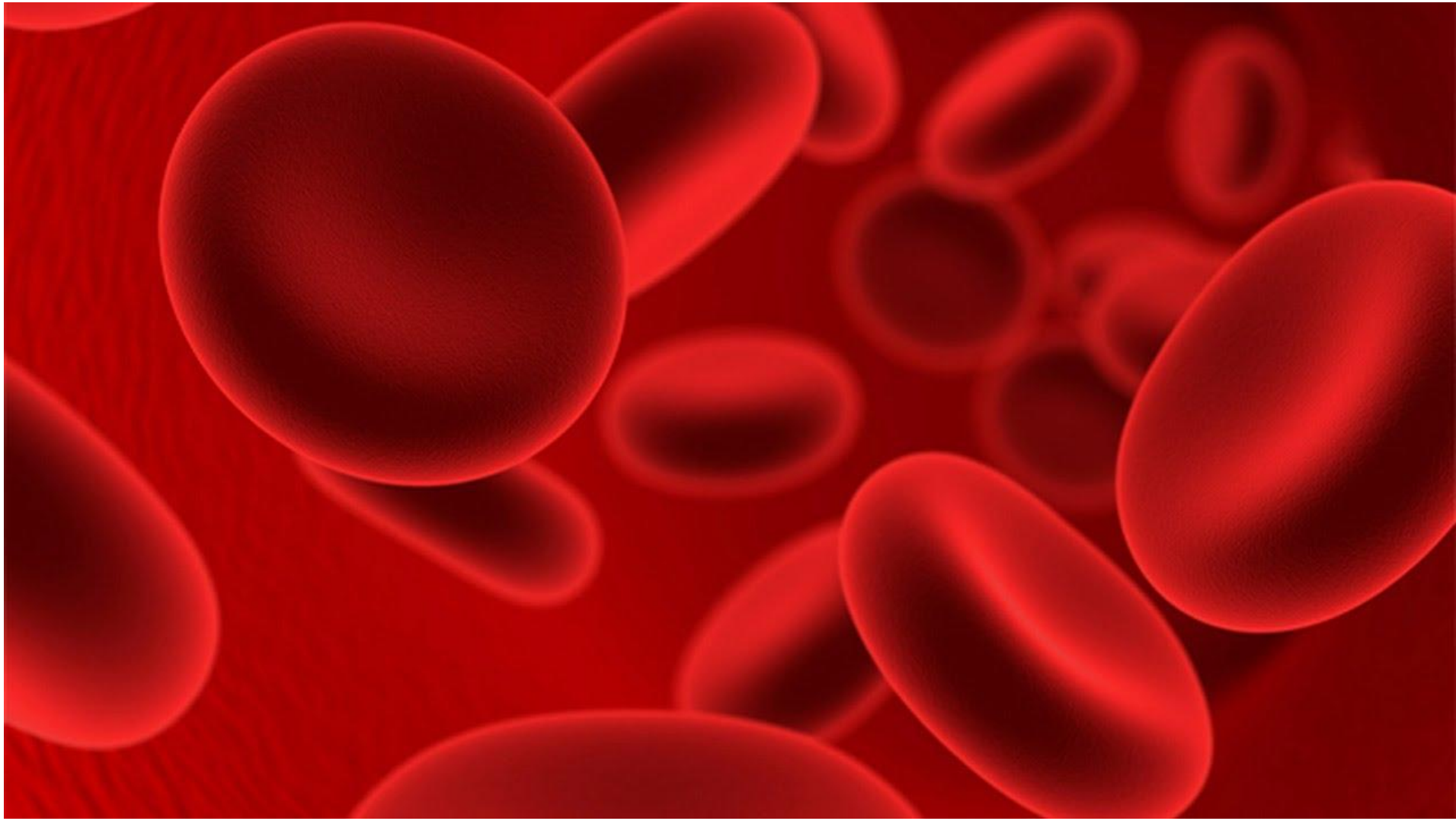

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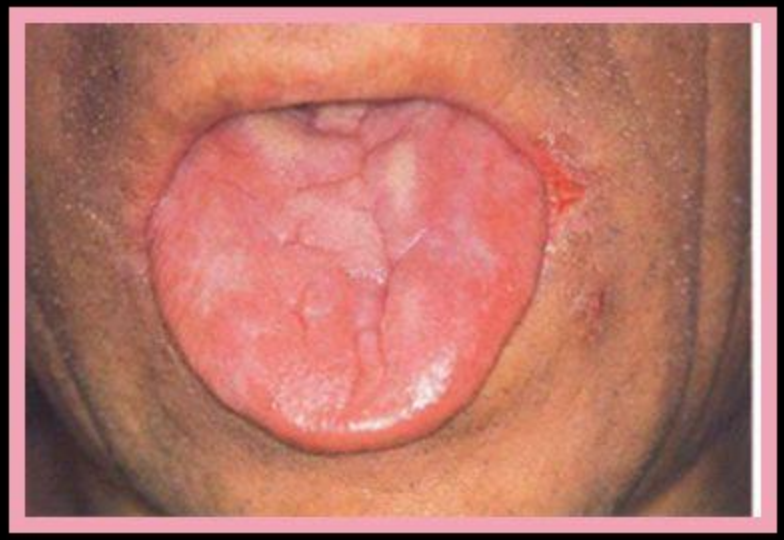
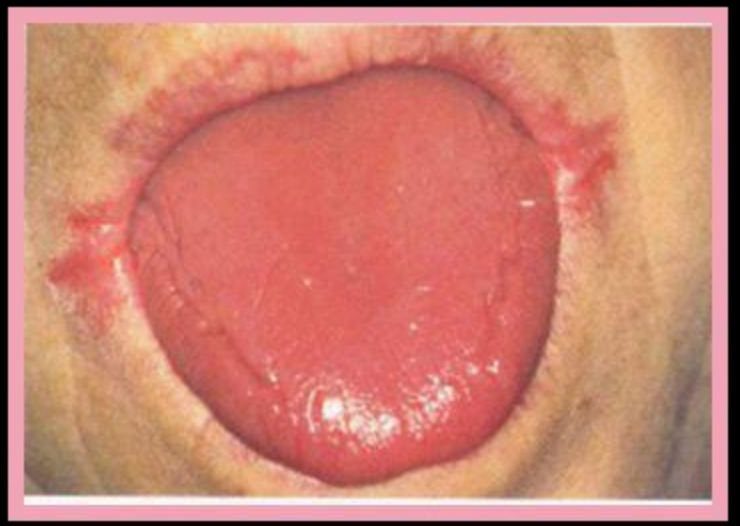
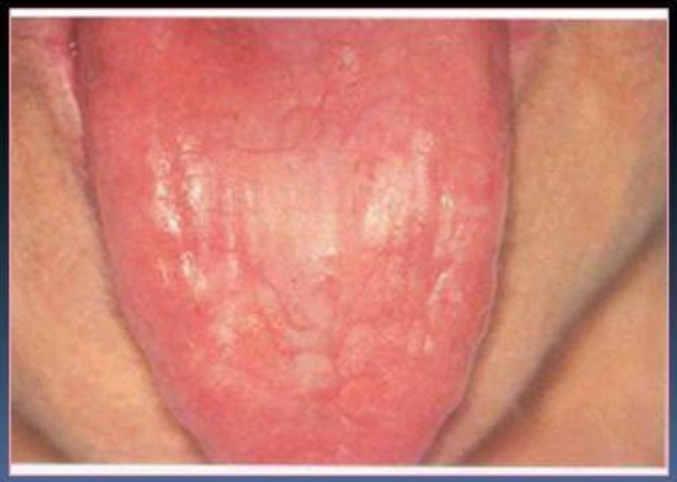
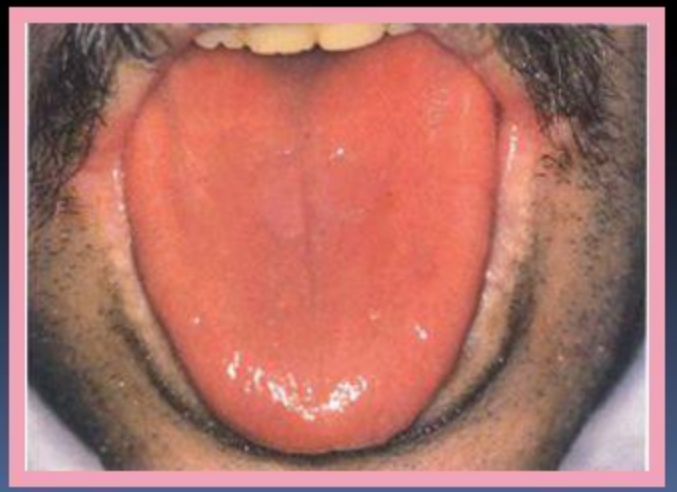




Iron deficiency anemia redness and atrophy of tongue papillae, smooth dorsal surface of the tongue.





Q. **Define Anaemia.**

Anaemia is a clinical condition characterized by both qualitative and quantitative decrease in Hb below the normal level irrespective to age and sex of a person.

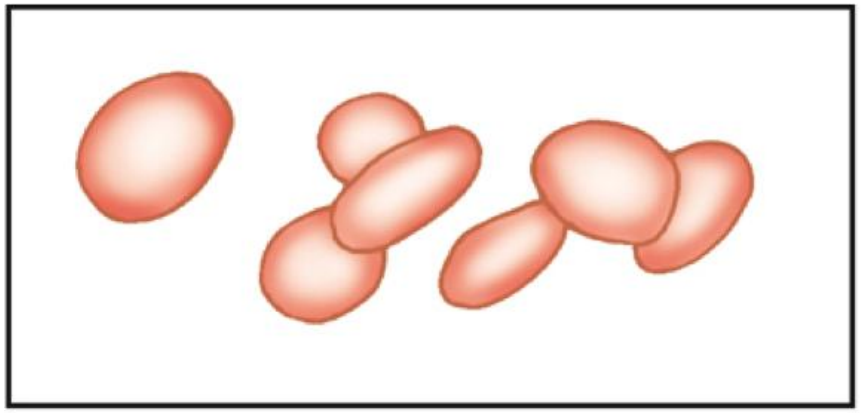
Q. Where we look anemia?

- Lower palpebral conjunctiva.
- Dorsal surface of tongue.(tongue is smooth and loss of papilla)
- Palm and sole of feet.
- Whole body

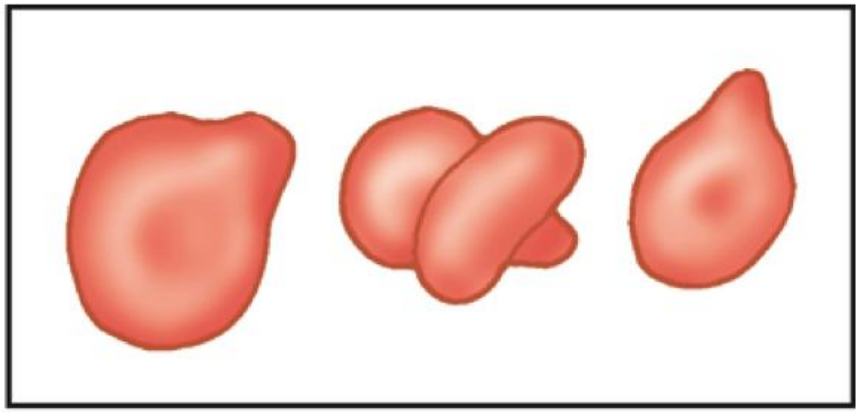
Then what is your finding : tell with adjective such pt is mildly /moderately / severely anemic

Classify anaemia

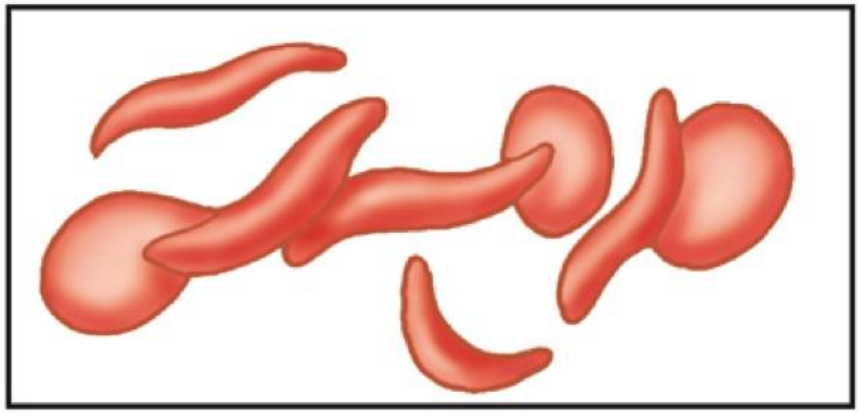
Etiological	Central cause	→Marrow failure → aplastic anaemia, anemia of chronic disease
	Peripheral cause	→ blood loss, heamolysis
Morphological	Microcytic hypochromic anaemia	**(MCV<76 fl)** **to remember TISA** **T—** Thalassaemia **I— Iron deficiency** **S—** Sederoblastic anaemia **A-- Anaemia of chronic disease (in some case)**
	Macrocytic anaemia	MCV>95 fl **to remember---MND** M--Megaloblastic: vitamin B12 or folate deficiency N--Non-megaloblastic: alcohol, liver disease,hypothyroid **D**--(dysplastic)--Myelodysplasia,
	Normocytic normochromic anaemia	**to remember Triple A** Aplastic aneamia Anemia due to acute blood loss Anemia of chronic disease –CRF, connective tissue disease



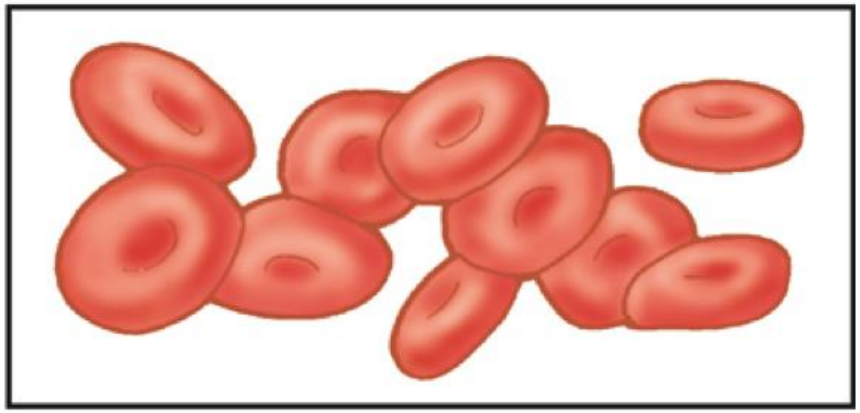
A Iron-deficiency anemia



B Megaloblastic anemia



C Sickle cell disease



D Normal

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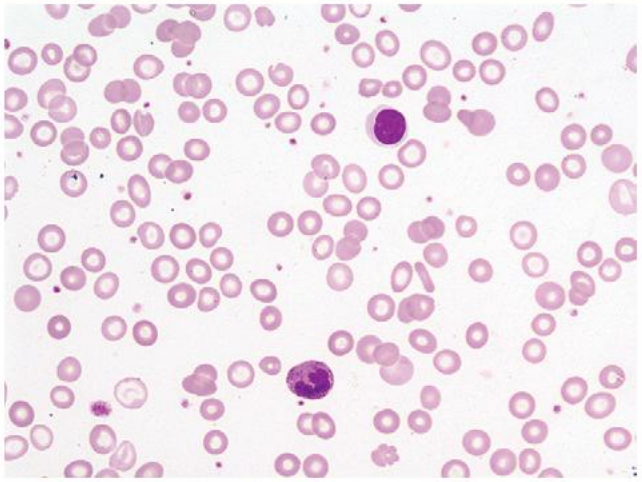
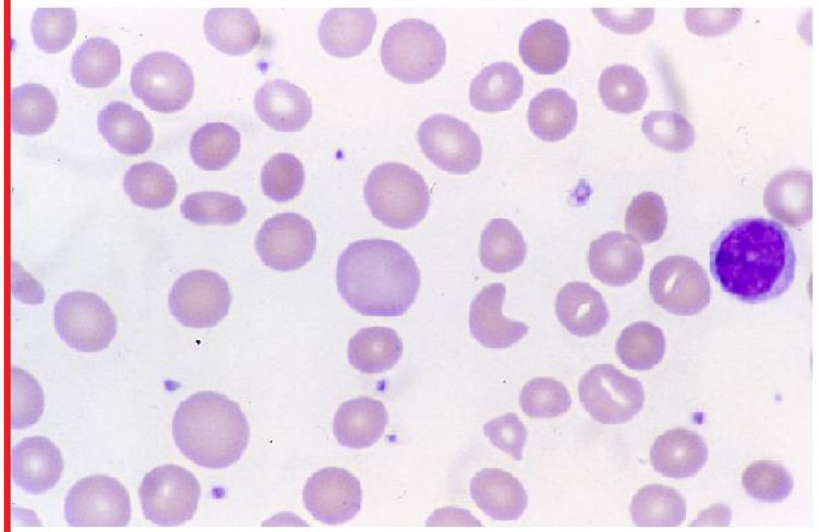
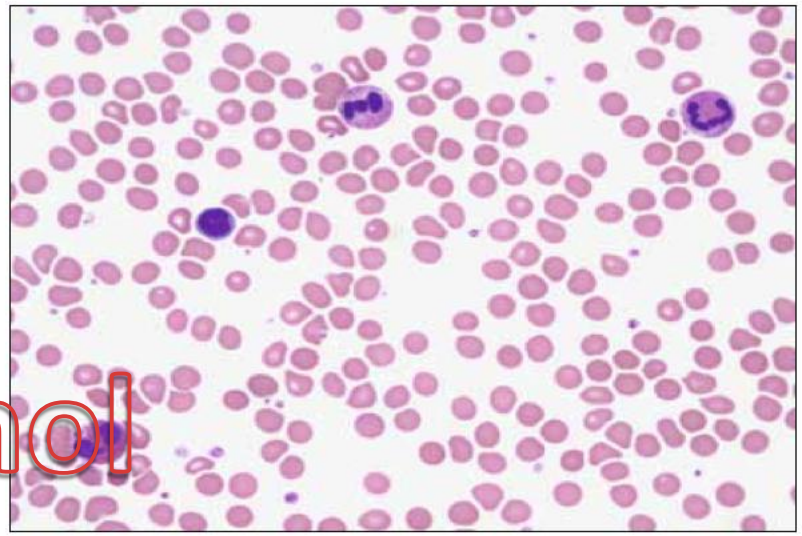


microcytic hypochromic



macrocytic normochromic



normocytic anaemia

what is the normal Hb level ?		
male: 13-18 gm/dl Female: 11.5-16.5 gm/dl		
Q. In which condition Hb level is 100% and ESR `0'?		
Ans. Polycythaemia		
what r causes of iron deficiency anemia?		
In both male & female ❖PUD ❖Hook worm ❖Carcinoma stomach ❖Drug- NSAID ❖haemorrhoid	**In female-** •Pregnancy •Menorrheagia	**Other-** •malabsorbtion •Coeliac disease

What are investigation of iron deficiency , thalassemia ,Megaloblastic anemia?		
Iron deficiency	**thalassemia**	**megaloblastic**
blood TC, DC, Hb%, ESR PBF- Microcytic hypochromic anaemia **Iron profile:** Serum ferritin ↓ Total iron binding capacity ↑ **To find etiology**: Upper GI endoscopy Colonoscopy barium follow through Stool for ova of helminthes	**blood** TC, DC, Hb%, ESR PBF- Microcytic hypochromic anaemia reticulocyte ↑ S.bilirubin **Iron profile:** Serum ferritin ↑ Total iron binding capacity ↓ **To comfirm diagnosis:** Heamoglobin electrophorosis	**blood** Hb% PBF- macrocytic RBC Bone marrow- megaloblast Vitamin B_{12} level or red cell folate level **To see cause**: • Schilling test • Enodoscopy to see atrophic gastritis • Anti-parietal cell antibody
single test to dx	**single test to dx**	**single test to dx**
Serum ferritin ↓	Heamoglobin electrophorosis	Bone marrow- megaloblast S. Vitamin B_{12} level

Laboratory Diagnosis of Anaemia

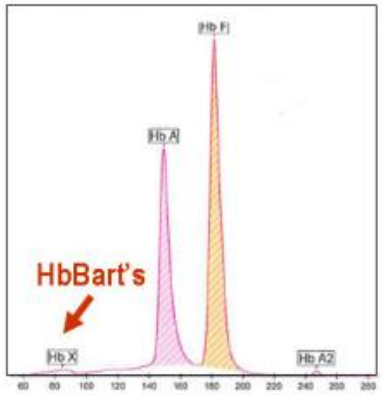
	IDA	Thalassemia	Chronic Diseases
Serum Iron	Decreased	Normal / Increased	Decreased
TIBC	Increased	Normal	Decreased or N
Transferrin Saturation	Decreased	N or Increased	N or Decreased
Serum Ferritin	Decreased	N or Increased	N
Marrow Iron	Decreased / absent	N or Increased	N
Therapeutic test with oral iron	Rise in Hb	No rise in Hb	No rise

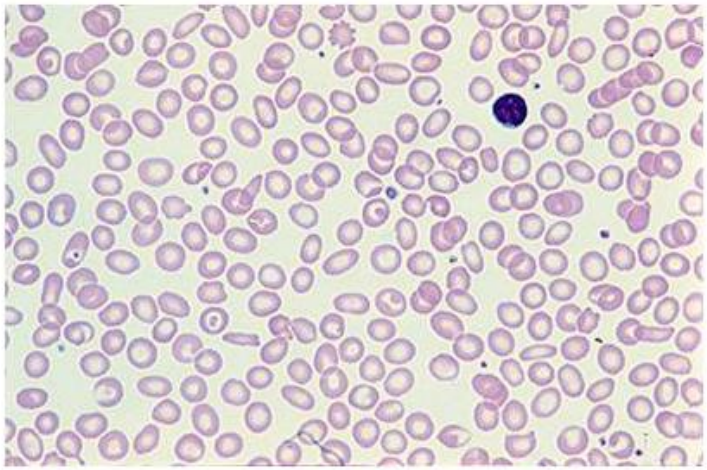
What is the clinical feature of iron? thalassemia, megaloblastic?		
iron	thalassemia	megaloblastic
HO of blood loss	family history	HO etiology dietary HO --vegan gastric/ intestine operation pernicious anemia malabsorption
eye :anemia **tongue**: smooth pale and loss of papillae **Mouth:** glossitis, angular stomatitis **nail** : koilonychia	**face** • heamolytic face **eye** • anemia • jaundice abdomen • hepato-splenomegaly	**eye** :anemia **tongue : glossitis** **neurological** **Eye**: optic atrophy Loss of **memory** : dementia **sensory :** Sensation loss in gloves and stocking pattern , loss of vibration and joint sense position

thalassaemia

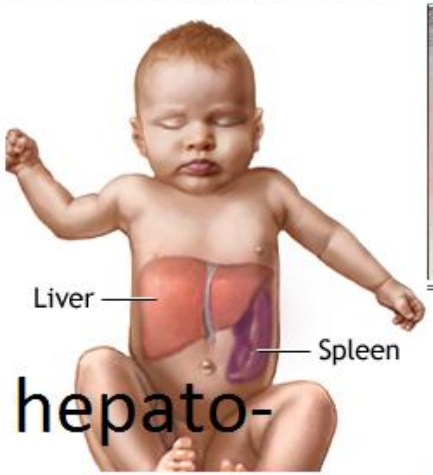
thalassamic face

Hb Electrophoresis





microcytic hypochromic



hepato-splenomegaly

severe anaemia

mild jaundice

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Investigation of anemia ?			
	iron	thalassaemia	anemia of chr. disease
CBC	Hb ↓	Hb ↓	Hb ↓
PBF	microcytic hypochromic	microcytic hypochromic	normocytic normochromic
reticulocyte	N	↑	N
bone marrow iron	↓	↑	↑
s.feritin	↓	↑	↑
S.iron	↓	↑	n/
Total iron binding capacity	↑	↓	↓
Transferrin saturation	↓		
Soluble transferrin receptor	↑	N/	N /↓
Hb electrophorosis	not done	confirm diagnosis	not done
for etiology	Upper GI endoscopy Colonoscopy Stool for ova of helminthes	genetic study	S.creatinine

Q. What are the PBF findings in iron deficiency anaemia?	
Ans. Microcytic hypochromic anaemia, anisocytosis, pencil cell, target cell, nucleated RBC.	
How will you differentiate PBF of iron deficiency anaemia and Thalassaemia.?	
Iron deficiency anaemia	Thalassaemia
Few target cell No features of heamolysis	Plenty of target cell Features of heamolysis present eg. Fragment cell, Pencil cell
What are the PBF findings of Vitamin B_{12} and Folic acid deficiency?	
Ans. Pancytopenia with Macrocytosis with hypersegmented neutrophil. Megaloblast & Howel-jolly body may present.	
Q. Bone marrow findings of Vitamin B_{12} deficiency?	
Ans. Megaloblastic change in erythoid series .	
Q. what are the other causes of macrocytosis?	
Ans. Alcohol Liver disease Hyperlipidaemia Hypothyroidism	

Name the sites of iron and Vitamin B_{12} absorption.?

Iron absorbed in jejunam. &Vitamin B_{12} absorbed in ileum

Q. **What are the causes of megaloblastic anaemia?**

Deficiency of Vitamin B_{12} and Folic acid.

Q. **Vitamin B_{12} and Folic acid deficiency- which one is more common? Why?**

Ans. Folic acid deficiency is more common than vitamin B_{12} deficiency.

Point	Vitamin B_{12}	Folic acid
Store	3years	3 months
Sources	Animal	plant
Effect of cooking	Not destroyed	Destroyed during cooking

Q. in which anaemia causes neurological manifestation ?

Megaloblastic anaemia due to Vitamin B_{12} deficiency

Q. Name causes of Vitamin B_{12} and Folic acid deficiency

causes of Vitamin B_{12} and Folic acid deficiency:

Vitamin B_{12}	Folic acid
✓ Diet: vegan ✓ Stomach: ○ pernicious anaemia, ○ partial/ total gastrectomy ✓ Intestinal: malabsorption ○ tropical sprue, ○ coeliac disease, ○ crohn's	diet: Increased demand, poor intake of vegetables Intestine: malabsorption, coeliac disease Drug: phenytoin, MTX Other haemolysis,

Q. **How Vitamin B_{12} absorbed in GIT?**

Ans. Vitamin B_{12}+food→ stomach acid causes release of Vitamin B_{12} from food → Vitamin B_{12} + intrinsic factor(secrete from parietal cell) → absorption at terminal ileum.

What is pernicious anaemia?

It is an autoimmune disease in which antibody is formed against parietal cell (which secrete intrinsic factor)

Q. Tell me the one investigation to diagnose iron deficiency anaemia.

Ans. Serum Ferritin

Q. Mention the treatment of iron deficiency anaemia

Ans. Tab. Ferus Sulphate (200mg), tds, for 3-6 months.

how will follow uP / how will understand that anemia is improved?

Follow up:

- ✓ Hb will increase 1gm/dl in every 7-10 days.
- ✓ Reticulocyte count will increase after 1 week

What are the indications of blood transfusion in anaemia?

- ✓ Angina
- ✓ Heart failure
- ✓ Evidence of cerebral hypoxia.

What are the complications of oral iron therapy?

Dyspepsia, Altered bowl habit.

What is the indication of Parenteral iron therapy?

Malabsorption.
severe anaemia

. Infusion of 1 unit of blood causes how much increase in Hb level?

Infusion of 1bag blood causes 1gm/dl increment of Hb level.

name iron therapy ?

oral	parental
✓ Ferrous sulphate 200 mg times (195 mg of elemental iron per day) ✓ ferrous gluco-nate 300 mg twice daily (70 mg of elemental iron**)**	old preparation iron dextran iron sucrose new preparations iron isomaltose and iron carboxymaltose

what is the treatment of Vitamin B_{12} deficiency anaemia?
Vitamin B_{12} supplementation: Inj. Hydroxycobalamine 1000 µgm , 1 ampule, I.M. every 2 day for 5 days. Maintenance: 1 amp, I.M. 3 monthly for lifelong.
What is the treatment of folic acid deficiency?
Tab. Folic acid 5 mg, (1+0+0) for 3 weeks, than lifelong
What is the importance of folic acid in pregnancy?
Deficiency of folic acid during pregnancy causes neural tube defect in fetus.
To prevent neural tube defect in fetus, when folic acid supplementation should be started ?
Folic acid supplementation should be started before conception, because, neural tube development occur within 1-3 weeks of conception.

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In witch conditions folic acid is used prophylactically?
Haemolytic anaemia Pregnancy With MTX therapy
Q. If a patient with Vitamin B_{12} deficiency is given folic acid without giving Vitamin B_{12}, what will happen
Ans. It will cause subacute combined degeneration of spinal cord.
Q. . What are the neurological feature of subacute combined degeneration of spinal cord?
Ans. Jerks absent but planter extensor .
Q. what is the daily requirement of Vitamin B_{12}?
Ans. 1µgm/ day
what are the sources of Vitamin B_{12}?
Animal source.
What are the causes of anaemia of chronic disease?
Renal failure Connective tissue disease
Q. What are the PBF findings of anaemia of chronic disease?
Ans. Normocytic normochromic RBC.
Q. what is the mechanism of anaemia of chronic disease
Ans. IL_6 suppresses the bone marrow.
Q. What biochemical abnormality occurs in heamolytic anaemia?
Ans. Mnemonic: BDR- Head- quarter B- ↑billirubin D- ↑LDH R-↑Reticulocyte Head-↓heptoglobin Quarter-↑urobillinogen

Jaundice

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Define jaundice?

•Jaundice refers to the yellow appearance of the skin, sclerae and mucous membranes resulting from an increased bilirubin concentration in the body fluids.

Normal bilirubin level ?

When will jaundice detectable clinically?

it is usually detectable clinically when the plasma bilirubin l > 3 mg/dl) or 50 µmol/

What do u mean by latent jaundice ?

when serum bilirubin is in between 1—3mg/dl then then jaundice cant detect clinically this called latent jaundice

How will examine the jaundice?

- it is always seen in bight day light
- not seen is night or artificial light
- so ask the sir I need to day light / or take the patient to the window

site where we look for

1. **sclera –**sclera is examined by retracting the upper eyelids upwards and ask the patient to look downward to his feet
2. **undersurface of tongue (ventral) ---**it looks in between venulam and lingual vein
3. **palms (mainly palmer crease)and soles**
4. **skin of whole body**

Why jaundice seen in sclera ?

sclera contain a lot of elastin –which have great affinity for bilirubin &white back ground of sclera

in which fluid jaundice appear ?

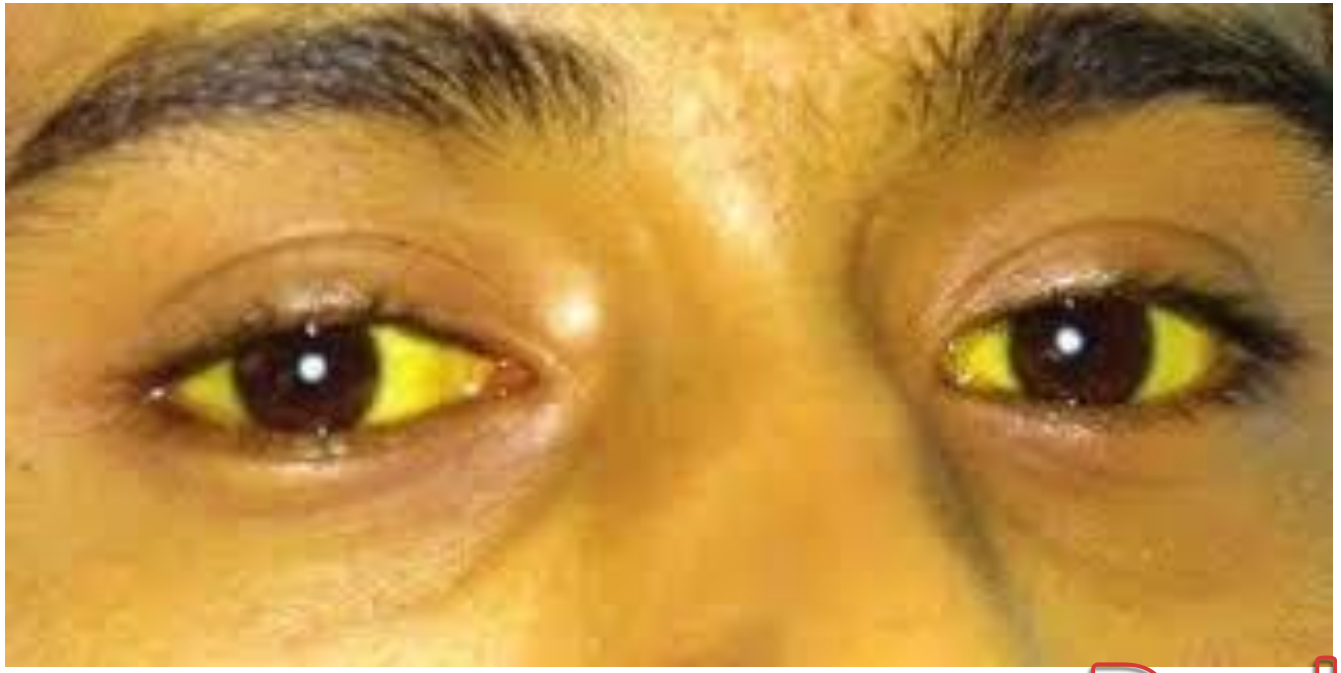
found in body fluid—CSF, joint fluid
absent in tear and saliva

How will differentiate it from carotenaemia?

in carotenaemia, there is yellow discolouration of the skin, but the sclerae remain white.

Classify jaundice?

- Prehepatic or Haemolytic jaundice
- Hepatocellular
- Post Hepatic or Obstructive jaundice



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Mention the cause of haemolytic jaundice?	Mention the cause of hepatocellular jaundice?
Haemolysis.— ✓ thalassamia , ✓ autoimmune haemolytic anaemia Falciparam malaria congenital ✓ Gilbert's disease. ✓ Dubin-Johnson syndrome. ✓ Rotor syndrome	3ADC A--Acute viral hepatitis, A--Alcoholic, A--Autoimmune, D--Drug-induced—anti-tubercular drugs C--Cirrhosis
Mention the cause of obstructive jaundice?	**Name some causes of viral hepatitis?**

Extrahepatic bile duct
• Choledocholithiasis
• Carcinoma
  ○ Primary
  ▪ Ampullary
  ▪ Pancreatic
  ▪ Bile duct (cholangiocarcinoma)
  ○ Secondary
  ▪ Metastasis in porta hepatis
• Parasitic infection
Intrahepatic
• Viral hepatitis
• Primary biliary cirrhosis
• Primary sclerosing cholangitis
• Alcohol
• Drugs
• Autoimmune hepatitis
	Common causes:
	• Hepatitis A
	• Hepatitis B ± hepatitis D
	• Hepatitis C
	• Hepatitis E
	Uncommon causes:
	• Cytomegalovirus
	• Epstein-Barr virus
	• Herpes simplex
	• Yellow fever
	
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How will u differentiate these three types of jaundice?			
	Haemolytic	**Hepatocellular**	**obstructive**
Jaundice	less	moderate to severe	severe
Anemia	more marked	absent	absent
Hepatospleno megaly	present	absent	absent
Stool	pale	normal color	normal color
Itching	absent	usually not	present
Viral prodome Nausea , malaise	absent	present	absent
investigation			
Bilirubin	unconjugated	mixed	conjugated
SGPT/ ALT		>6 times	<6
Alk.phosphatate		<2.5	> 2.5 times

What are the causes of recurrent jaundice? Fluctuating jaundice?

- ✓ gilbert syndrome
- ✓ stone in common bile duct
- ✓ haemolytic anaemia
- ✓ CLD
- ✓ willson disease SN: first three common only for MBBS

What do u mean by courvoisier's law?	
palpable nontender smooth surface gall bladder in patient with jaundice is due to neoplastic obstruction of common bile duct such as carcinoma of head of pancrease but due to stone in CBD in which gall bladder become small	
What do u mean by charcots triad?	
Obstructive jaundice with abdominal pain is usually due to gallstones, and if fever or rigors are present suggests ascending cholangitis (Charcot's triad).	
What are the cause of **Painless obstructive jaundice**?	
Malignant biliary obstruction, e.g. • pancreatic cancer or • cholangiocarcinoma.	
How will differentiate between cholestatic jaundice t due to stone and carcinoma of head of pancrease	
stone	carcinoma
pain full	painless
jaundice is fluctuating	static or progressively increased
gallbladder not palpable	gallbladder is palpable

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What is the feature of haemolytic jaundice ?

- ✓ sever anaemia
- ✓ mild jaundice
- ✓ hepato-splenomegaly
- ✓ haemolytic faces and family HO

what is feature hepatocellula rjaundice ?

- ✓ viral prodome –nausea , anorexia , vomiting
- ✓ fever
- ✓ joint pain , malaise
- ✓ tender hepatomegaly

Feature of obstructive jaundice ?

- ➢ deep jaundice
- ➢ dark urine
- ➢ pale stoot
- ➢ itching

other : uncommon

- ➢ pulse ----bradycardia
- ➢ xanthelasma ---
- ➢ bleeding manifestation ---petechae, purpura , echymosis
- ➢ steatorrhoea –due to fat malabsorption
- ➢ osteomalacia---in prolong case causes ----osteomalacia

what are the causes of fever with jaundice ?

1. viral hepatitis
2. leptosiprosis
3. malaria
4. cholangitis
5. Liver abscess

What are the medical cause extrahepatic obstruction?

- ✓ sclerosing cholangitis
- ✓ obstruction by round worm in CBD
- ✓ enlarge lymphnode at porta hepatis in lymphoma

What history u will take in a patient with jaundice:
• Viral prodome ---development of viral prodome –associate with nausea and vomiting , fever , • The colour of the urine (dark in cholestatic jaundice). • The colour and consistency of the stools (pale in cholestatic jaundice). • Abdominal pain (e.g. caused by gallstones). • Appetite and weight change • fever • Gastrointestinal bleeding • Itching • Previous blood transfusions. • Past history of jaundice. • Drugs (e.g. antibiotics, NSAIDs, oral contraceptives, phenothiazines). • IV drug use. • Tattoos and body piercing. • Foreign travel. • Sexual history. • Family HO of liver disease. • Alcohol consumption. • Any personal contacts who also have jaundice.
Young patient with recurrent jaundice what may be the cause ?
gilbert syndrome willson disease

billirubin metabolism ?

- billirubin is create from haemoglobin , myoglobin by RBC destruction in reticulo endothelium system
- Within macrophage Haem -> biliverdin ->bilirubin -> Unconjugated bilirubin
- Unconjugated bilirubin is bound to albumin in the plasma and
- transported bound to albumin to the liver and
- it is conjugated with glucuronic acid in the hepatocytes by glucuronyl transferase.
- Conjugated bilirubin is secreted into the bile and enters the duodenum.(80%)
- Most of stercogbilinogen enter portal circulation goes to liver
- Small amount Into the intestine convert in to stercobilin excrete in to the stool
- A small amount by the kidneys as urobilinogen.

Gilbert syndrome	
✓ it is genetic disease Autosomal dominant ✓ defect in conjugation of bilirubin – increase Unconjugated hyperbilirubinaemia **presentation :** ✓ mild jaundice –more marked in fasting ✓ dark color urine –due to haemolysis	**investigation** – ✓ bilirubin --mild increase ✓ SGPT/Alkaline phosphate –N **confirm DX**— calori test fasting ---hyperbilirubinaemia

Stigmata of CLD

face

Hepatic faces (sunken eye, Malar prominent)

eye

- ✓ anemia
- ✓ jaundice
- ✓ Kayser–Fleischer ring

mouth

- ✓ cyanosis (hepatopulmonary syndrome)
- ✓ fetorhepaticus

chest

- ✓ Spider nevi
- ✓ gynaecomastia
- ✓ Female breast atrophy
- ✓ loss of axillary and pubic hair,

Hands

- ✓ Clubbing
- ✓ Dupuytren's contracture
- ✓ Leuconychia
- ✓ Palmar erythema
- ✓ Flapping tremor(hepatic encephalopathy)

abdomen

- ✓ Ascites
- ✓ Engorged vein
- ✓ Loss pubic hair
- ✓ Testicular atrophy
- ✓ Ascites
- ✓ Hepatomegaly
- ✓ Splenomegaly
- ✓ Hepatic bruit
- ✓ Palpable gallbladder

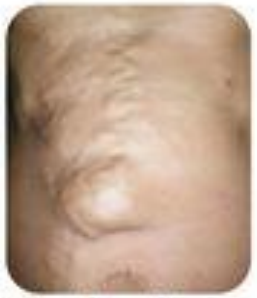
leg

- ✓ Legs
- ✓ Bruising
- ✓ Oedema
- ✓ planter extensor (if patient in encephalopathy)

Chronic Liver Disease

Hepatomegaly and **Ascites**

Cirrhosis



Caput medussae
(dilated veins around the umbilicus due to portal htn)

Gynecomastia
(impaired breakdown of estrogens)

Icterus
(increased bilirubin due to dysfunction of bilirubin metabolism)

Palmar erythema
(impaired breakdown of sex hormones)

Spider nevi
(isolated telangiectasias)

Ecchymosis
(defective coagulation)

Leukonychia
(hypoalbuminemia)

Finger clubbing

Asterixis
(abnormal motor fct due to faculty metabolism)

FECTOR HEPATICUS

(characteristic odor due to volatile aromatic compounds)

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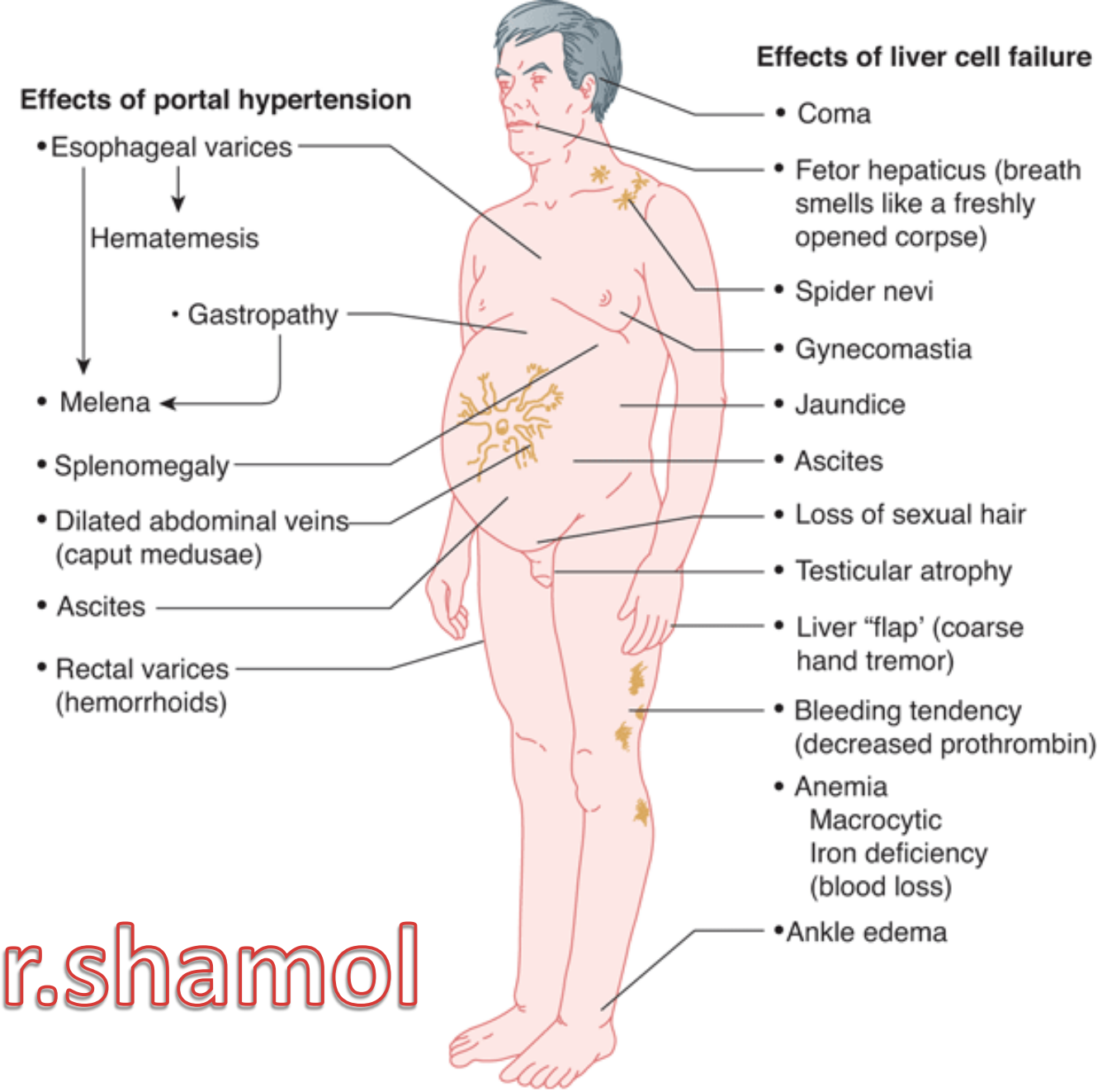

Source: McPhee SJ, Hammer GD: *Pathophysiology of Disease: An Introduction to Clinical Medicine, 6th Edition:* http://www.accessmedicine.com

CYANOSIS

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cyanosis is defined as a bluish discoloration of the skin and mucous membranes, due to excessive concentration of deoxyhemoglobin in the blood

Classification?

Central cyanosis
peripheral cyanosis

mechanism of central and peripheral cyanosis ?

Central: either due to imperfect oxygenation of blood in lung or admixture of venous and arterial blood.
Peripheral: due to localised reduction of blood flow on exposure to cold, causing capillary vasoconstriction

example of central and peripheral cyanosis ?

central cyanosis

heart causes:

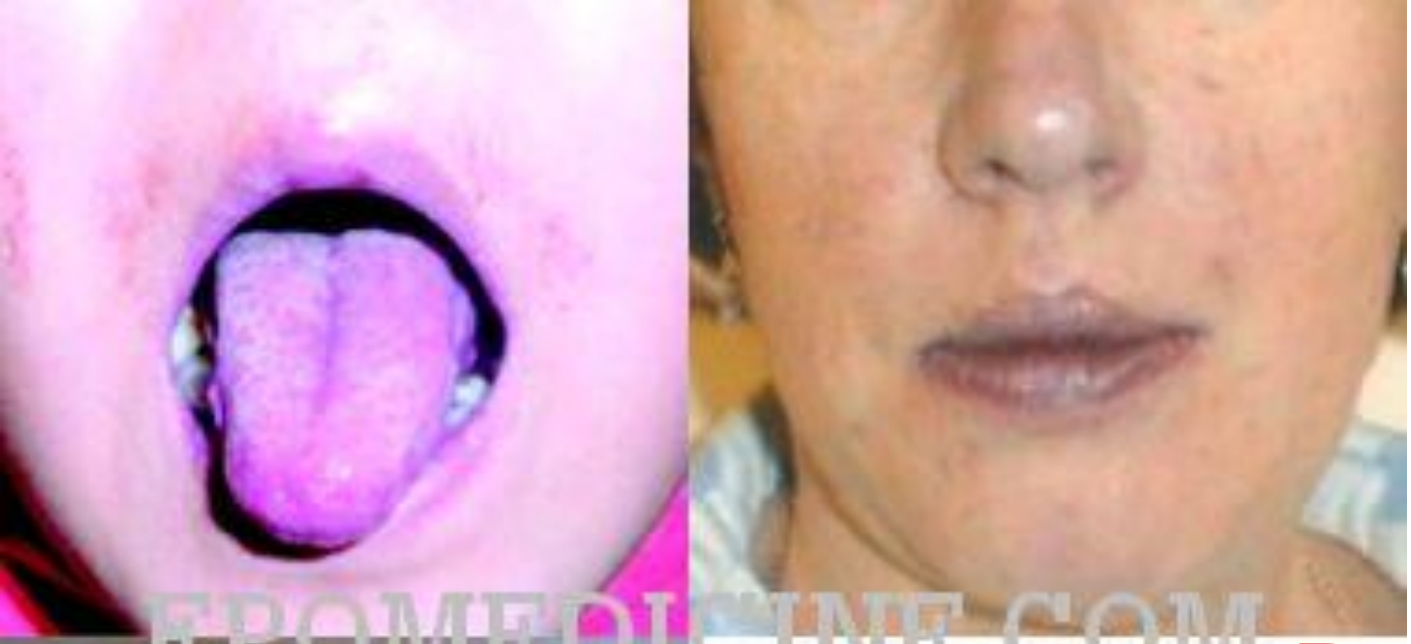
- Congenital cyanotic heart disease e.g. Fallot's tetralogy,
- Eisenminger's syndrome,
- Cardiogenic shock

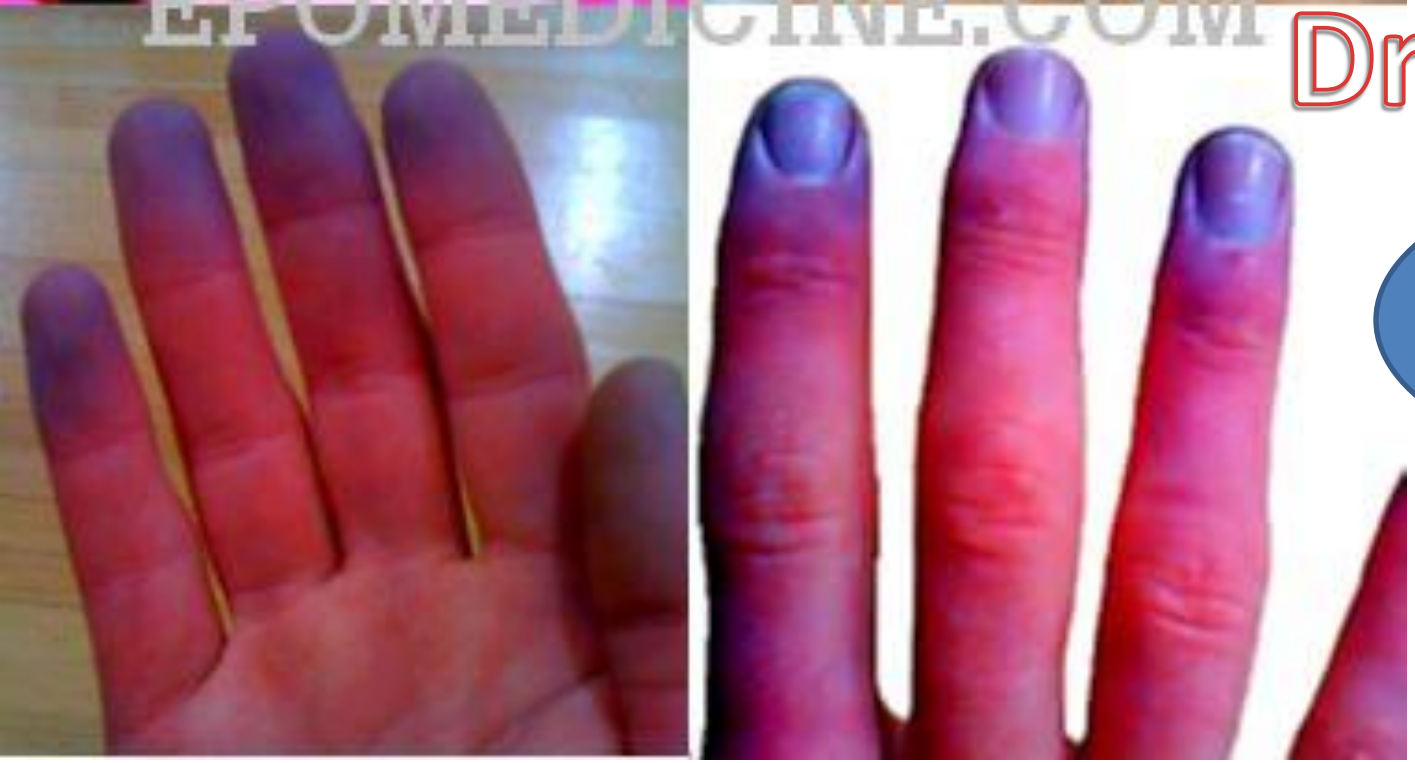
lung causes

- COPD
- acute severe asthma
- Pulmonary embolism
- severe pneumonia

peripheral cyanosis :

- peripheral arterial disease and
- Raynaud's phenomenon,
- venous obstruction





Central Cyanosis

Peripheral Cyanosis

Difference between central and peripheral cyanosis?		
	Central cyanosis	peripheral cyanosis
Cyanosis	**Generalised**	**Localised**
Affected part	Warm	Cold
Application of warm	Does not disappear	Disappears
Oxygen	Cyanosis may disappear	not Disappears
Tongue	Always involved	Never involved
site	It affects skin, nail, lips, tongue and mucus membranes	It affects the skin only i.e. nails, tip of nose or ears

How will bed side differentiate central and peripheral cyanosis?

by giving O2
if central cyanosis it will disappear and but peripheral cyanosis will not

Why tongue is not involved in central cyanosis ?

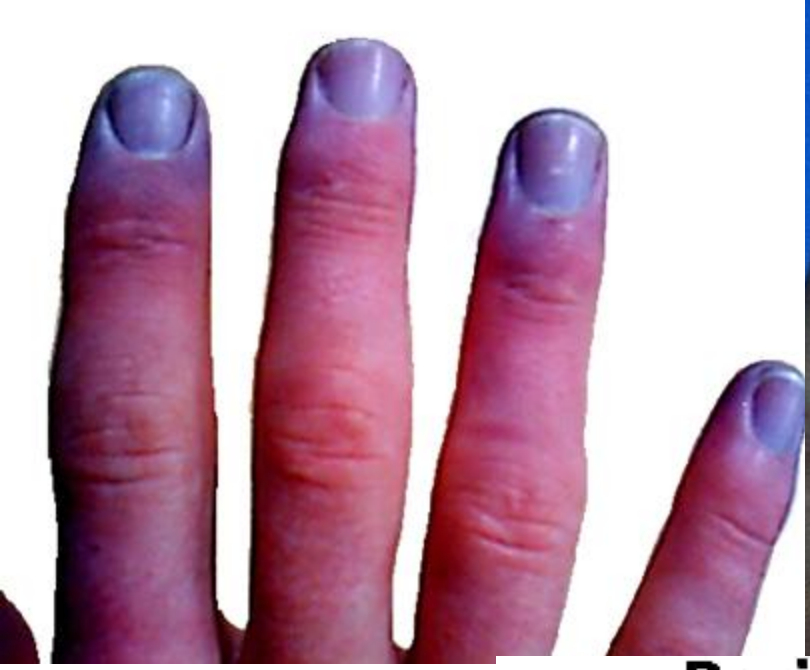
A: Because tongue is always warm, and circulation is good in tongue

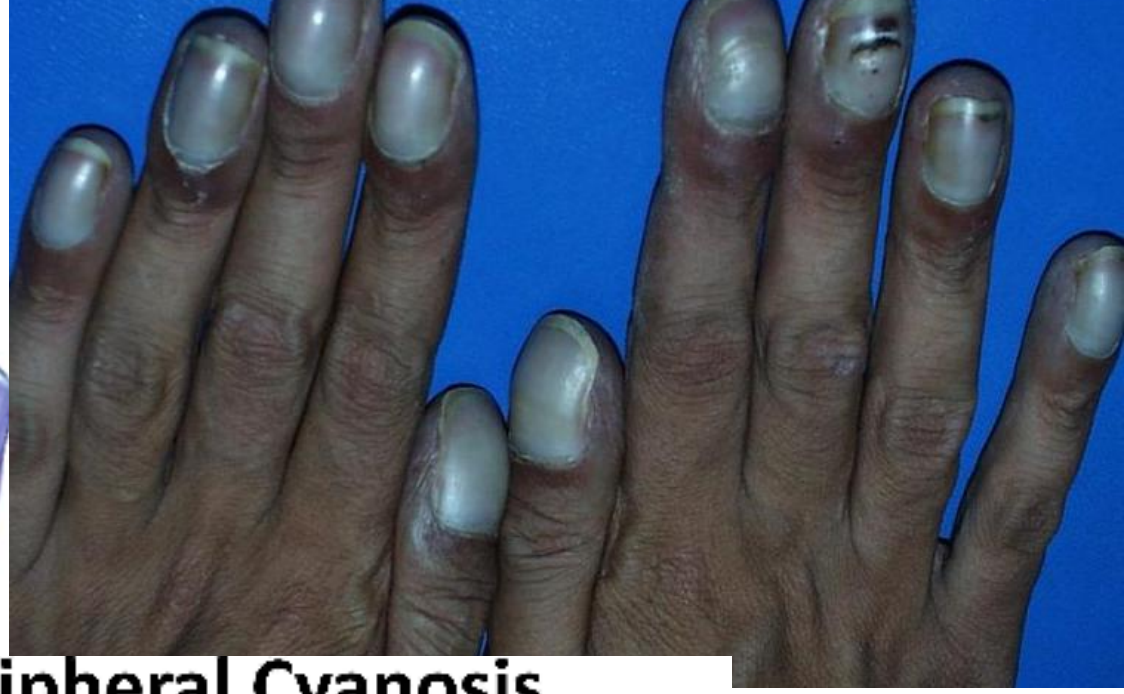
Can u seen cyanosis in severe anaemia ?

NO,
Because in severe anaemia, Hb is low and fully saturated, no excess deoxygenated Hb.
To see cyanosis Hb need to be more than 5 mg /dl

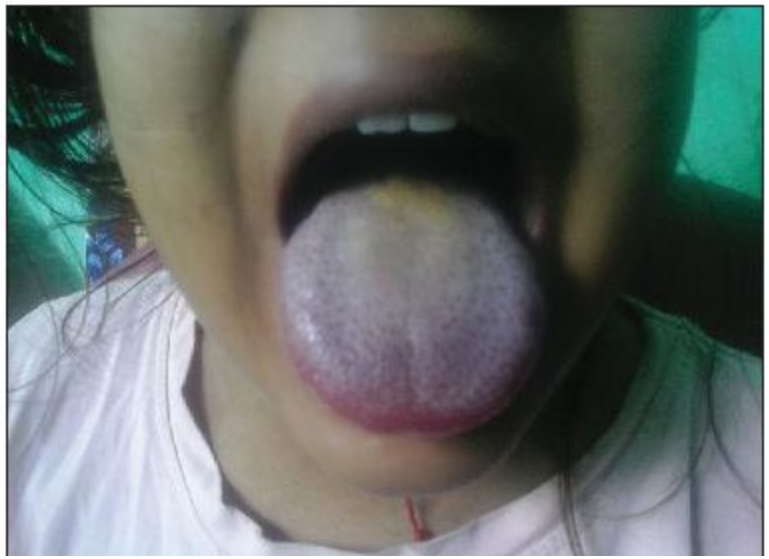
what do u mean by differential cyanosis ?

when cyanosis present only on the lower limb but not in upper limb is called differential cyanosis e.g.P.D.A. with reversed shunt





Peripheral Cyanosis



Central
Cyanosis

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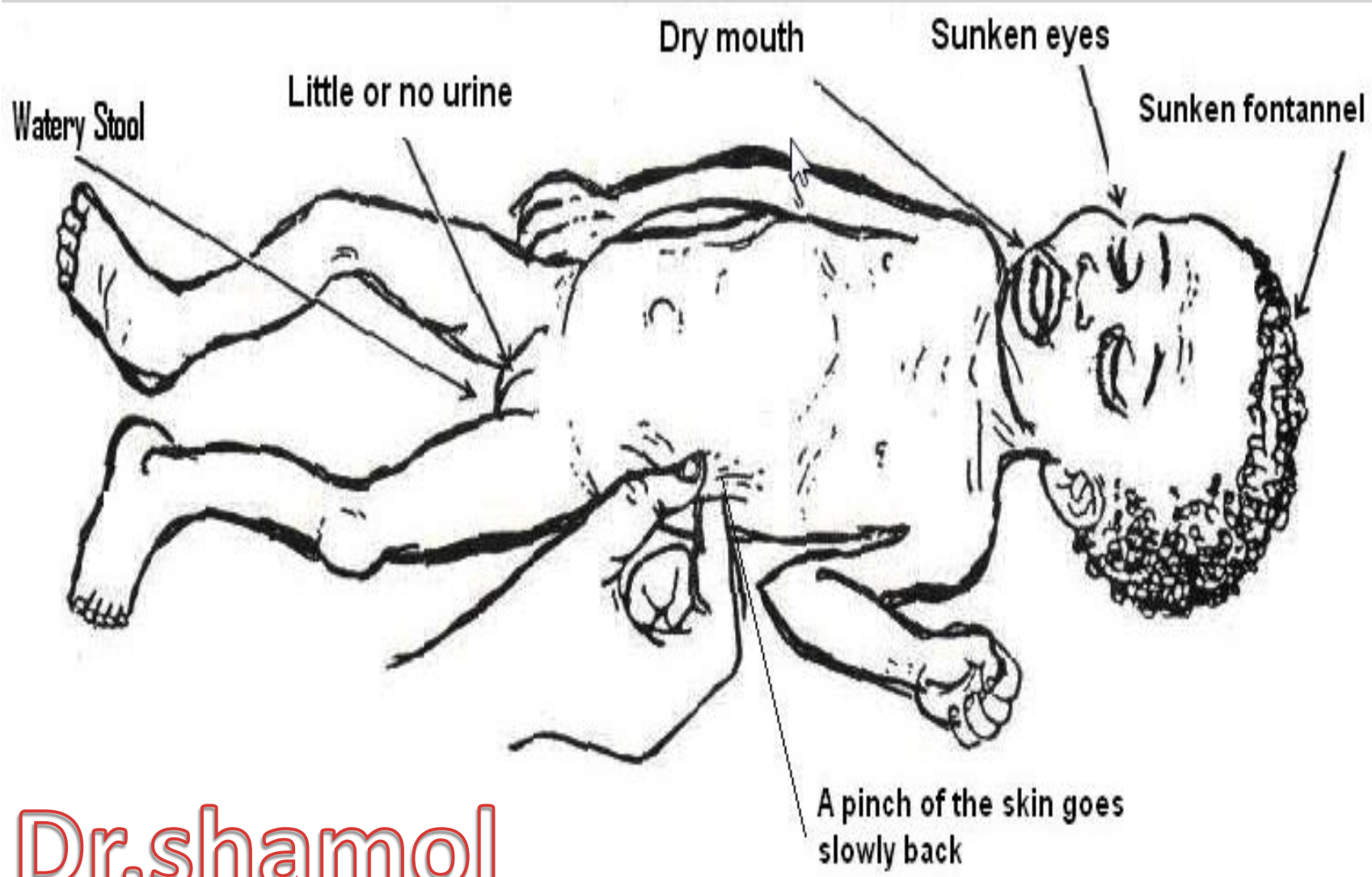
Dehydration


Dry mouth
Sunken eyes
Little or no urine
Watery Stool
Sunken fontannel
A pinch of the skin goes slowly back

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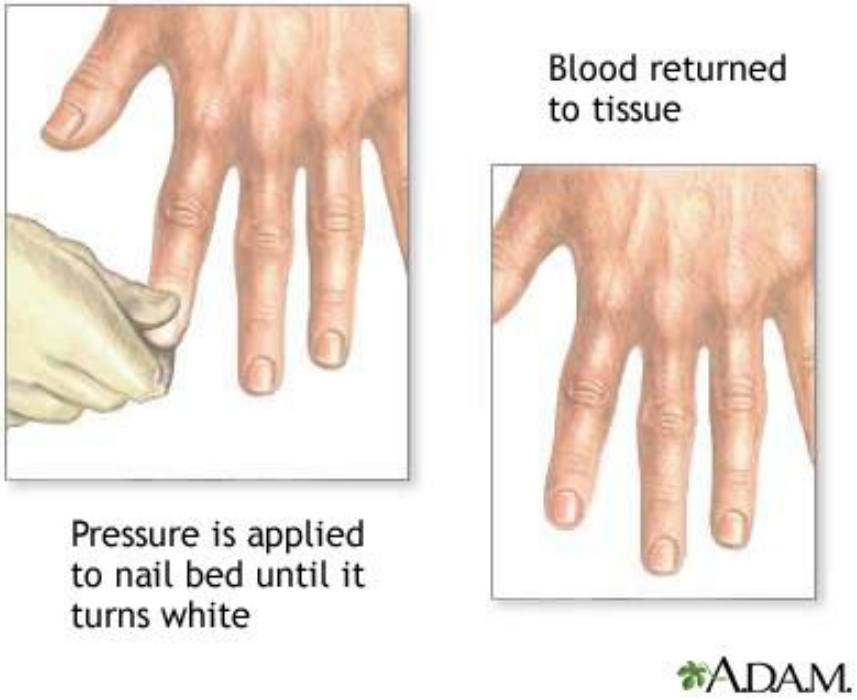
DEHYDRATION		
Type	deficit	physical signs
Mild	(<5%): = 2.5 L	thirst Dry mucous membranes Concentrated urine
Moderate	(5%–8%): = 4 L deficit	Reduced skin turgor (elasticity), arms, forehead, chest, abdomen Tachycardia
Severe	(9%–12%): = 6 L deficit	decreased eyeball pressure Collapsed veins, sunken eyes, 'gaunt' face Postural hypotension Oliguria (<400 mL urine/24 hours)
Very severe	(>12%): >6 L deficit	Comatose Moribund Signs of shock
Note:Total body water in a man of 70 kg is about 40 L		

Capillary refill:



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- keep the finger at heart level
- press over the nail bed with thumb and index finger until it turn white
- now measure the time that is required to return normal color
- normally it require less than 2 second
- A prolongation is indicative of a poor blood supply to the peripheries

Lymph node:

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Cervical glands

- ❖submental,
- ❖submandibular,
- ❖tonsillar,
- ❖preauricular and posterior auricular
- ❖anterior chain
- ❖supraclavicular
- ❖Palpate deeply for the scalene nodes
- ❖posterior chain
- ❖occipital nodes
- ❖and deep cervical glands in the anterior triangle of the neck

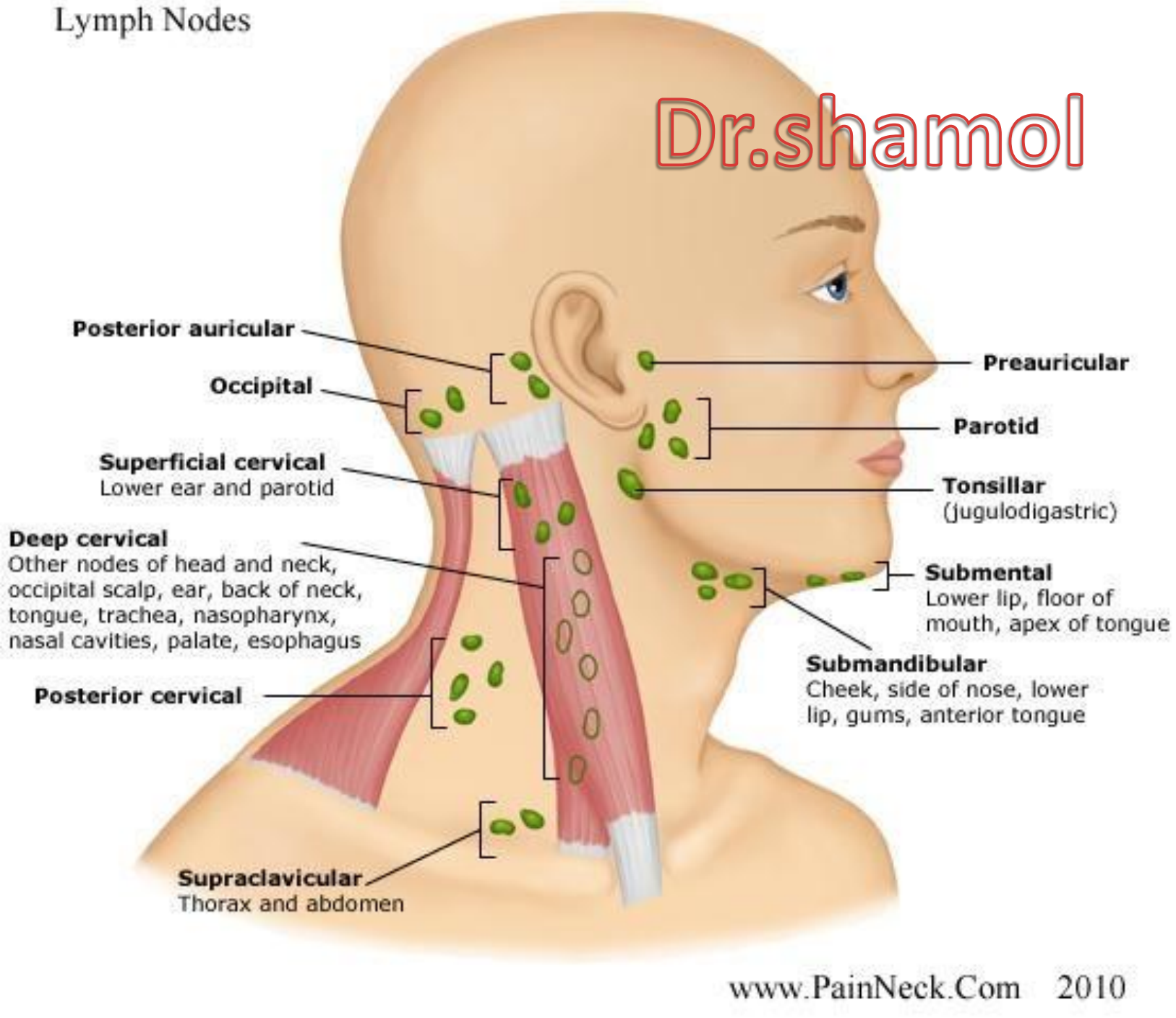
Axillary glands

- ❖Anterior
- ❖Posterior.
- ❖'Lateral,
- ❖Central./ medial
- ❖Apical

Epitrochlear glands

Inguinal glands

Popliteal glands


Lymph Nodes
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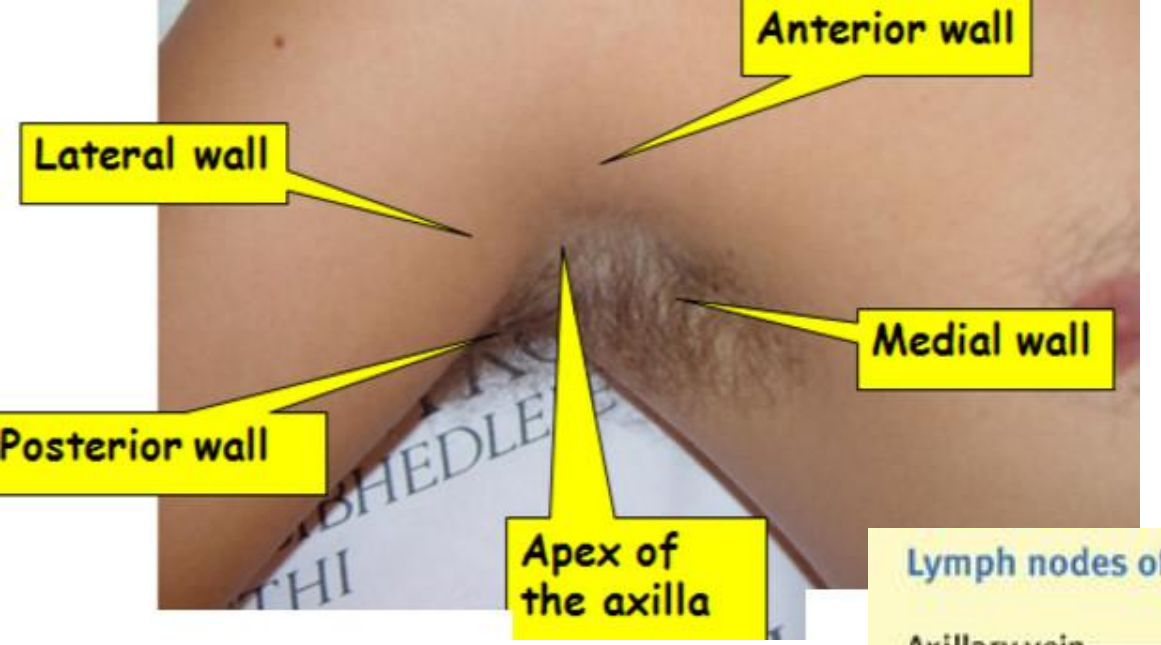
Posterior auricular
Occipital
Superficial cervical
Lower ear and parotid
Deep cervical
Other nodes of head and neck, occipital scalp, ear, back of neck, tongue, trachea, nasopharynx, nasal cavities, palate, esophagus
Posterior cervical
Supraclavicular
Thorax and abdomen
Preauricular
Parotid
Tonsillar
(jugulodigastric)
Submental
Lower lip, floor of mouth, apex of tongue
Submandibular
Cheek, side of nose, lower lip, gums, anterior tongue
www.PainNeck.Com 2010


Anterior wall
Lateral wall
Medial wall
Posterior wall
Apex of the axilla

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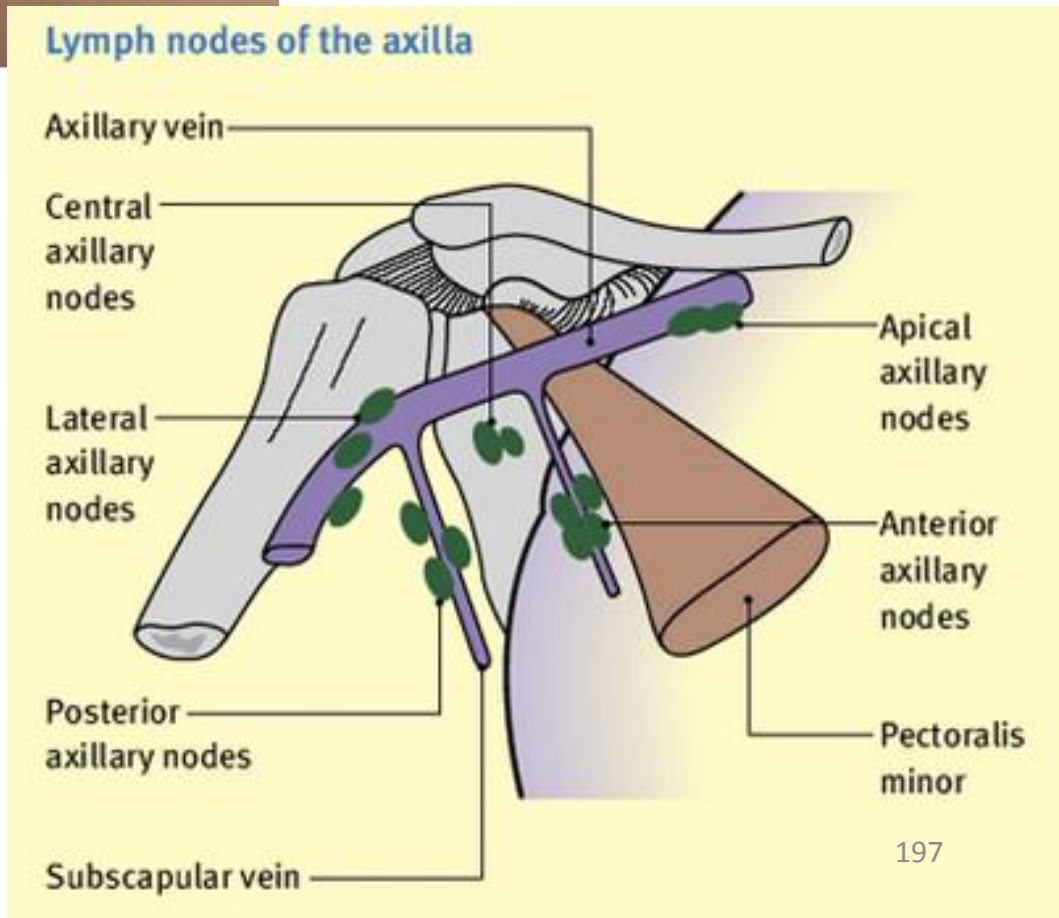
Lymph nodes of the axilla
Axillary vein
Central axillary nodes
Lateral axillary nodes
Posterior axillary nodes
Subscapular vein
Apical axillary nodes
Anterior axillary nodes
Pectoralis minor

what will see if u got lymph node palpable ?
SSN CT MRI

- S--Site (cervical – anterior or posterior , supraclavicular , axillary – anterior or posterior)
- S--Size---2 X 2 cm
- N--Number (single or multiple)
- C--Consistency (soft or firm or rubbery or hard).
- T--tenderness
- M--matted or Discrete
- R--Rto underlying structure or overlying skin) /Fixation
- I—Incision mark over lying skin /-- sinus, ulcer, biopsy mark

what do mean by generalized lymphadenopathy

3 or more lymphnode area
Localised lymphadenopathy means single analom¬ical area of LN involvement

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what is causes of generalized lymphadenopathy ?

Ans. Common causes of lymphadenopathy:

- Lymphoma
- Leukaemia
- Disseminated TB

Causes of lymphadenopathy as a whole:

Infective:

- Bacterial: streptococcal, TB, brucellosis
- Viral: EBV, HIV, CMV
- Protozoal: toxoplasmosis
- Fungal: histoplasmosis, coccidiomycosis.

Neoplastic:

- Primary: lymphoma, leukaemia(ALL (child),CLL (old))
- Secondary: lung, breast, thyroid, stomach

Connective tissue disease: RA, SLE

- Sarcoidosis
- Amylodosis

Drugs: Phenytoin

what is the importance of consistency

- ✓ Rubbery - lymphoma.
- ✓ Firm and matted - TB.
- ✓ Hard and craggy - malignancy.
- ✓ Stony hard - calcified LN.
- ✓ Soft, cystic - cold abscess.

what is the importance of matted or discrete

- ✓ matted ---TB
- ✓ discrete –lymphoma

what is cause of discharging sinus of lymphnode ?

- ✓ Tuberculous lymphadenitis.
- ✓ Actinomycosis

how will differentiate these two

in actinomycosis ---secretion of color granule with pus

name one drug causes lymphadenopathy

phenytoin

If lymphadenopathy is immobile,hard , fixed to skin, the cause?

metastasis.

Unilateral axillary lymphadenopathy?

- ✓ Local infection in upper extremity.
- ✓ Carcinoma of breast with metastasis.
- ✓ Lymphoma (non-Hodgkin's commonly).

what is causes of supraclavicular lymphadenopathy

- ✓ bronchial carcinoma
- ✓ lymphoma
- ✓ in case of left supraclavicular lymphnode --- CA stomach

What is Troisier's sign? what does it indicate ? what will want to see next ?

- ✓ IF only left supraclavicular LN is palpable, it is called Troisier's sign
- ✓ it indicated Metastasis from carcinoma stomach
- ✓ I want to palpate abdomen to see see any epigastric mass carcinoma of stomach

what is caused of Scalene LNs involvement

it indicated Metastasis from carcinoma of bronchus

what will do if a lymphnode is palpable ?

examine the drainage area of that lymphnode

- Cervical lymphadenopathy (examine the mouth, tonsil, teeth, face, ears and scalp).
- Axillary lymphadenopathy (examine the breasts, chest and upper limbs).
- Supraclavicular lymphadenopathy (examine the chest for bronchial carcinoma).
- Left supraclavicular lymphadenopathy or Virchow's gland palpate for epigastric mass, carcinoma of stomach).
- Inguinal lymphadenopathy (examine the lower limbs for any septic focus, genitalia and perineum).

causes of epitrochlear lymphadenopathy ?

- ✓ lymphoma Nonhodgkin
- ✓ sarcoidosis
- ✓ secondary syphilis
- ✓ localized infection of hand or arm

if **lymphnode is tender than what does it indicate ?**

it indicate the reactive hyperplasia due to infection

How to treat tuberculous lymphadenitis?

with standard anti-tb therapy –CAT I (if sir don't agree then say--- for 9 months to I year --)

What may happen following anti-tb in case of tuberculous lymphadenitis ?

Following anti-TB drug therapy, the LNs maybe enlarged. It is due to hypersensitivity reaction to tuberculoprorein, released from dead mycobacteria

Which organism is responsible for cervical lymphadenopathy ?

the atypical mycobacteria

What are the atypical mycobacteria?

Atypical mycobacteria, also called non-tuberculous mycobacteria (NTM) or mycobacteria other than TB (MOTT). The following are atypical mycobacteria---to remember ABC

A---mycobacterium avium intracellulare complex (MAC)

B---M. bovis

C--M. chelonei

M. xenopi

M. kansasii

what are the Rx of atypical mycobacteria ?

: If there is localised involvement in cervical LN, perform surgical excision.

Most organisms are resistant to standard anti-TB drug.

treatment is ---CER

- ✓ Clarithromycine 500 mg BD
- ✓ Ethambutol 15 mg / kg
- ✓ Rifabutin 3000 mg

if biopsy mark present what is diagnosis ? could it be leukaemia

- ✓ TB
- ✓ lymphoma
- ✓ malignancy

no it could not be leukaemia ---becauses in leukemia biopsy and FNAC is contra indicated

what investigation you want to do ?

- ✓ CBC and ESR & PBF
- ✓ MT
- ✓ FNAC and biopsy LN
- ✓ CXR—to see hilar lymphadenopathy
- ✓ USG—to see hepato-splenomegaly and intraabdominal lymphadenopathy

How will u exclude leukaemia ?

by seeing the PBF

causes of unilateral and bilateral hilar lymphadenopathy

Unilateral	**Bilateral hilar LN**
✓ TB(primary TB)	✓ sarcoidosis
✓ bronchial carcinoma	✓ lymphoma
✓ lymphoma	✓ TB

How MT help in diagnosis ?

in TB—MT positive
in sarcoidosis and lymphoma –MT negative

what is the normal size of lymph node ?

Normal LNs may be palpable in axilla, groin, usually up to 0.5cm, which are soft,
Submandibular LNs < 1 cm is normal in children
inguinal LNs<2cm is normal in adult

A patient have goiter and lymphadenopathy what is the diagnosis ?

papillary carcinoma of thyroid

what is Lyrnphoreticullar system?

Lyrnphoreticullar system includes LNs, spleen, tonsil, adenoid, Peyer's patch of ileum and Kupffer cells in liver

if find LN palpable what else u want to examine ?

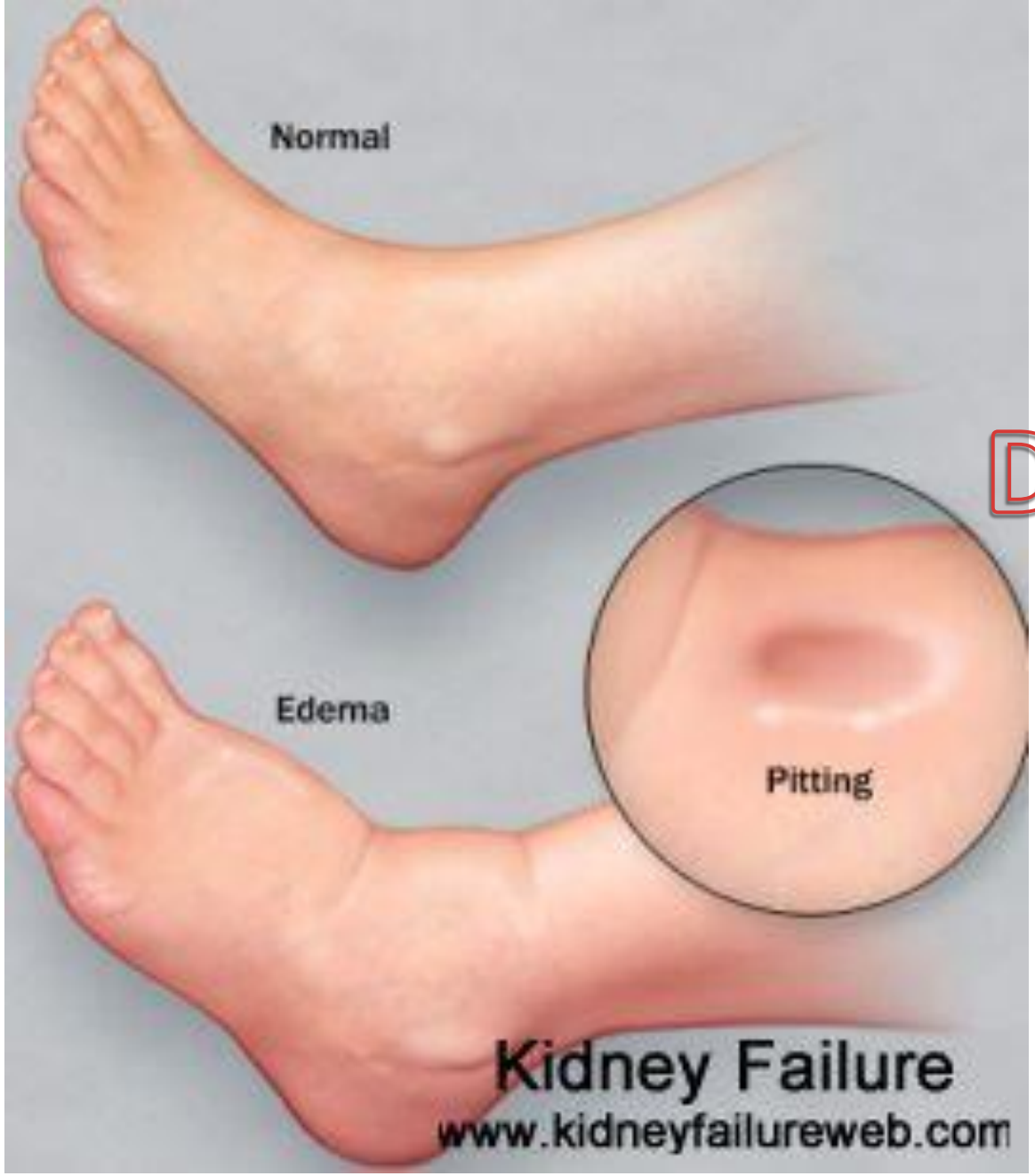
- ✓ LNs in other parts (axillary, inguinal, para-aortic, when asked to examine the neck only).
- ✓ Geneal examination – Anaemia and bony tenderness (leukaemia).
- ✓ Liver and spleen (lymphoma and leukaemia).
- ✓ Purpura or-bruise or petechiae (haematological malignancy).
- ✓ Palatal petechial haemorrhage (infectious mononucleo¬sis and leukaemia)
- ✓ draining of that lymphnode ---eg. If axilla LN → breast

how will describe lymph node finding

- examination of this patient reveals that patient have generalized lymph adenopathy involving cervical, right axillary group and left inguinal group . There multiple, discrete, rubbery ,nontender lymph node of variable size and shape largest of them in cervical region is 2x 1 cm and in right axillary's region is 1.5x1 cm and left inguinal region is 2x 1.5 cm .these lymph node are not fixed with underlying structure or over lying skin and having no discharging sinus
- examination of this patient reveals that patient have cervical lymph adenopathy involving right submandibular both anterior chain and right supraclavicular lymph node . There multiple, discrete, rubbery ,nontender lymph node of variable size and shape largest of them in is 2x 1 cm these lymph nodes are not fixed with underlying structure or over lying skin and having no discharging sinus

oedema


Edema (swelling) o
the ankles and feet
Kidney Cares Community
www.kidney-cares.org


Normal
Edema
Pitting
Kidney Failure
www.kidneyfailureweb.com

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define oedema

oedema is an abnormal accumulation of fluid in the interstitium or in one or more cavities of the body

classification with example

according to distribution

✓ generalized and localized

according to depress on pressure

✓ pitting and nonpitting edema

generalized edema

- heart causes –CCF
- liver causes –CLD
- renal cause -- nephrotic syndrome
- other causes
  - mal absorption / malnutrition
  - protein-losing enteropathy
  - pregnancy
  - drug

localized

lymphatic obstruction/ *lymphoedema*

- Filariasis

Venous causes

- Deep venous thrombosis or chronic venous insufficiency

Inflammatory causes.

Allergic causes

- Angio-oedema (the face, lips and mouth)

What do u mean by pitting edema ? name some causes of non pitting edema ?

the oedema that leaves an indentation after pressure on the affected area is called 'pitting' oedema,

non pitting edema

lymphatic obstruction/ *lymphoedema*

- *Infection: filariasis,*
- *Malignancy*
- *Radiation injury*
- *Congenital abnormality*

myxoedema in hypothyroidism

pitting edema ---rest causes r pitting edema (eg heart , liver , kidney causes)

in **which malnutrition edema occur ? name some drug causes edema**

Kwashiorkor

drug causes edema

- ✓ calcium channel blocker –Amlodipine , NSAID, steroid , OCP

name two endocrine disease where we get edema

- ✓ Conn
- ✓ hypothyroidism

if a diabetic patient come with edema what may be causes

- nephrotic syndrome
- due to loss of vasomotor tone

what is the mechanism of edema

there several causes –

- ✓ Decrease colloid osmotic (or oncotic) pressure due to hypoalbuminea ---(eg. Renal , git causes)
- ✓ Increase hydrostatic pressure (heart failure)
- ✓ Increase capillary permeability (inflammatory causes)
- ✓ Secondary hyperaldosteronism (mainly in heart failure)
- ✓ Lymphatic obstruction

Where we see edema?

over the shin of tibia just above the medial maleolus …. Press with both thumb over both leg for 10/ 15 sec ..during pressing you should look at patients face to pain

in case bed ridden patient

ask the patient to sit down see over sacrum or

zygomatic arch of face (tell only if ask where we see also)

mechanism of edema in different disease	
heart failure	due to increase hydrostatic pressure Secondary hyperaldosteronism
nephrotic syndrome	decrease *colloid osmotic* (or *oncotic*) *pressure due to hypoalbuminea*
CLD	portal hypertension decrease *colloid osmotic* (or *oncotic*) *pressure due to hypoalbuminea*
How will differentiate different type of edema?	
heart failure	**HO** • Respiratory distress or breathlessness. orthopnea • HO heart disease • Edema first appear at dependent part (leg) **examination** : tachycardia JVP raised tender hepatomegaly investigation : ECG , ECHO , CXR—feature of heart failure unrine RME—normal

nephrotic syndrome	**HO** edema first appear at face HO of renal disease ---frothy urine . oliguria no HO breathlessness **examination** : normal i**nvestigation** urinary –protienuria (massive) 24 hr total urinary protein serum albumin –decrease
CLD	**HO** • history jaundice , Alcohol , risk factor for HBV (sexual exposure) • swell first appear at abdomen / ascites **examinatio**n • feature of hepatic insufficiency –hepatic faces , gynaecomastia , spider navi, loss body hair , engorged vein , splenomegaly , testicular atrophy **investigation** • viral marker (HBS ag) (anti-HCV) • USG • liver function test –Albumin , AG ratio • endoscopy to see varices

tell one bed side test that can help u to diagnosis of cuases of edema

heat coagulation test --- nephrotic syndrome

what is lymphedema and why it is non pitting and causes ?

Normally, small amount of albumin filtered through the capillaries is absorbed through lymphatics. In lym¬phatic obstruction, water and solutes are reabsorbed into the capillaries, but the protein remains. Fibrosis occurs in the interstitial space and the area becomes hard or thick. Non pitting on pressing .

causes of lymphoedema is due to lymphatic obstruction such as

- Infection: filariasis,
- Malignancy
- Radiation injury
- Congenital abnormality—turner , yellow nail syndrome

what investigation you will do in patient with edema ?

urine RME

24 hr total urinary protein

S.creatinine

RBS

ECG

CXR

ECHO

USG of whole abdomen

s.Albumin , A/G ration

What are the causes of unilateral leg swell?

- Deep venous thrombosis.
- cellulitis.
- Lymphoedema---filariasis
- Ruptured Baker's cyst.

How will differentiate DVT and cellulitis ?

	DVT	**cellulitis**
	less erythemous , non toxic , less rise of temperature	more erythemous , pt toxic , fever , high rise of local temperature
tenderness	along the distribution of deep venous system	diffuse
infective foci	absent	present
leg swelling	entire leg swelling	localized swelling
calf swelling	> 3 cm than opposite limb	< 3 cm than opposite limb
collateral superficial vein	present	absent
investigation	CBC –normal color dopplor --- +	CBC—leucocytosis color dopplor --- negative
risk factor present	immobilization surgery pregnancy malignancy ocp	DM

What are thrombophlebitis and phlebothrombosis ?

T**hrombophlebitis** (superficial vein thrombosis): inflammation involving superficial veins (after intravenous fluid or injection . Pain, Increased local temperature ,prominent superficial vein
Phlebothromhosis (DVT): thrombosis in deep veins is non-inflammatory in nature. Present with unilateral swell

investigation of unilateral leg swelling

- ✓ CBC—
  - eosinophil may be high in filariasis,
  - leucocytosis---cellulitis
- ✓ Blood film to see microfilaria (usually at night)
- ✓ Compliment fixation test (CFT) or ICT for filaria.
- ✓ Lymphoscintigraphy
- ✓ FOR DVT
  - D-dimer & Doppler USG of lower limb vessels

treatment of DVT

General measure

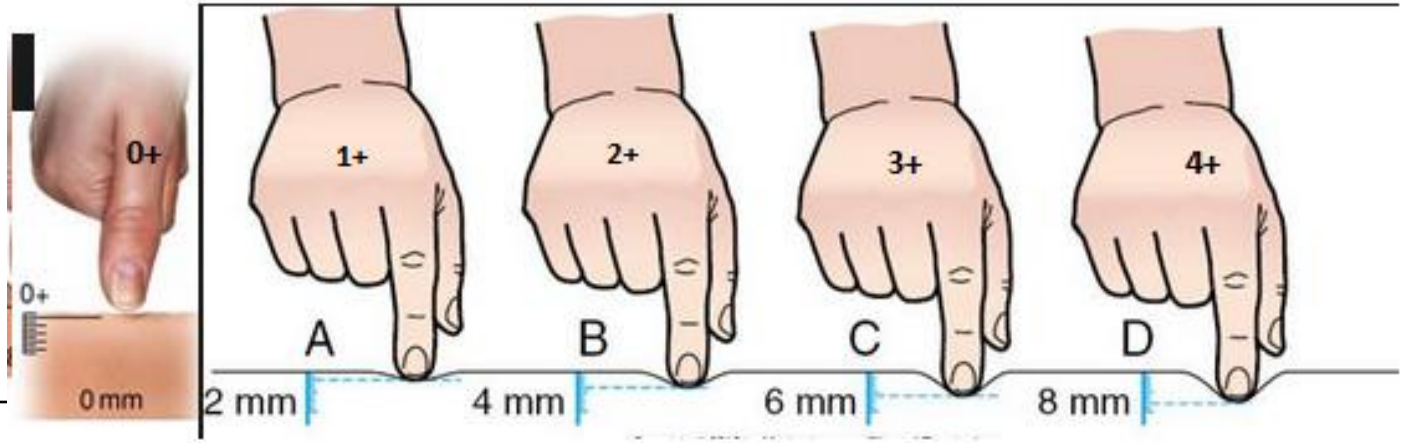
- ✓ Bedrest.
- ✓ Intermittent elevation of foot during day and night (above the heart level).
- ✓ Use of elastic 'stockings from midfoot to below knee (in calf thrombosis).
- ✓ Relief of pain by analgesic.

specific :

- ✓ Anticoagulation: low molecular wt heparin followed by warfarin
- ✓ If anticoagulation is contraindicated--- IVC filter(inferior venacava filter)

Complication OF DVT ? if patient comes with breathlessness what is the Dx?

pulmonary embolism



grading	
"Absent"	Absent or unilateral
Grade + **Mild:**	Both feet / ankle
Grade ++ **Moderate**:	Both feet, plus lower legs,hands or lower arms
Grade +++ **Severe**	Generalised bilateral pitting edema, including both feet,legs, arms and face

00+= no pitting edema

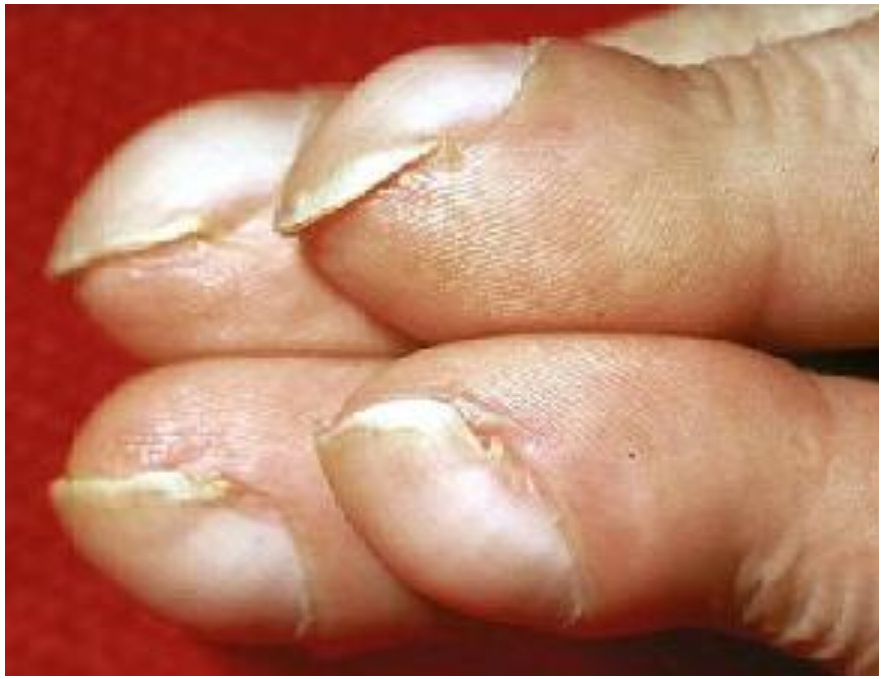
1+= mild pitting edema , 2 mm depression that disappears rapidly

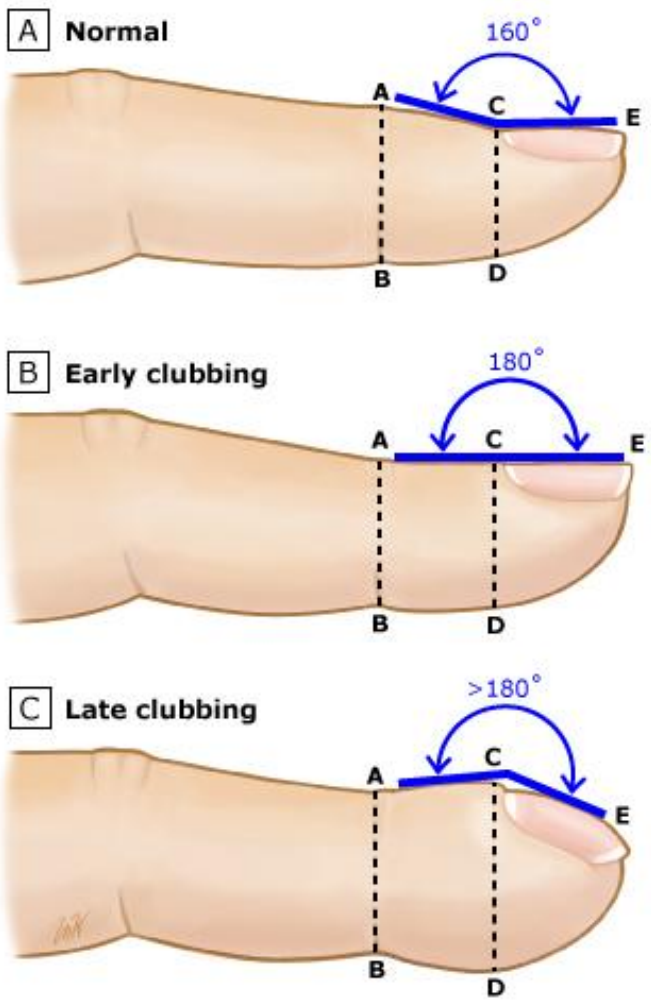
2+= moderate pitting edema ,4 mm depression that disappears in 10-15 second

3+= moderately severs pitting edema ,6 mm depression that may last more than 1 minute

4+= severe pitting edema 8mm depression that can last more than 2 minutes

CLUBBING





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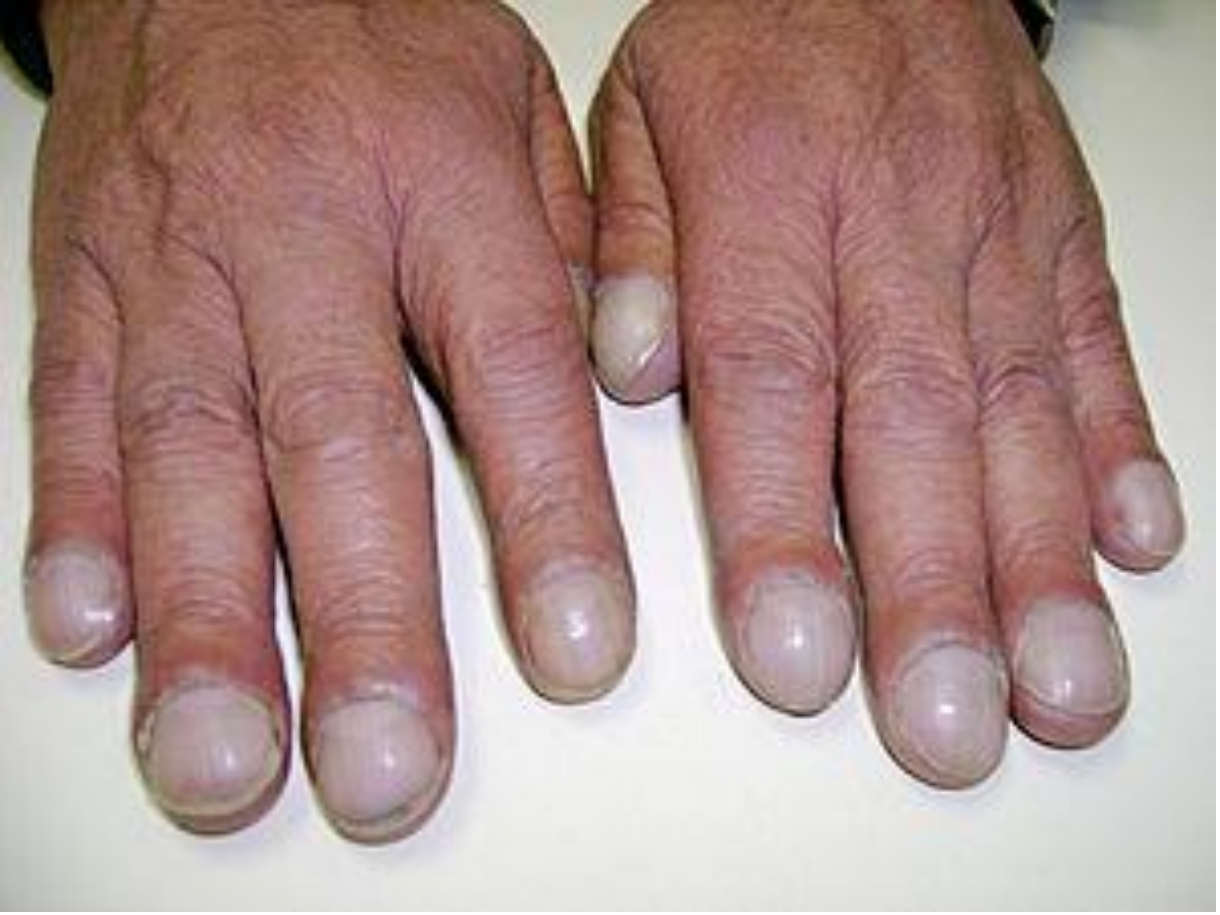


Normal angle of nail bed

Distorted angle of nail bed

Clubbed fingers

Define clubbing?

It is a selective bulbous enlargement or swelling of the terminal phalanges of the fingers and toes particularly on the dorsal surface due to proliferation of the soft tissue of the nail

Causes

Respiratory

- ✓ Bronchial carcinoma (squamous cell).
- ✓ Suppurative lung disease
  - bronchiectasis,
  - lung abscess and
  - empyema thoracis
- ✓ Fibrosing alveolitis or ILD
- ✓ Pulmonary TB (in advanced stage with fibrosis).(don't tell in viva)
- ✓ Pleural mesothelionna.

Cardiac

- ✓ SBE.subacutbacterial
- ✓ Conqenital cyanotic heart disease.
  - Fallot's tetralogy (clubbing with cyanosis).
  - Eisenminger's syndrome

Chronic abdominal disorders

- ✓ IBD
  - Crohn's disease
  - Ulcerative colitis
- ✓ Cinhosis of the liver

Familial

if sir want to know more then thyroid ---graves disease

What is differential clubbing? What are the causes?

It means clubbing in the toes, but not in the fingers

Causes of differential clubbing

- Patent ductus arteriosus with reverse shunt (also there is cyanosis in toes, not in finger called differential cyanosis).
- Infected abdominal aortic aneurysm.
- Coarctation of abdominal aorta

Causes of unilateral clubbing

- Axillary artery aneurysm.
- Bronchial arteriovenous aneurysm.
- Others: aneurysm of ascending aorta, sub¬clavian or innominate artery.

Causes of clubbing in a single finger

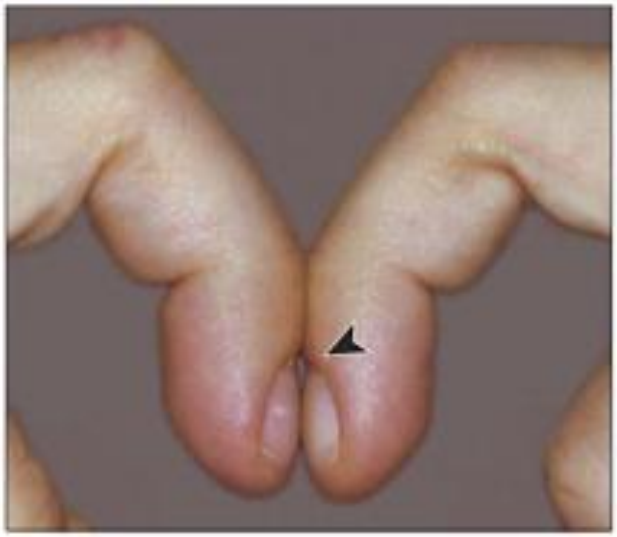
- Trauma (the commonest cause).
- Chronic tophaceous gout.
- Sarcoidosis.

Causes of clubbing with cyanosis

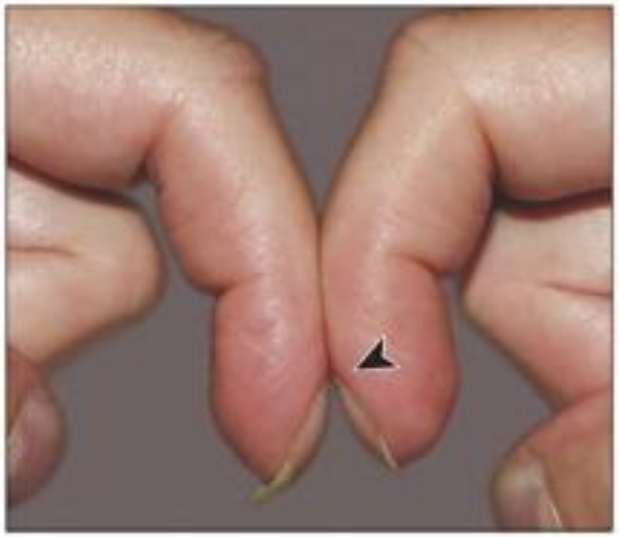
- Fibrosing alveolitis./ILD
- Cyanotic heart disease (Fallot's tetralogy).
- Cystic fibrosis.
- Bilateral extensive bronchiectasis.

A Schamroth sign

Normal

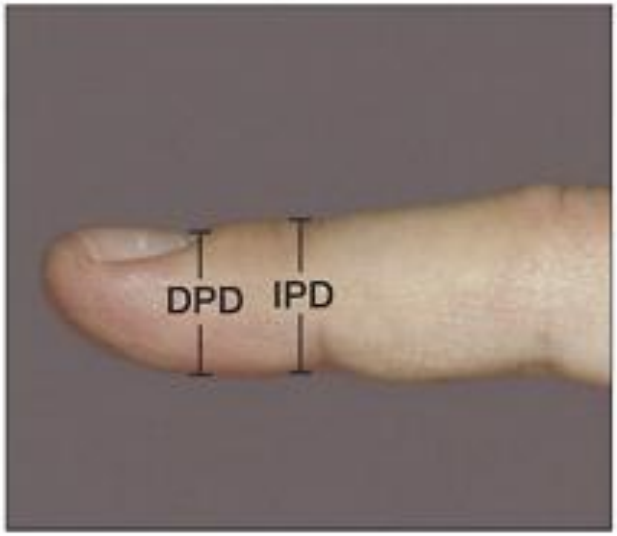


Clubbed

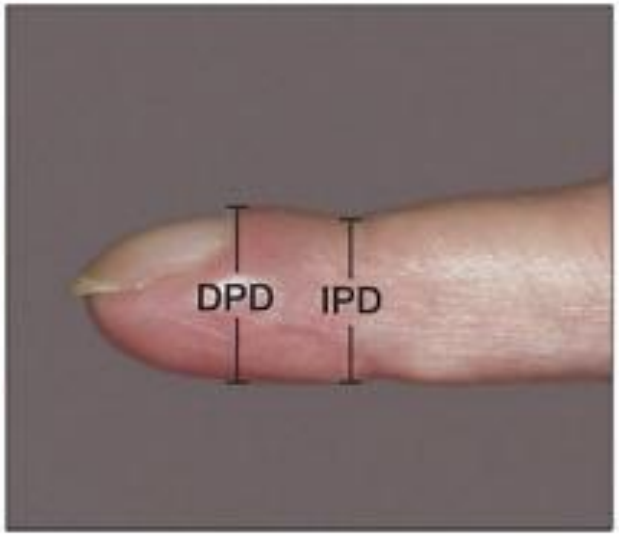


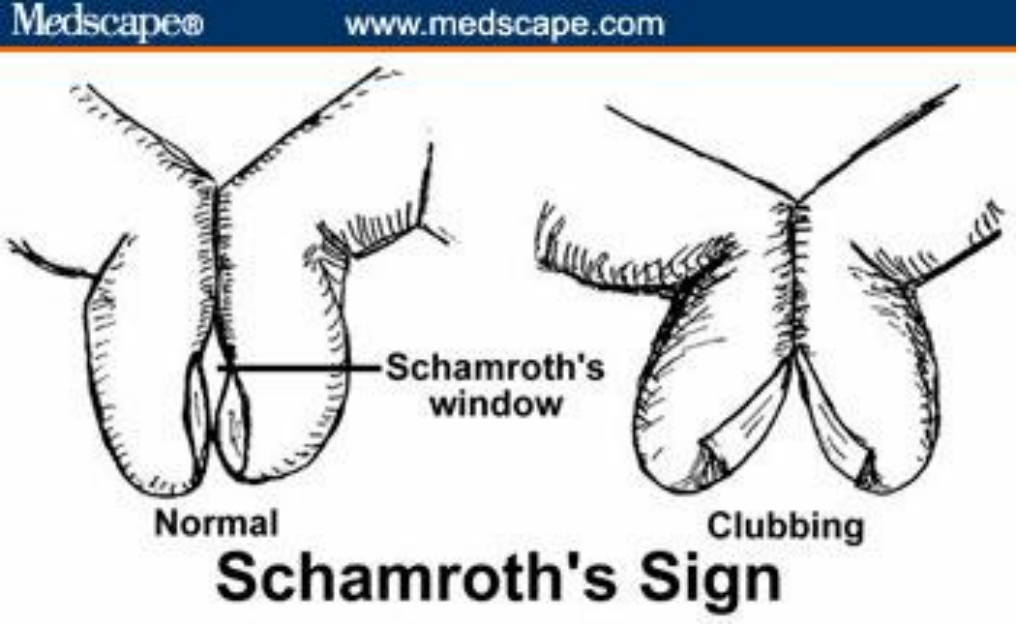
B Phalangeal depth ratio

Normal

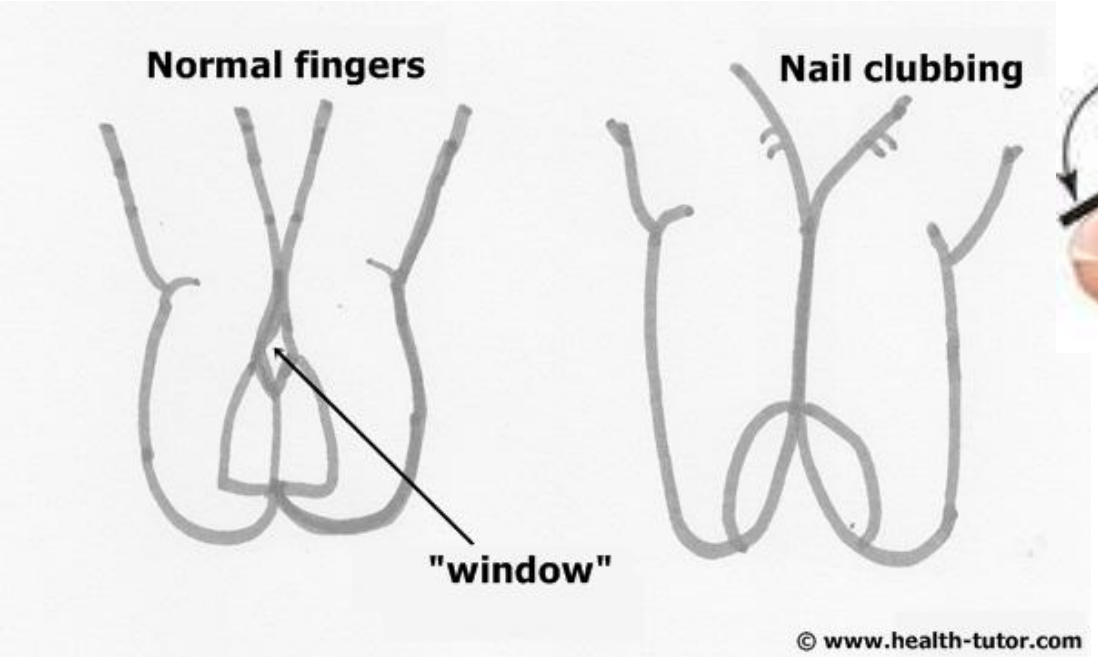


Clubbed




Medscape®
www.medscape.com
Schamroth's window
Normal
Clubbing
Schamroth's Sign


160°


Normal fingers
Nail clubbing
"window"
© www.health-tutor.com


180°

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staging of clubbing

1. **Stage one**: increased sponginess of proximal nail bed (fluctuation is positive). due to increased prolif¬eration of cells at nail base
2. **Stage two:** Obliteration of the angle of the nail (i.e. the angle between nail base and its adjacent skin, the angel of Lovibond).
3. **Stage three:** Increased curvature of nails. Hence nails become convex
4. **Stage four:** Drumstick appearance
5. **Stage five:**Hypertrophic osteoarthropathy

what is Hypertrophic osteoarthropathy

This is the combination of clubbing and Thickening of the distal ends of the long bones especially at wrists and ankles.It is due to subperiosteal new bone formation.
found in bronchial carcinoma

how will examination of clubbing

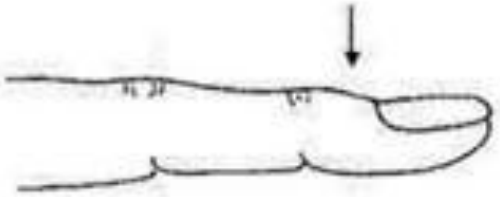
step one :
first inspection ---
sit down and keep the patient both palm on your hand and look at the angle between nail base and its adjacent skin ----patient hands and your eyes will remain same horizontal plane /

step two:
now do fluctuation test

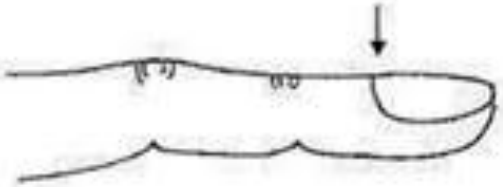
step three
now do
Schamrotb's signor Schamrotb's window test :
place the terminal phalanx / digit of thumb against each other
normally there is a diamond shape space between two nail bed
in clubbing space is disappear

Step four
do only if clubbing present to see Hypertrophic osteoarthropathy present or not
slightly press over distal surface of ulna and radius and patient will feel pain

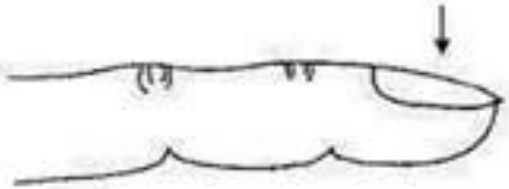
Stages of Clubbing



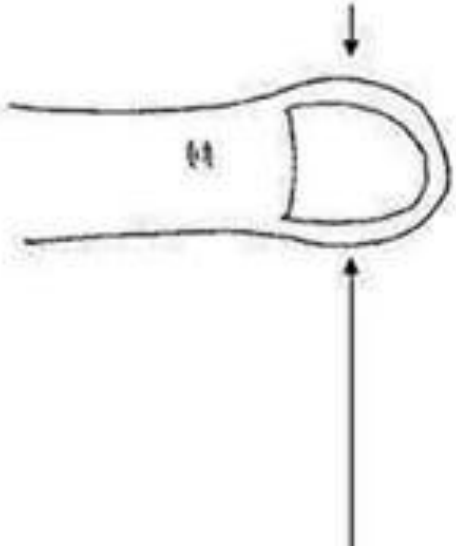
Stage 1: normal appearance and angle but increased fluctuancy of nail bed



Stage 2: loss of angle between nail and nail bed



Stage 3: increase curvature of nail



Stage 4: expansion of terminal phalanx
Drum stick appearance

What are the mechanisms of clubbing?
exact causes is not known • Arterial hypoxaemia • Vasodilatation (due to some humoral factor bra¬dykinin, prostaglandins, 5-hydroxytryptamine) • secretion of growth factors (such as Platelet-derived growth factor (PDGF) released from megakaryocyte**)**
Causes of acute clubbing ?
lung abscess infective endocarditis

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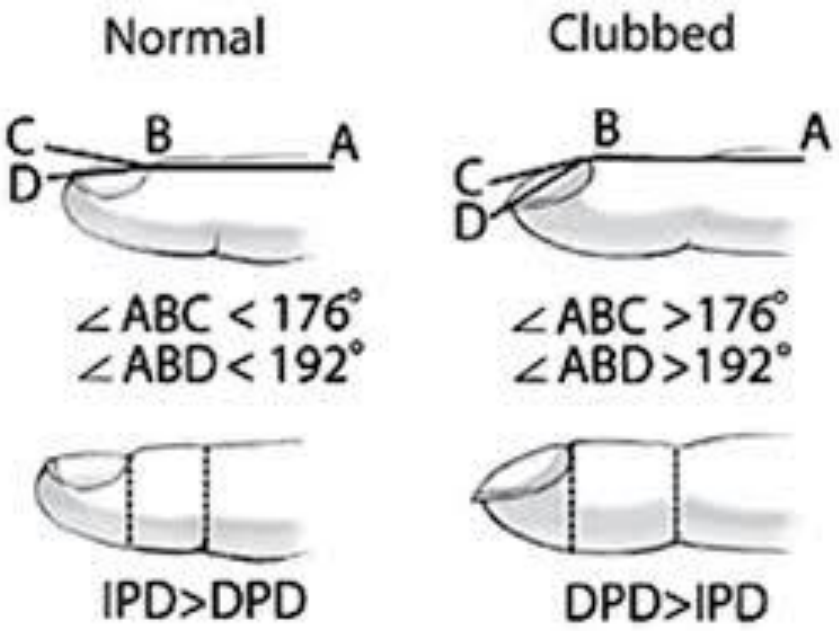

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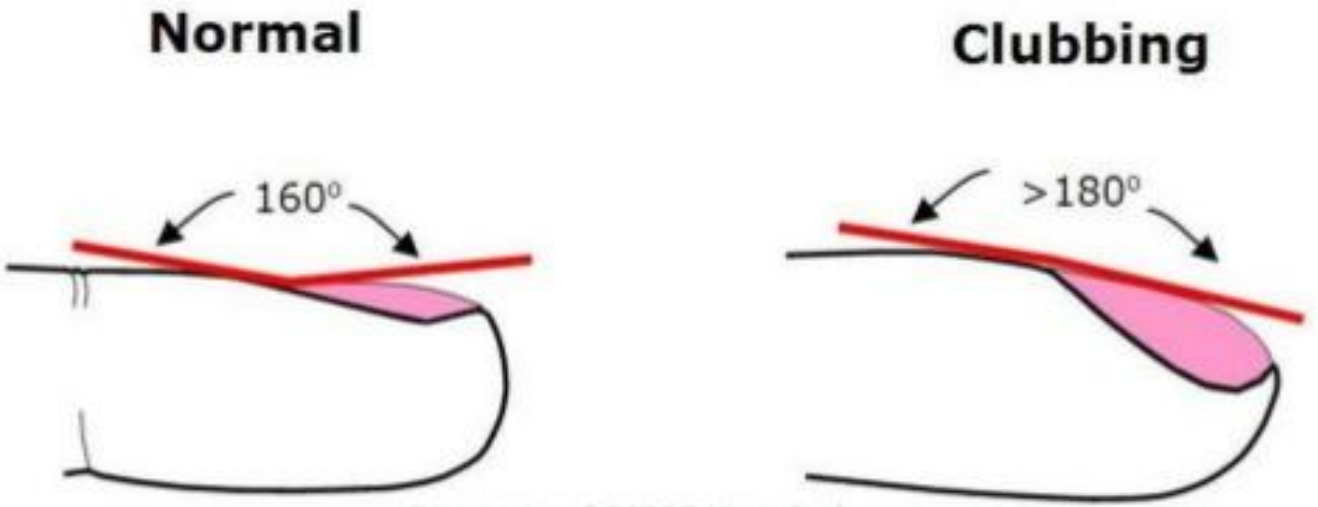

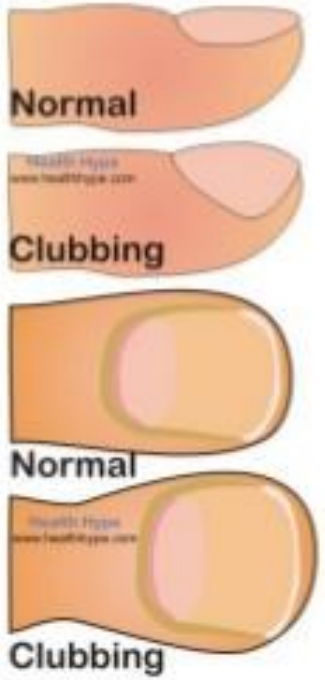

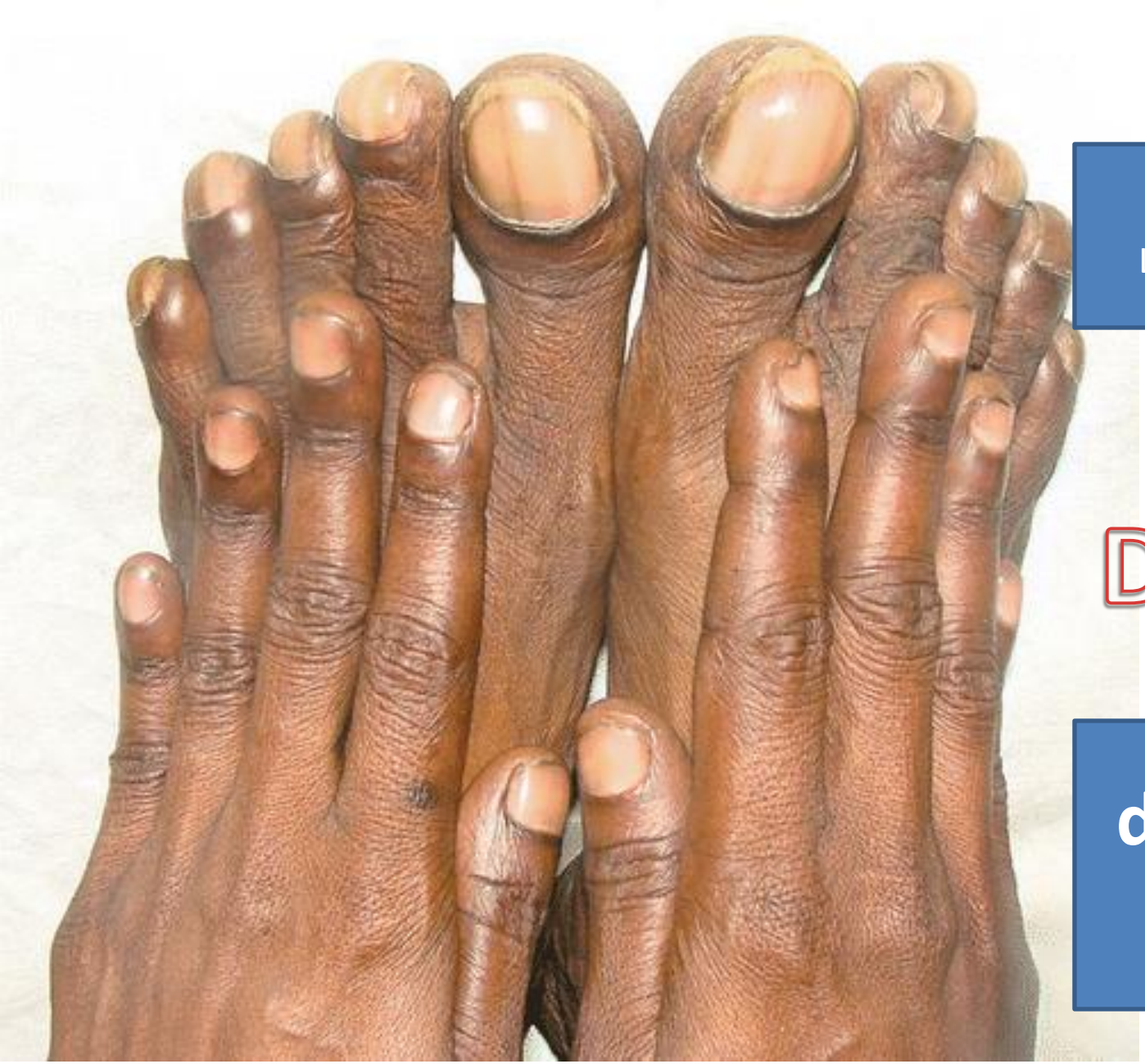

Upper limb –is normal
Lower limb ----clubbing

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differential clubbing

koilonychias

What are the causes of koilonychias?
Iron-deficiency anaemia if sir want to know other causes then only say the following otherwise not : • Trauma • Thyrotoxicosis. • Fungal infection
Q: **What is koilonychia?**
A: A disorder in which nail is concave or spoon shaped.
Q: **What is the mechanism of koilonychia?**
A: Unknown, result from slow growth of nail plate.
What are the stages of koilonychia?
• Dryness, brittleness and ridging (first stage). • Flattening and thinning (second stage). • Spooning or concavity (third stage).


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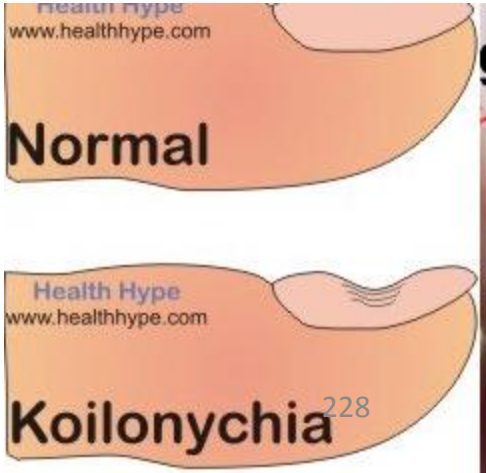
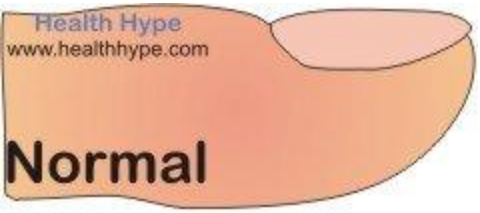
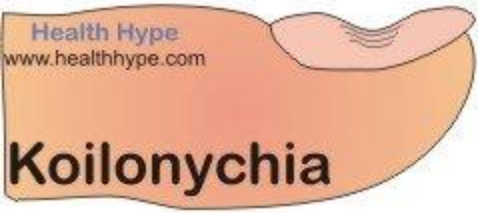
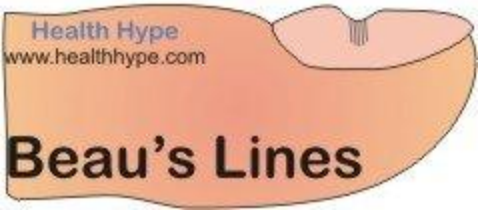
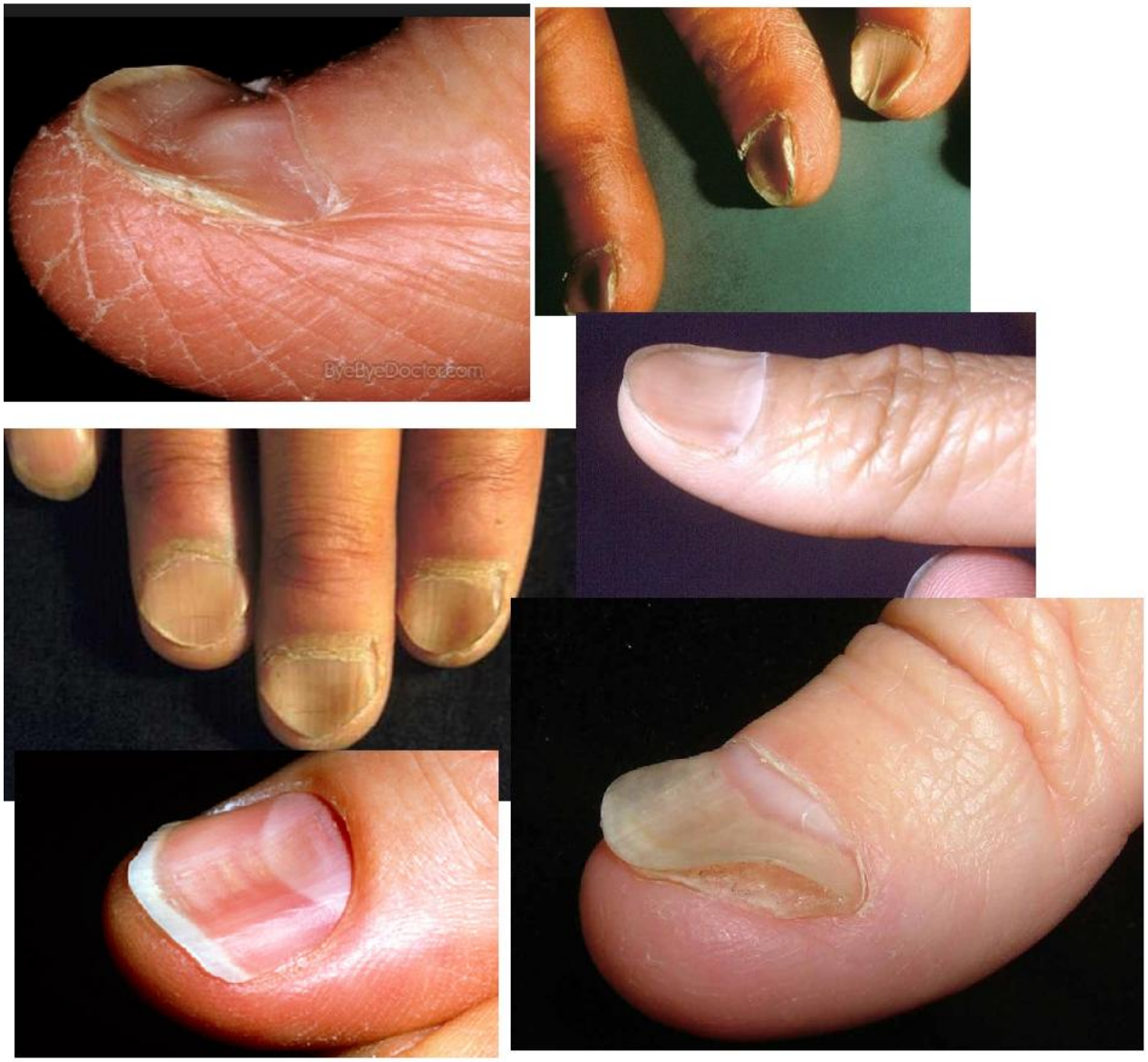
Koilonychia
Spooning
Dr.shamol
www.clinicalexams.co.uk


www.healthhype.com
Normal
Health Hype
www.healthhype.com
Koilonychia









KOILONYCHIA

leuchonychia

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What is leuchonychia ?
Whitish discoloration of nail. Leuconychia indicates hypoalbuminaemia
What are causes of leuconychia ?
• Renal cause (nephrotic syndrome) • Liver diseases (CLD, cirrhosis of liver). • Malnutrition (malabsorption,). • May be normal finding

what information or disease u can diagnose by The handshake ?	
Features	**Diagnosis**
Cold, sweaty hands	Anxiety
Hot, sweaty hands	Hyperthyroidism
cold calmy skin	shock
Large, fleshy, sweaty hands	Acromegaly
Dry, coarse and rough skin	Hypothyroidism
Cold, dry hands	Raynaud's phenomenon
Deformed hands/fingers	Rheumatoid arthritis Dupuytren's contracture
Delayed relaxation of grip	Myotonic dystrophy

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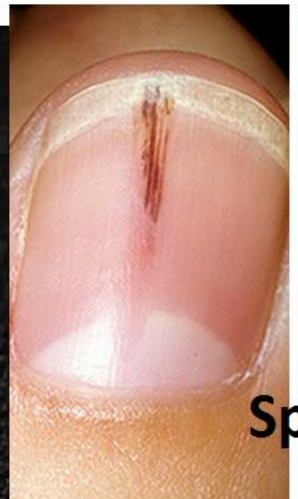
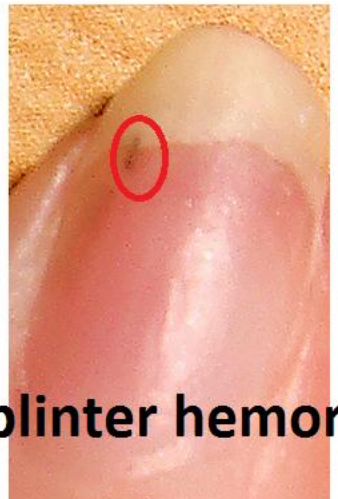
TO REMEMBER
DR .SHARMA
D- Dupuytren's contracture
R- Rheumatoid arthritis
S— shock
H— Hyperthyroidism & Hypothyroidism
A- Anxiety
R- Raynaud's phenomenon
M— Myotonic dystrophy
A-- Acromegaly

What information you may get from the nail **SHE BLOCK MY RIB**	
S--Splinter haemorrhages	Infective endocarditis, vasculitis
H-- Half and half naIL	proximal portion white to pink and distal portion red orbrown: Terry's nails) Chronic renal failure, cirrhosis
E-- Nail fold erythema and telangiectasia	Systemic lupus erythematosus
B -Beau's lines	Non-pigmented transverse bands in the nail bed found in Fever, cachexia, malnutrition
L -Leuconychia	Hypoalbuminaemia
O --Onycholysis	Thyrotoxicosis, psoriasis,
C-- Clubbing	Lung cancer, lung abscess , infective endocarditis, cyanotic heart disease, IBD
K-- Koilonychia	spoon-shaped nails Iron deficiency, fungal infection, Raynaud's disease
M --Mees'	Single transverse white band found in Arsenic poisoning, renal failure or severe illness
Y --Yellow nails	Yellow nail syndrome
R --Red nails	Polycythaemia (reddish-blue), carbon monoxide poisoning (cherry-red)
I—infarction in nail	Infective endocarditis, vasculitis
B --Blue nails	Cyanosis, Wilson's disease

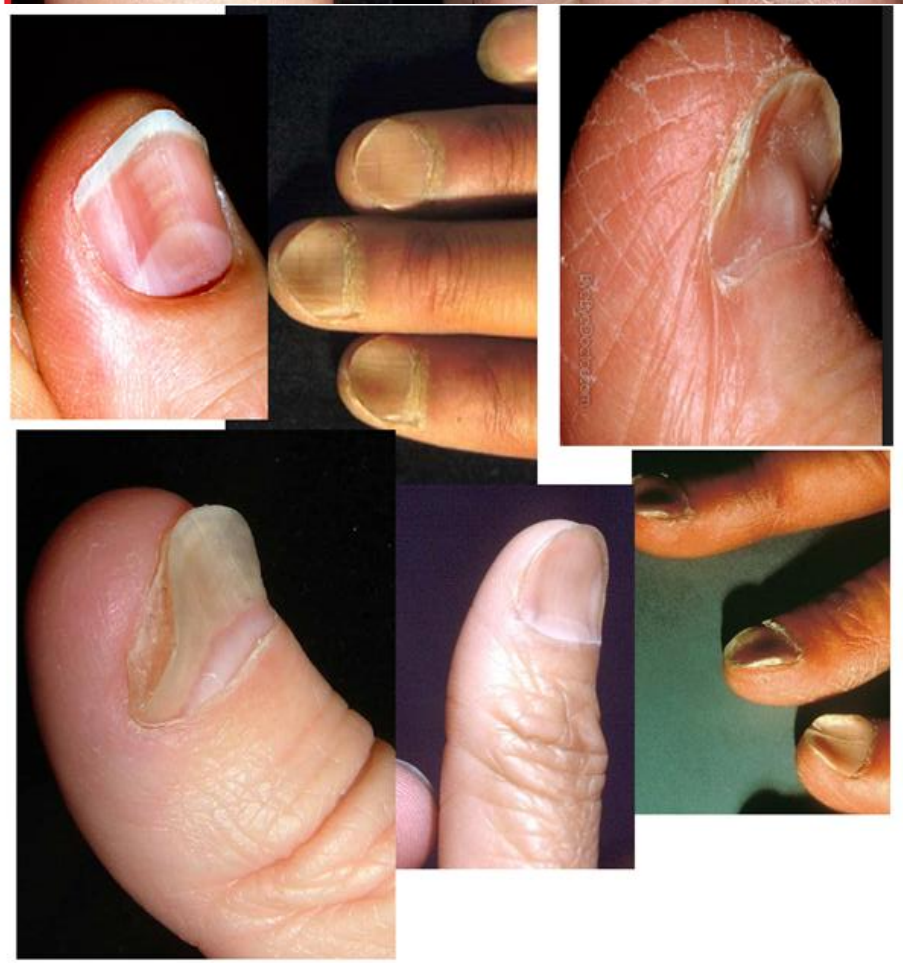




Splinter hemorrhage

onycholysis

KOILONYCHIA



Mees' Lines

clubbing

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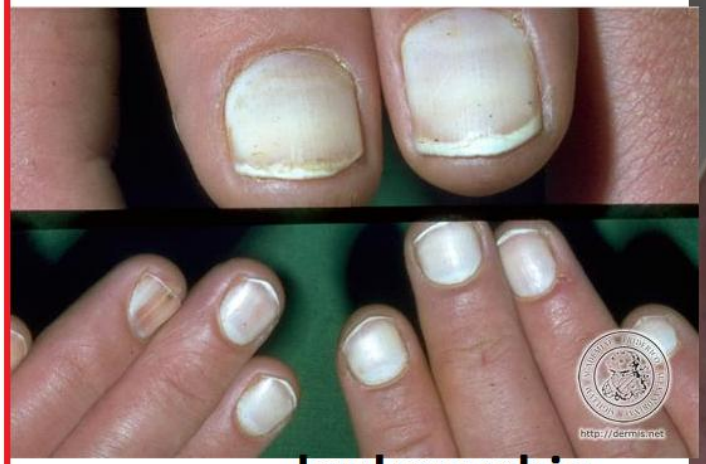
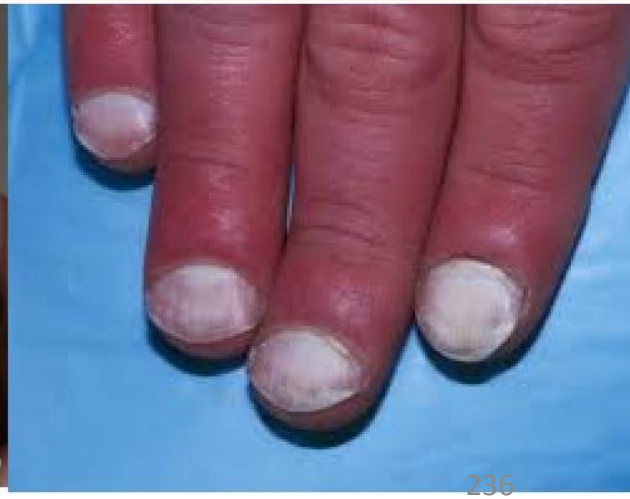


leukonychia



INFORMATION FORM HAND	
nail	**finger palp**
clubbing koilonychias leuconychia splinter haemorhagge capillary refilling –dehydration nail infarction	janeway lision oslar node
palmer	**dorsum**
palmer erythema Dupuytren's contracture claw hand wrist drop wasting of thenear and hypothenaer Myotonic dystrophy	dorsal guttering swan neck boutonniere Z from ulnar deviation swell finger grotron papule
finger	**Anxiety** Hyperthyroidism Raynaud's phenomenon Acromegaly
rheumatoid nodule calcinosis tophi trigger finger	

what is palmer erytema
Palmar erythema is a reddening of the skin on the **palmar** aspect of the hands, usually over the hypothenar eminence. It may also involve the thenar eminence and fingers. It can also be found on the soles of the feet, when it is termed plantar **erythema**.
pathogenisis
increase circulating levels of estrogen in both cirrhosis and pregnancy, estrogen was thought to be the cause for the increased vascularity
Causes of palmar erythema
C--TROPP ✓ C--Cirrhosis ✓ T--Thyrotoxicosis ✓ R--Rheumatoid arthritis ✓ O—Oral contraceptic pill ✓ P--Pregnancy ✓ P--Polycythaemia

what is Spider telangiectasia?

Spider telangiectasia is a central arteriole from which small vessels radiate

What is the site ?

- along the distribution of superior vena cava circulation
- usually above the nipple
- Normally found: 1or 2 in 2 % people

what is the causes ?

Cause due to: hyper dynamic circulation. In case of CLD due to access oestrogen as metabolism of oestrogen decreased by diseased liver.

C--PHOT

- ✓ C-CLD
- ✓ P-pregnancy
- ✓ H-viral hepatitis
- ✓ O-OCP
- ✓ T-thrytoxicosis ,

How will u see it?

With the help of pin head or glass slide

How will differentiate between purpura and spider nevi ?

Purpura does not blanch on pressure (as it extravascular)

Spider nevi : Blanch on pressure and when release the pressure it will reappear

What is gynaecomastia?
Enlargement of male breast tissue due to proliferation of glandular component.
causes 0f gynaecomastia ?
To remember --- BLAST3 B—Bronchogenic carcinoma L—chronic liver disease A—Adrenal carcinoma S—spirolactone T1--Testicular tumour (leydig cell), T2-- Testicular failure (trauma, orchitis, radiation) T3---Thrytoxicosis
What is the mechanism of gynaecomastia ?
Mechanism: Either due to increase activity of oestrogen or decrease activity of testosterone
How to differentiate gynaecomastia from lipomastia
Lipomastia is due to deposition of fat in the breast. Therefore, it is soft. **Gynaecomastia** is the enlargement of male breast due to glandular tissue proliferation. Hence, it is firm, hard or rubbery
Name some drug responsible gynaecomastia ?
Spirolactone , cemitidine , digoxin
Cause of gynaecomastia is in CLD?
Due CLD it self @ drugs spirolactone differentiate between two -- Painful gynaecomastia found in Spirolactone

where and how bony tenderness is seen
Test bony tenderness by pressing over the manubium sternum with right thumb but look at the face of the patient while pressing.
where bony tender ness is positive ?
acute leukaemia
other sites ?
over clavicle scapula spine
how many pressure is given ?
4 dyne or until nail become white

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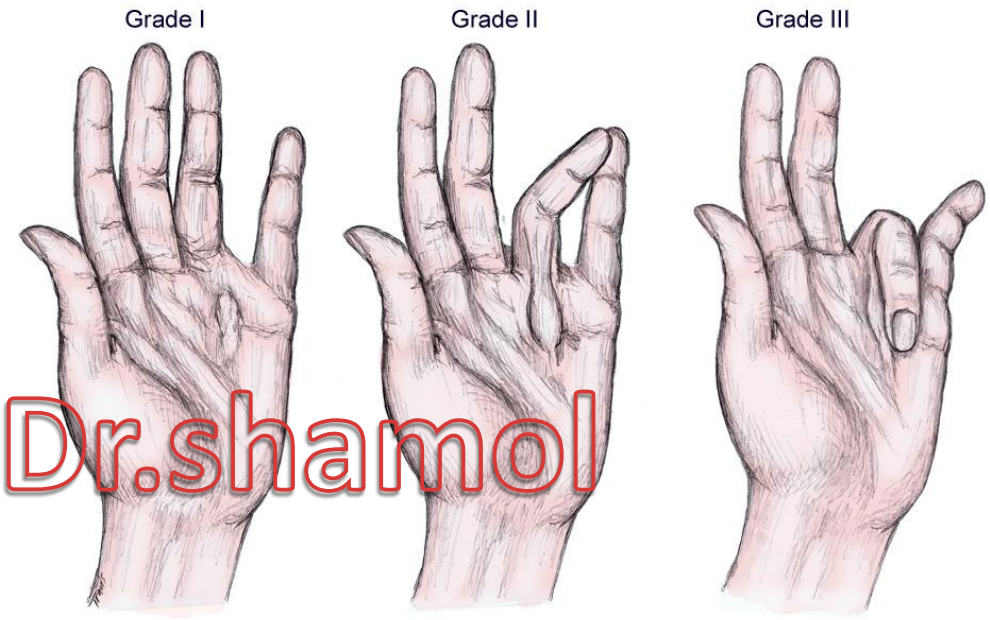
Dupuytren contracture ?

Dupuytren disease is a fibrosing disorder characterized by is a fixed flexion contracture of the hand due to slowly progressive thickening and shorting of the palmar fascia

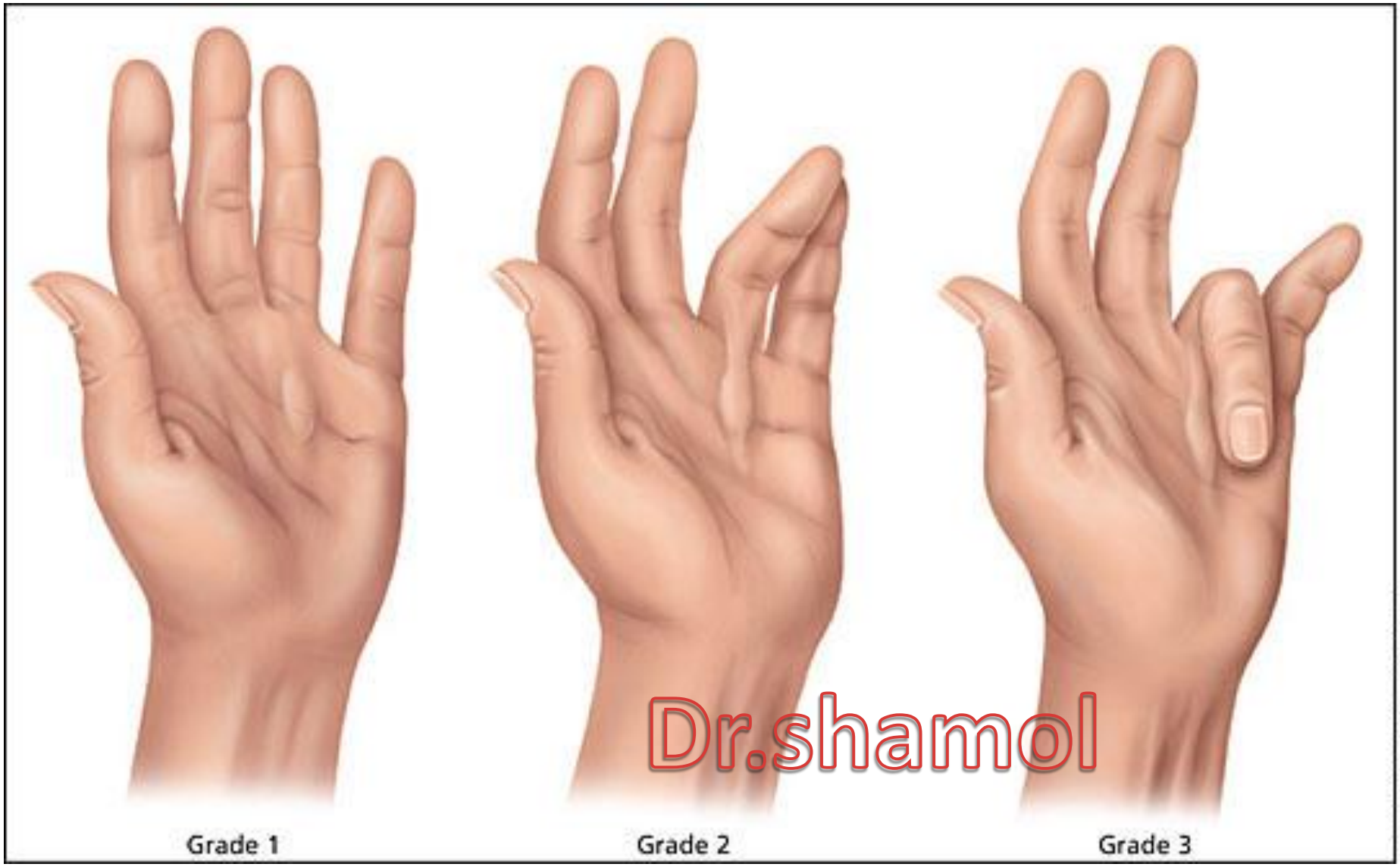
- it causes flexor deformity of metacarpophalangeal (MCP) joints or the proximal interphalangeal (PIP) joints
- usually affects the fourth and fifth digits (the ring and small fingers)

causes

DM
CLD
Alcoholism
idiopathic



- **Grade 1** - Thickened nodule and band in the palmar aponeurosis; may have associated skin abnormalities
- **Grade 2** - Development of pretendinous and digital cords with limitation of finger extension
- **Grade 3 -** Presence of flexion contracture


Grade 1
Grade 2
Grade 3
Dr.shamol
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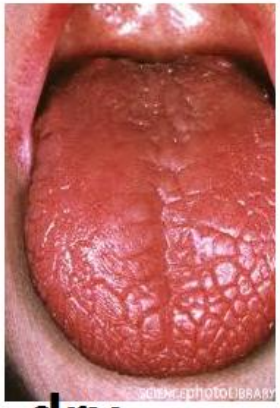
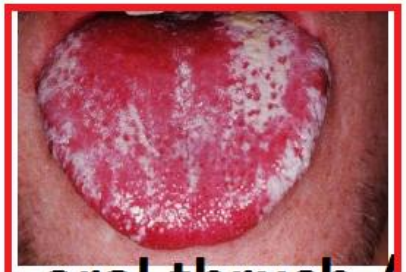
	information u got form the tongue	
size	macro glossia	
	microglossia	
	dry tongue	dehydration , sjogren's syndrome
color	pale tongue	anemia (pale and smooth and loss of papillae –iron def anaemia)
	yellow	jaundice
	blue tongue	cyanosis
	Magenta	riboflavin deficiency
	pigmentation	Addison
surface change	Raw beef tongue	red swollen and painful tongue ---Vit—B12
	strawberry tongue	scarlet fever
	leucoplakia	HIV
	angry looking tongue	central coating with red tip and margin — enteric fever
	geographic	
	ulcer in tongue	–apthous ulcer , malignant ulcer , bechet disease , celiac disease , SLE
neurologic tongue	spastic tongue	pseudo bulbar palsy
	flaccid tongue with fasciculation	bulbarpalsy
	loss of taste sensation ---	ant 1/3 – facial nerve post 2/3 –gloss pharyngeal nerve



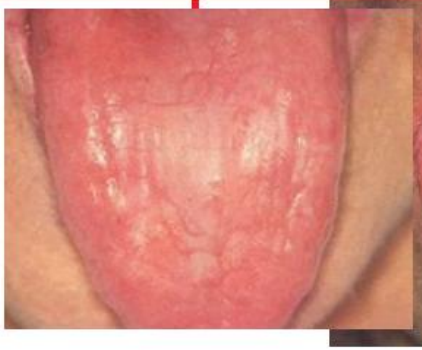
dry tongue

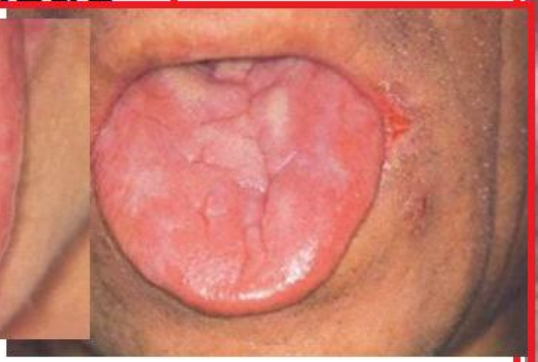
strawberry tongue

Geographic Tongue

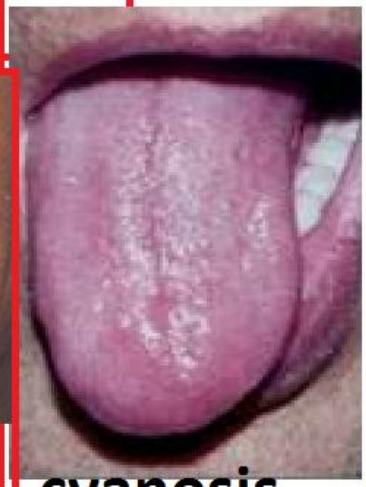


oral thrush / candida



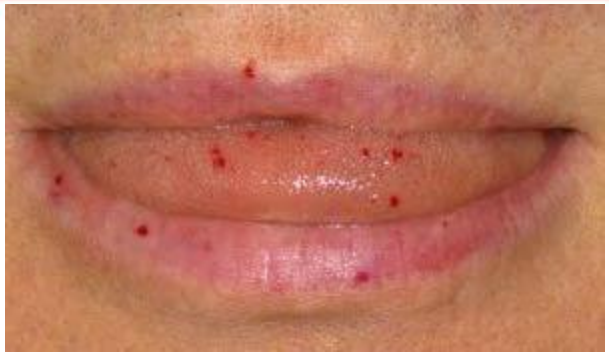


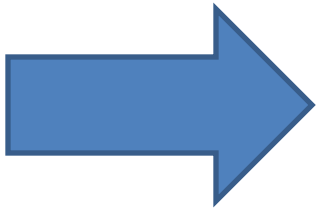
tongue in anaemia



cyanosis

tongue in scarlet fever





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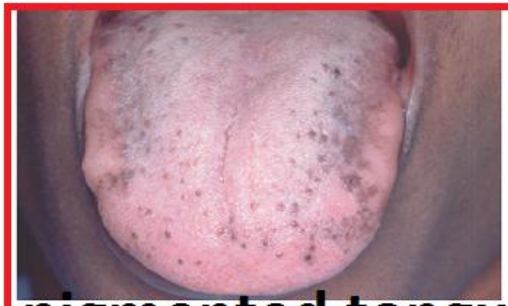
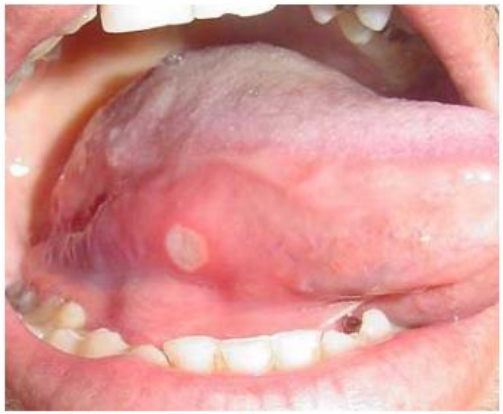
Hereditary haemorrhagic telangiectasia (HHT)

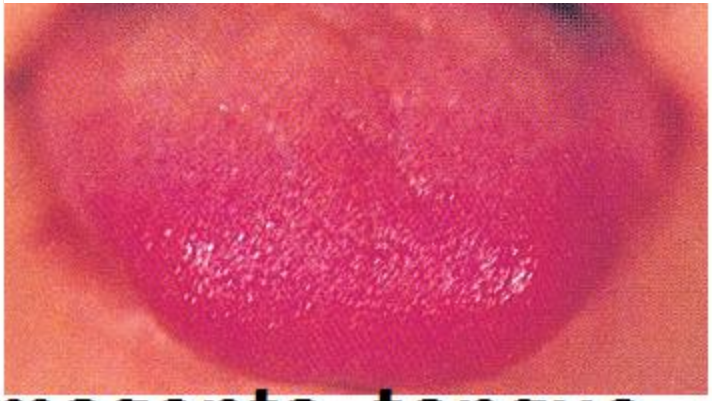
raw tongue
B12



pigmented tongue
addison



apthus ulcer



magenta_tongue
riboflavin defi

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what are the causes of macroglossia and microglossia ?

macroglossia to remember ADAM	**Microglossia**
✓ Acromegaly ✓ Down syndrome ✓ Amyloidosis (primary) ✓ Myxoedema (hypothyroid)	✓ cerebral diplegia ✓ MND ✓ wasting of tongue due to LMN of XII nerve ✓ Bulbar and pseudo bulbar palsy

what is the site of test sensation ?

sweet –tip
sour –at margin
bitter –at posterior
salt –any where

What do u mean by halitosis ?

mal odorous breath …or foul-smelling breath is called Halitosis

causes

- ✓ poor oral hygiene
- ✓ lung abscess
- ✓ bronchiectasis
- ✓ hepatic and renal failure
- ✓ intestinal obstruction

What information u can get from eye	
from eye	✓ anaemia ✓ jaundice ✓ subconjuntival haemorrhage ✓ blue sclera – ✓ KF-ring –willson ✓ Arcus senilis
eye lid	✓ xanthelasema –hypercholesterolemia ✓ unilateral complete ptosis –3rd nerve palsy , ✓ unilateral partial ptosis—Horners syndrome ✓ bilateral ptosis ----myasthenia graves ✓ exophthalmas ---graves disease ✓ lid leg and lid retraction –graves disease
pupil	✓ dilated ---3rd nerve ✓ constricted pupil – OPC poisoning /horner ✓ pin point –pontine haemorrhage ✓ irregular pupil --- Argyl Robertson pupil
fundoscopy	✓ DM and HTN retinopathy ✓ optic atrophy ✓ papillaedema ✓ roth spots --- SLE, infective endocarditis , aplastic anaemia

Causes of blue sclera--HOME
m-Marfans H--Homocystinuria E--Ehlers-Danlos syndrome O--Osteogenesis imperfecta

Temperature

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VITAL SIGNS
Certain important measurements must be made during the assessment of the patient. These relate primarily to cardiac and respiratory function and comprise: ● pulse (page 63) ● blood pressure (page 67) ● respiratory rate (page 138) ● temperature (page 36).

What is the normal temperature ?
Normal temperature is 370 C or 98.40 F
Site where temperature seen?
in oral cavity-- under surface of the tongue in the axilla in rectum or internal ear
Where core temperature is seen?
in rectum or the external auditory meatus
What is the difference of temperature in different site?
temperature in mouth is 0.5°C or 1^0 F higher than the axilla temperature in rectum is 0.5°C or 1^0 F higher than the mouth
When temp is highest n lowest? What Is the diurnal variation of temp?
body temperature is lowest in the morning and reaches a peak between 6 pm and 10 pm this diurnal difference is not more than 0.5^0 C
What do you mean by fever?
Fever is an elevation of body temperature that exceeds the normal daily variation and occurs in conjunction with an increase in the hypothalamic set point (e.g., from 37°C to 39°C).
What do you mean by hyperthermia ?
Hyperthermia is characterized by an uncontrolled increase in body temperature that exceeds the body's ability to lose heat. The setting of the hypothalamic thermoregulatory center is unchanged

What is hyperpyrexia?
when body temperature increases hyperpyrexia defined as above 41.6°C
causes cerebral malaria garm negative septicaemia heat stroke malignant hyperthermia-drug ➢ anaesthetic agents [e.g. halothane] or ➢ muscle relaxants [e.g. suxamethonium]), ➢ the neuroleptic malignant syndrome (a reaction to antipsychotic medication) intracranial haemorrhage or head injury

Deference between hyperthermia and fever		
	FEVER	**HYPERTHERMIA**
causes /pathology	Involve pyrogenic cytokines	Failure in thermoregulatory homeostasis
Change in hypothalamic set point	occur	remain unchanged
temp	Rarely exceed 41 ^{0}C	Can exceed 41 ^{0}C
Complications	rare	common
Diurnal variation	present	Absence

Classify fever with definition and example?

Type of fever

- Continued
- Remittent
- Intermittent -
  - a.Quotidian
  - b.Tetrtian
  - C.Quartan

1. Continued fever : When fever does not fluctuate more than about 1` C (1.5' F) during 24 hours but never touches the base line is called continued fever.

- **Causes** :-

I. I .Typhoid fever
II. 2_ Millary tuberculosis
III. Lobar pneumonia

2. Remmittent fever

- When daily fluctuations exceed 2^0C called **re**mittent fever.
- **Causes**

I. Amoebic liver abscess
II. Lung abscess
III. Collection of pus ¡n the tissues

3. Intermittent fever

When the fever is present only, for several hours during the day it is called intermittent-fever.

a) Quotidian:

When a paroxysm of intermittent fever occurs daily. the type is quotidian.

Cause - Kala-azar (double quotidian)

b) Tertian

When fever comes on alternate days, it is tertian.

Causes: P. Vivax and P .Ovale Malaria.

C) Quartan

When there is Two days interval between two consecutive attacks. Then it is call quartan.

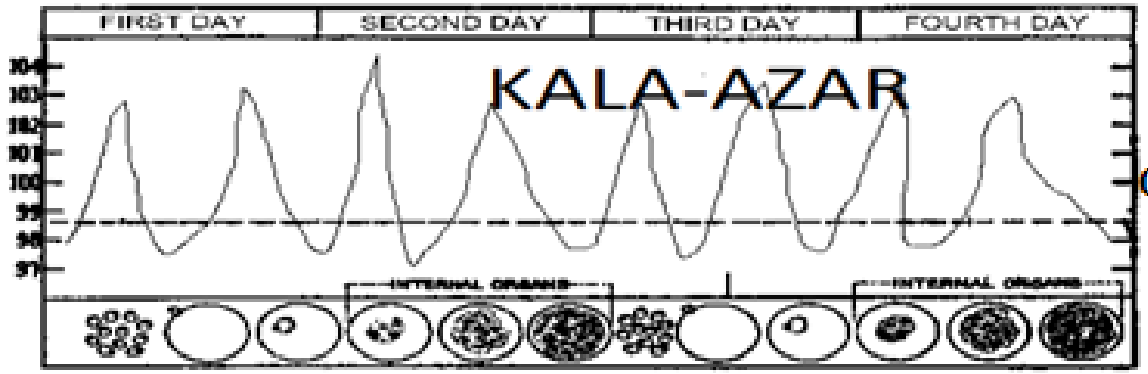
Cause- P. Malariae infection.

Pel-Ebstein fever

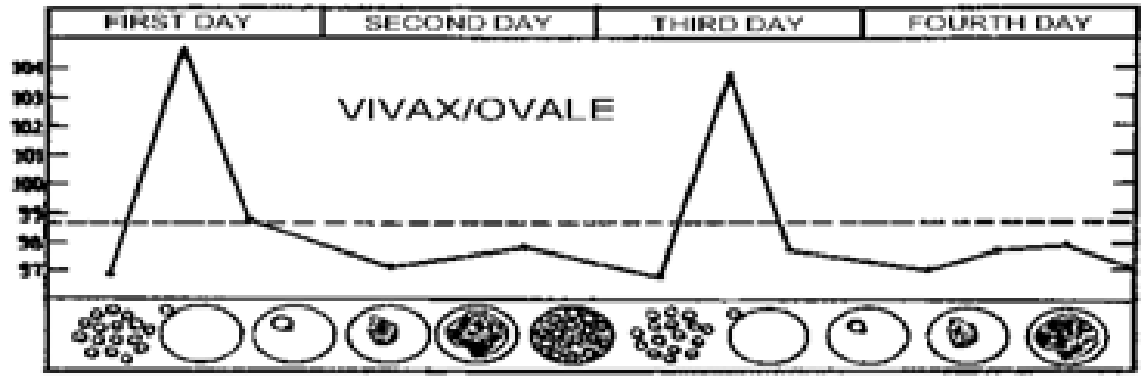
A specific kind of fever associated with Hodgkin's lymphoma, being high temp for one week and low temp for the next week and so on

Stepladder pattern

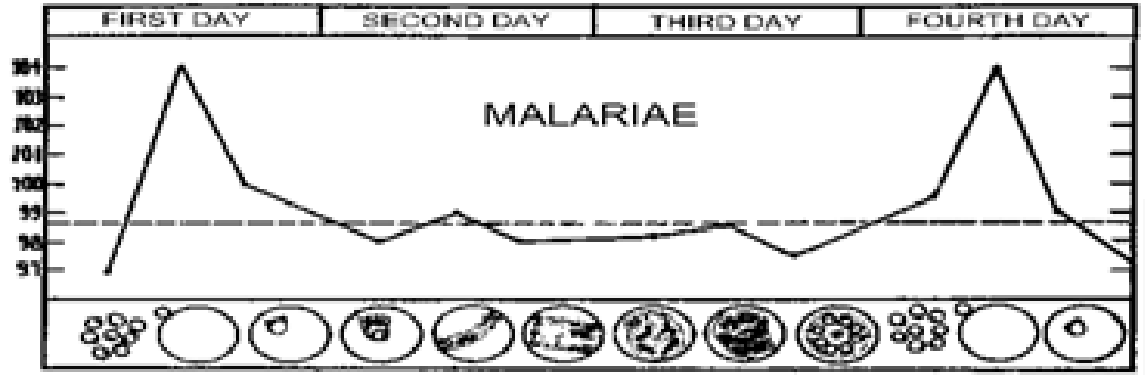
Typhoid fever may show a specific fever pattern, with a slow stepwise increase and a high plateau

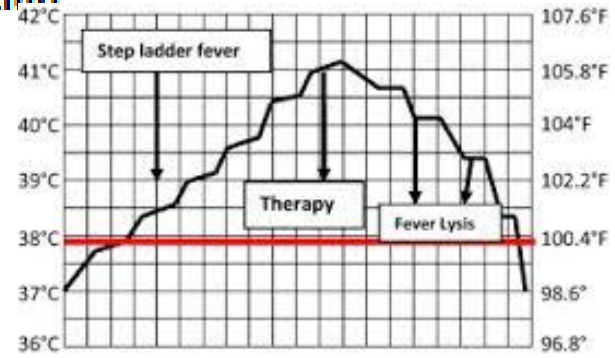


Quotidian

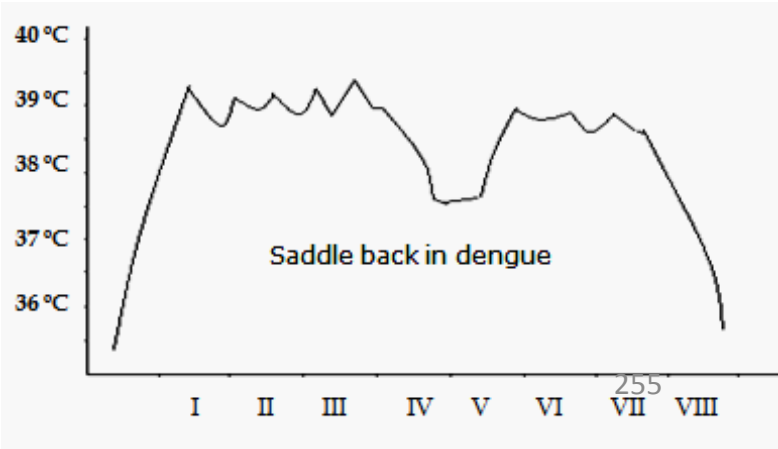


Tertian





Quartan



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Fever with relative bradycardia	Fever with relative tachycardia
in this condition increase pulse rate less than 10 / min for per degree F increase of temperature – example : **1. viral fever --dengue** **2. first week of enteric fever,** other **1. pyogenic meningitis** **2. leptospirosis** **3. brucellosis**	increase pulse rate more than 10 / min fo per degree F increase of temperature is called relative tachycardia Example : 1. acute rheumatic fever 2. polyarteritis nodosa

Causes fever with rash according to day of appearance?

very sick person must take double eggs

1. 1st day -> very --varicella (chicken pox)
2. second day → sick --scarntlet fever
3. third day → person -- pox (small pox)
4. fourth day → must --measles , rubella /german measles
5. fifth day → take --typhus
6. six day → double --dengue
7. seven day → eggs ---enteric fever

a patient with three days fever	more than 7 day fever
viral fever malaria UTI pneumonia	enteric fever Malaria pneumonia TB (>2week) kala-azar (>2week) liver absecess

fever with unconsciousness
➢ cerebral malaria ➢ encephalitis ➢ meningo-encephalitis

PUO?

PUO is defined as a temperature persistently above 38.0 °C for more than 3 weeks, without diagnosis despite initial investigation
during 3 days of inpatient care or
after more than two outpatient visits

Causes of PUO : **MIC**

Malignancy----

- Heamatological malignancy :lymphoma, leukamia, myeloma
- Solid tumour : renal,liver,colon carcinoma

Infection-------Abscess, infective endocarditis , TB

Connective tissue disease—SLE , vasculitis , adult still

What is hypothermia ?

Hypothermia is defined as a temperature of less than 35°C.
Usually measure in core temperature

- Prolong water immersion
- exposure to cold weather (elderly immobile patients)
- severe hypothyroidism/maxedema coma
- drug overdosage
- alcohol intoxication
- stroke or head injury

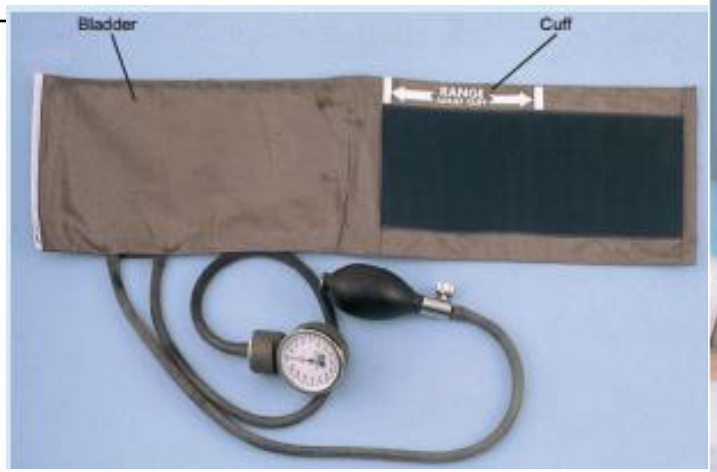
What is Fictitious fever? Clue of Fictitious fever ?

Fictitious fever is produced artificially by the patient or an attendant

A—**appearancc**—Patient looks well
B— **Bizarre** temperature chart with temperatures >41°C
C— No **correlation** between temperature and pulse rate
D--- absence of **diurna**l variation
E— **ESR and C-reactive** protein is normal
F—**fall of temp**—No sweating during when temp fall or subsided
g—X
H— Evidence of **self-harm** ,injection
I—**independent observer**—Temperature is normal when taken by an independent supervised observer

causes of immune-compromise 3 D
D---due to disease 1. DM 2. HIV 3. Malignancy –lymphoma , leukemia 4. Disease of different organ a. Renal failure b. Liver cirrhosis
D—drug 1. Corticosteroids 2. Chemotherapy 3. immunosuppressants drug
D—deficiency 1. Malnutrition 2. Splenectomy

Machine needed to measure BP
•BP machine
•stethoscope
name of BP machine is
sphygmomanometer
part are :



1. inflatable bladder with cuff
2. Meter
3. Pump

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The standard cuff is 12 ×23 cm appropriate for arm circumferences .
the inflatable bladder of the cuff

- Width of should be about 40% of upper arm circumference (about 12–14 cm in the average adult).
- Length should be about 80% of upper arm circumference (almost long enough to encircle the arm).

- , If the cuff is too small(narrow), the blood pressure will read high
- if the cuff is too large(wide), the blood pressure will read
  - low on a small arm and
  - high on a large arm

how measure BP pressure?

pre-requisite

Use a machine that has been validated, well maintained and properly calibrated

Measure sitting BP routinely, with additional standing BP in elderly and diabetic patients and those with possible postural hypotension

Remove tight clothing from the arm

Support the patient's arm comfortably at about heart level.

Two method

- plapatory and
- auscultatory

1. Apply the cuff to the upper arm with the centre of the bladder over the brachial artery
2. Use a cuff of appropriate size (the bladder must encompass > two-thirds of the arm)
3. Palpate the brachial pulse.
4. Inflate the cuff until the pulse is impalpable. Note the pressure on the manometer. This is a rough estimate of systolic pressure
5. now inflate the cuff another 10 mmHg and listen through the stethoscope over the brachial artery.
6. Deflate the cuff slowly (2 mmHg per second) until regular sounds are first heard. Note the reading to the nearest 2 mmHg. This is the systolic pressure.
7. Use phase V (disappearance of sounds) to measure diastolic BP
8. Take two measurements at each visit

Write down the phases of Korotkoff sounds ?

five phases of Korotkoff sounds as the cuff is deflated:
Phase 1: the first appearance of the sounds marking systolic pressure
Phase 2 and 3: increasingly loud sounds
Phase 4: abrupt muffling of the sounds
Phase 5: disappearance of the sounds
phase 1 is systolic BP and phase : 5 is diastolic BP
SN : in those conditions where Korotkoff sounds remain audible despite complete deflation of the cuff (aortic regurgitation, arteriovenous fistula, pregnancy) here phase 4 must be used for the diastolic measurement

Define BP and classify?

sustained elevation of blood pressure / arterial pressure above the normal level is called Hypertension
two type

- Essential hypertension ((95%)
- Secondary hypertension (5%)

casues of secondary hypertension ?

to mnemonic **REDCAP**

R—renal disease, ,

- **renal Parenchymal disease, glomerulonephritis**
- **renal artery stenosis**
- **polycystic kidney disease**

E-endocrine --2C,2T,2P

- **Cushing**
- **conns syndrome**
- **hypothyroidism**
- **hyperthyroidism**
- **phaeochromocytoma**
- **hyperparathyroidism**

D--Drug

- **OCP**
- **NSAID**
- **steroid**

C— Coarctation of the aorta

A—Alcohol

P—pregnancy

what is white coat hypertension

When BP measurement by physician show apparent hypertension in the clinic but show normal BP when it is recorded by automated devices used at home.
it occur 20% patient

Could be the blood pressure may differ in both hand?

yes

usually it is 5 to 10 mm of Hg

Pressure difference of more than 10–15 mm Hg occurs in

- subclavian steal syndrome,
- aortic dissection
- Coarctation of the aorta proximal to left subclavian artery

what is isolated systolic blood pressure?

when systolic blood pressure is ≥140 mm Hg, and diastolic blood pressure is <90 mm Hg.

what is the target BP?

in normal population

- 140 /90 mm of Hg

in DM

130 /85 mm of Hg

if proteinuria >1 gm/24 hr (CKD)

125/80 mm of Hg

What are causes of hypotension?

- shock
- hypovolumia
- Addison disease

what is postural hypotension

Orthostatic hypotension/ postural hypotension

it is defined as a fall in systolic blood pressure of at least 20mm Hg and diastolic blood pressure of at least 10 mm Hg when a person assumes a standing position from sitting position

Causes of postural hypotension ?

- hypovolemia
- drug
  - Diuretics, vasodilators, antidepressants
- Addison's disease
- DM
- Parkinson's disease

How will measure?

how to measure :

1. first measure BP in supine position
2. now deflate the bladder
3. ask the patient to stand
4. again inflate the bladder and measure the BP after 2 min of standing but within greater within 3 minutes of standing

what is the treatment of postural hypotension

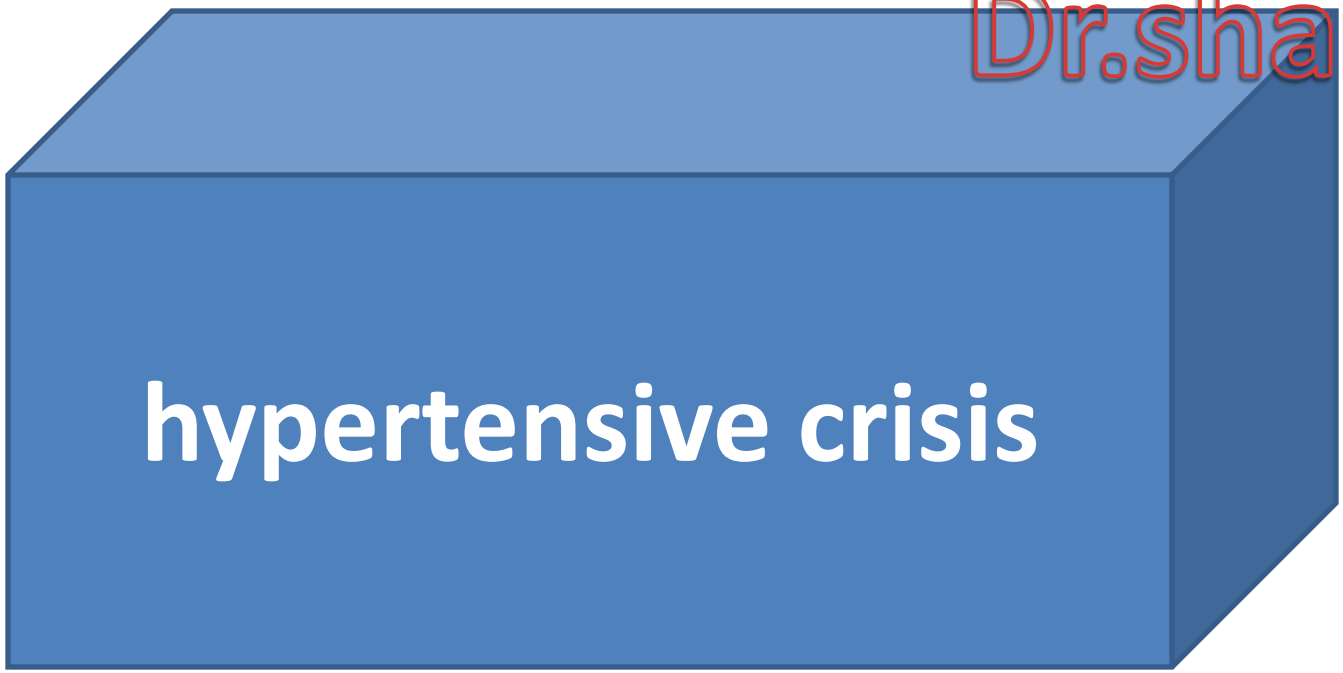
non pharmacological :

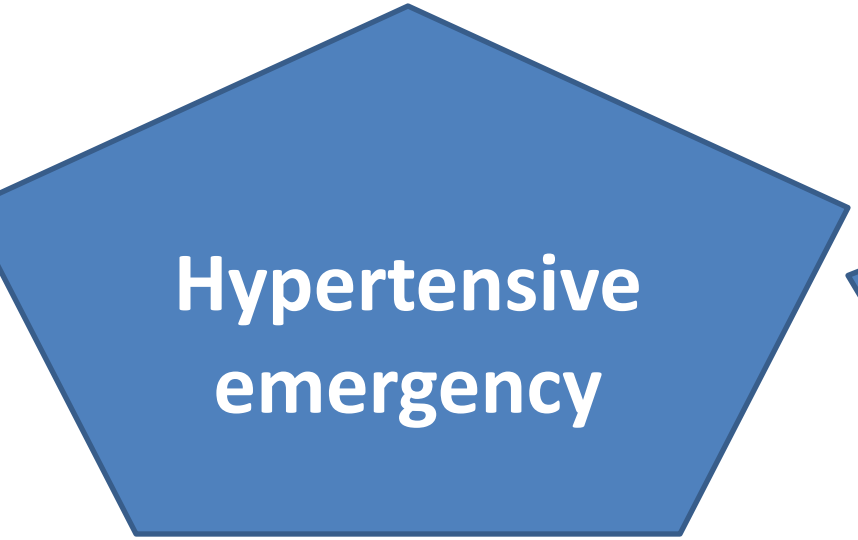
- correct hypovolemia
- stop the drug
- Support stockings—compression bandage

pharmacological :

- Non-steroidal anti-inflammatory drugs (NSAIDs)
- Fludrocortisone
- α-adrenoceptor agonist (midodrine)

if patient is pulse less how will measure the BP
if patients are pulseless due to from Takayasu arteritis, atherosclerosis if only in upper limb measure in lower limb keeping the patient on prone position and wrap cuff on thigh and measure in popliteal atery . if all limb are pulseless then measure with droppler flow
what is the causes of BP more in leg or arm then corresponding
BP more in leg then arm Takayasu arteritis Bp more in arm then leg coractation of aorta Dr.shamol
How will measure BP if patient mid arm circumference is more ?
▪ If the arm circumference is >50 cm and not amenable to use of a thigh cuff ▪ wrap an appropriately sized cuff around the forearm, ▪ hold the forearm at heart level and feel for the radial pulse ▪ and measure BP on radial artery
What will u do When you cannot hear Korotkoff sounds at all, ?
estimate the systolic pressure by palpation
what is malignant hypertension
what is hypertensive urgency and emergency ?


hypertensive crisis


Hypertensive emergency


Hypertensive urgency

Hypertensive emergency	**what it is**	**Severe elevation of** BP > 180 / 120 mm of Hg complicated by evidence impending or progressive target organ damage . • **They require immediate reduction of BP reduction (not necessarily to normal)**
	example	HTN Encephalopathy • Intracerebral haemorrhage • Acute MI • Acute LVF • Acute pulmonary edema • Unstable angina • Eclampsia
	place of Rx	Treatment in ICU with monitor Parental administration of Anti- HTN
	Goal of therapy	↓ BP not more then 25 % in 1 st hour.
	target BP	160/110 mm Hg in next 6 hrs Then reduction of BP to normal in next 24 -48 hrs
	hazard of sudden fall	Sudden fall may cause o Cerebral ischemia o Renal ischemia o Coronary ischemia

Hypertensive urgency	**define**	**Hypertensive urgency is** Severe elevation of BP without target organ damage Upper level of stage ii
		Patient is noncompliant or inadequate treated HTN with little or no Target organ damage
	example	Severe head ache • Epistaxis • Dyspnea • Severe anxiety

Malignant' or 'accelerated' phase?

Refers to a rapid rise in BP leading to vascular damage (pathological hallmark is fi brinoid necrosis in the walls of small arteries and arterioles).

The diagnosis is based on evidence of

- high BP Usually (eg systolic >200, diastolic>130mmHg)
- and rapidly progressive end organ damage, such as
  - retinopathy (grade 3 or 4),
  - renal dysfunction (especially proteinuria) and/or
  - hypertensive encephalopathy
  - Left ventricular failure may occur

prognosis?

Untreated, 90% die in 1yr; in Davidson –(untreated, death occurs within months) treated, 70% survive 5yrs.

It is more commo in younger patients and in black patients

PULSE

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what are the vital sign ?
• Pulse • Bp • Respiratory rate • Temperature

Difference between carotid and arterial pulsation		
	carotid / arterial pulsation	**venous / JVP**
direction	Rapid outward movement	Rapid inward movement
per heart beat	One peak per heartbeat	Two peaks per heartbeat
palpable	Palpable	Impalpable / only visible
pressure	Pulsation unaffected by pressure at the root of the neck	Obliterated/ diminished by pressure at the root of the neck
position	Independent position and respiration	varies with respiration and position
hepato-jugular reflux	no change	Rises with abdominal pressure

In examination of pulse what will u see?

- Rate
- Rhythm
- Volume
- Character
- Radio-radial delay
- Radio-femoral delay
- Condition of vessel wall

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Rate and rhythm seen –radial artery

Volume and character is seen in carotid artery also in brachial & femoral artery

Causes or sinus tachycardia and sinus bradycardia ?	
Cause of sinus tachycardia	Cause of sinus bradycardia?

Fast heart rate (tachycardia, > 100/min)
• **Physiological**
  ○ Exercise
  ○ Pain
  ○ Excitement/anxiety
• Hyper dynamic circulation
  ○ Fever
  ○ Hyperthyroidism
• Medication:
  ▪ sympathomimetics sulbutamol
  ▪ vasodilators
• **Pathological**
  ○ Atrial fibrillation
  ○ Atrial flutter
  ○ Supraventricular tachycardia
Ventricular tachycardia
	Slow heart rate (bradycardia, < 60/min
	• **Sinus bradycardia**
	  ○ Sleep
	  ○ Athletic training
	  ○ Hypothyroidism
	  ○ Medication:
	  ▪ Beta-blockers
	  ▪ Digoxin
	  ▪ Verapamil, diltiazem
	• **Pathological**
	  ▪ Carotid sinus hypersensitivity
	  ▪ Sick sinus syndrome
	  ▪ Second-degree heart block
	  ▪ Complete

What are causes of irregular pulse?	Cause of low volume pulse?

• Irregularly irregular
  ○ Atrial fibrillation
  ○ Atrial flutter with variable response
  ○ Multiple ectopics
• Regularly Irregular
  ○ Sinus arrhythmia
  ○ Second-degree heart block Type –I
  ○ Ventricular extrasystoles
	• Shock
	• Aortic stenosis
	• Pericardial effusion
	• Pulmonary hypertension

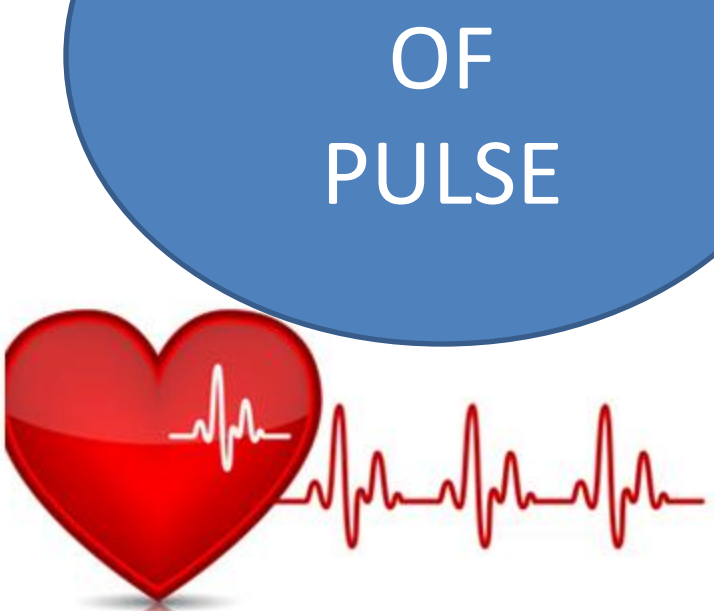
Causes of radio radial delay and radio-femoral delay?	**Cause of high volume ?**

• Radio-femoral delay
  ○ coarctation of the aorta distal to left subclavian artery
• Radio-radial delay
  ○ coarctation of aorta proximal
	• AR
	• Hyperdynamic circulation
	  ○ Fever
	  ○ Pregnancy and
	  ○ Thyrotoxicosis
	  ○ PDA

what are causes of absence of pulse in upper limb ?	**causes of absence of pulse in lower limb ?**
• takayasu disease • Atherosclerosis • thrombo-embolism • aberrant vessel	• peripheral arterial diseases • Buerger's disease (thromboangiitis obliterans) • Vasculitis

What are feature of coarctation of aorta ?
• patient have headache • pulse –radio-femoral delay • BP—more in upper limb than in lower limb • Murmur ---systolic murmur at midscapular region
What are feature of takayasu disease ?
it is vasculitis • patient have HO claudication in upper limb • pulse ---absent in upper limb • BP—high • bruit ---renal , carotid present • heart –Murmur of aortic regurgitation

CHARACTER OF PULSE



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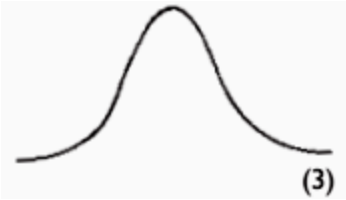
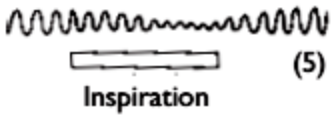
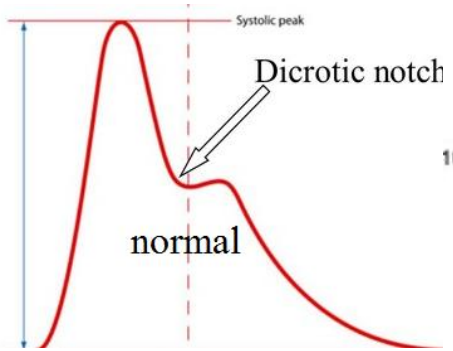
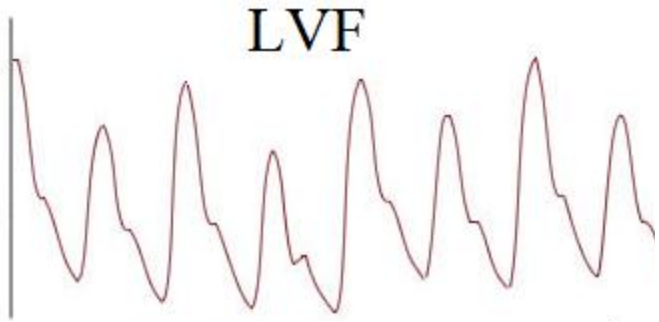
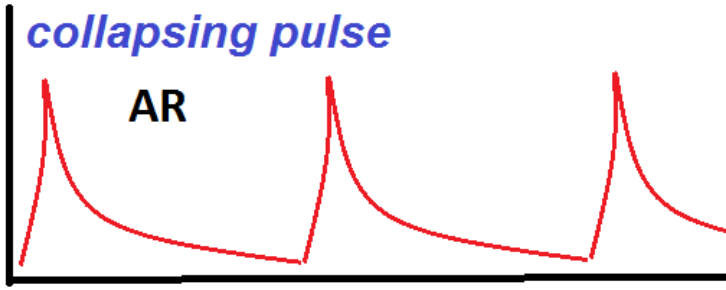
type of different pulse			
	normal	 (1)	
A	Anacrotic	Slowly rising & small volume pulse	Aortic stenosis  (2)
A	Pulsus alternans  Pulsus alternans	an alternating strong and weak pulsation	LVF
B	Pulsus bisferiens	Double peak of pulse , combination of slow rising and collapsing pulse	AS with AR  (4)
C	collapsing  (3)	Rapid upstroke and descend of pulse. the pulse which feels as though it suddenly hits your fingers and falls away just as quickly and seen by raising the arm above the head .	• AR, • Hyperdynamic circulation • PDA • Rupture of sinus of Valsava • Large A-V fistula
W	waterhammer	Collapsing pulse of AR is called water hammer pulse	AR
P	Pulsus paradoxus	When volume of pulse reduce in inspiration and increase in expiration then it is called pulsus paradoxus .it is the exaggeration of normal phenomenon .  (5) Inspiration	• Pericardial effusion • Chr.constrictive pericarditis • Acute severe asthma • Massive pulmonary embolism
J	Jerky pulse	:	Hypertrophic cardiomyopathy





Pulsus alternans



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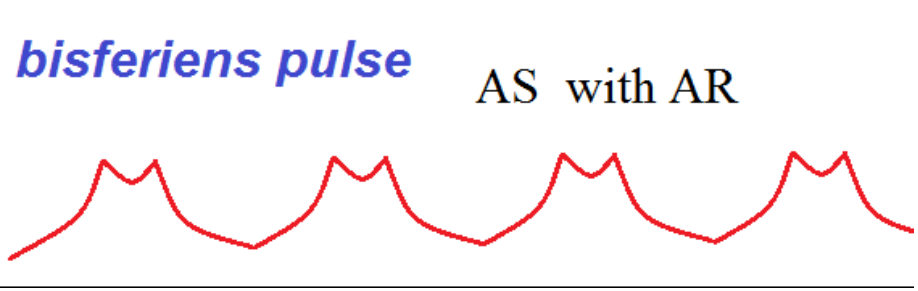

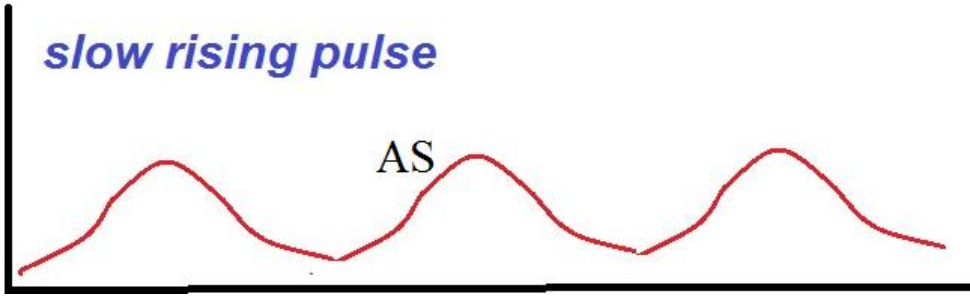

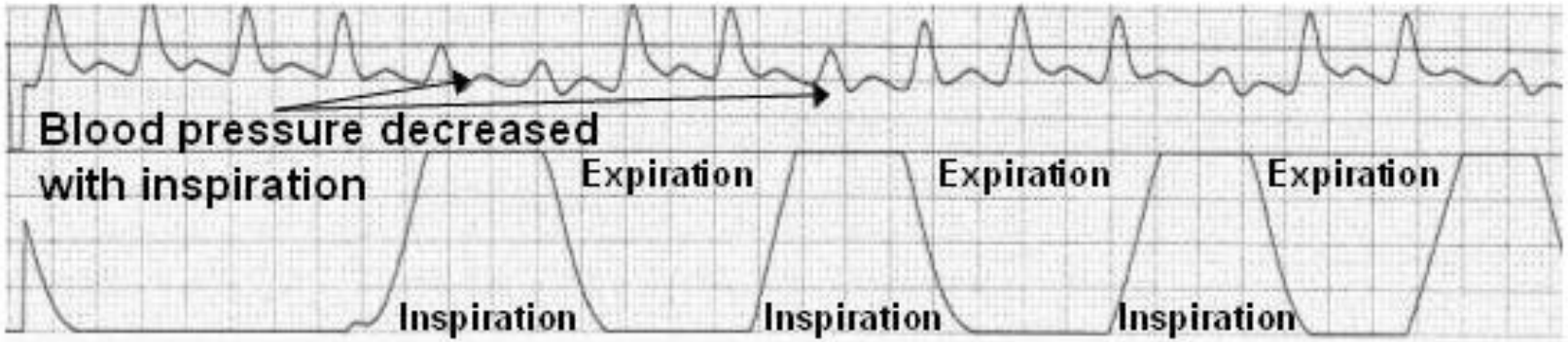

pericardial effusion , sever asthma

Difference between neurogenic and arterial claudication

	Arterial	**Neurogenic**
Pathology	Stenosis or occlusion arteries	Lumbar nerve root or cauda equina compression (spinal stenosis)
Site of pain	Muscles, usually the calf	according to dermatome . May be associated with numbness and tingling
Onset	Gradual after walking the 'claudication distance'	Often immediate upon walking or even standing up
Relieving features	On the cessation of walking	Eased by bending forwards and stopping walking. May have to sit down to obtain full relief
Colour	pale	Normal
Temperature	cool	Normal
Pulses	Reduced or absent	Normal
Straight leg raising	Normal	May be limited
sensory and jerk	Normal	may absent

What are the sign of acute limb ischaemia ?	
Soft signs	**Hard signs (indicating a threatened limb)**
Pulseless Pallor Perishing cold	Paraesthesia Paralysis Pain on squeezing muscle

Acute limb ischaemia - embolus vs thrombosis in situ		
Clinical features	**Embolism**	**Thrombosis in situ**
Onset	Seconds or minutes	Hours or days
Embolic source	Present (usually AF)	Absent
Previous claudication	Absent	Present
Contralateral leg pulses	Present	Absent
Diagnosis	Clinical	Angiography
Treatment	Embolectomy, warfarin	Medical, bypass, thrombolysis

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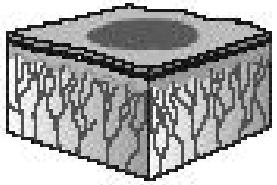
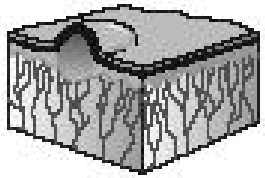
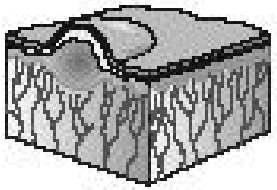
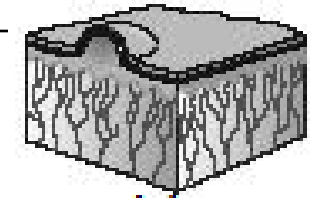
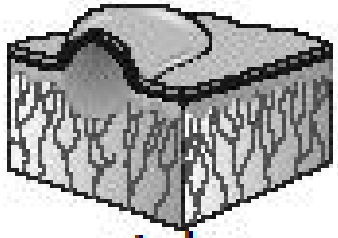
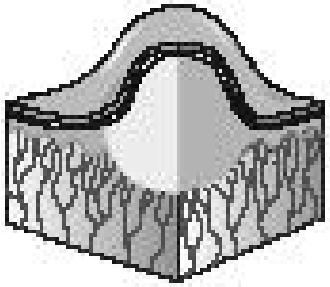
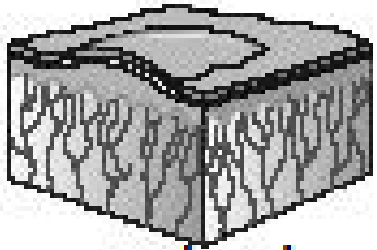
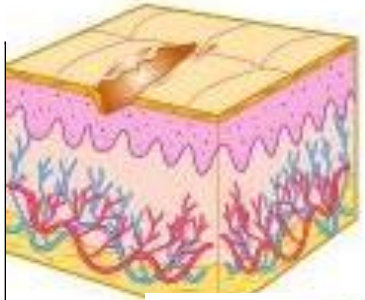
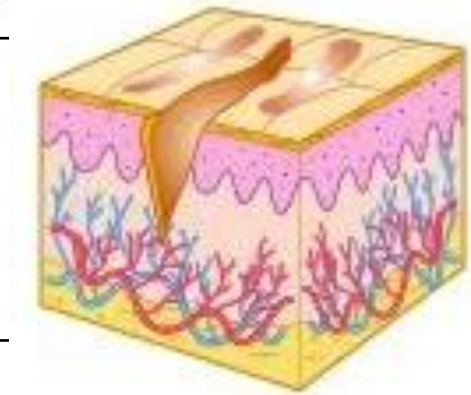
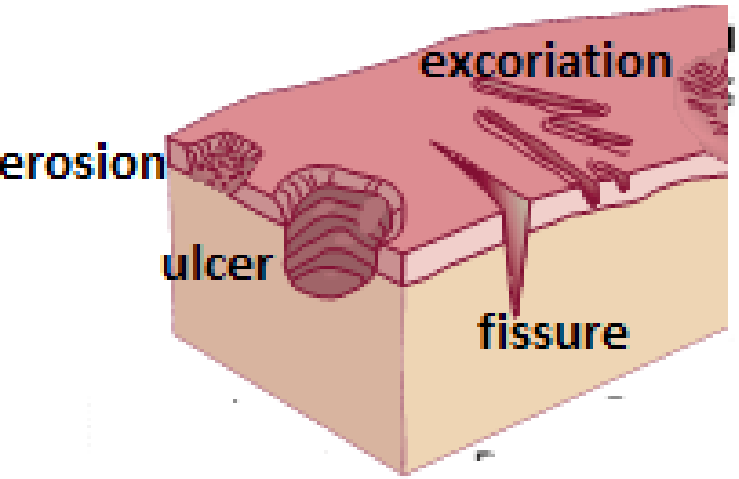
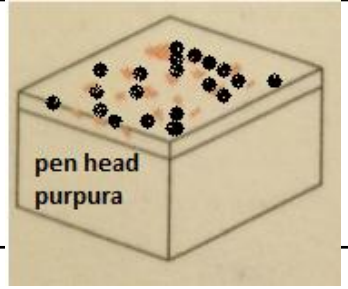
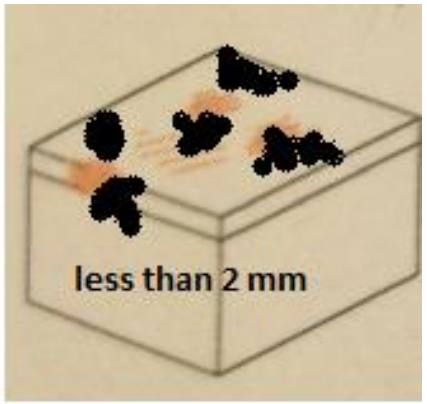
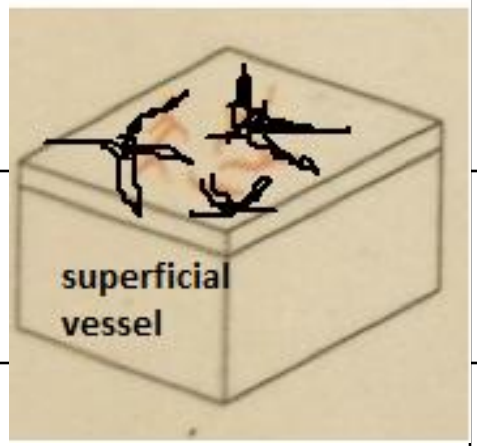
 macule	Macule	A localized area of colour or textural change in the skin
 papule	Papule	A solid elevation of skin < 5 mm diameter
 nodule	Nodule	A solid elevation of skin > 5 mm diameter
	Plaque	A palpable elevation of skin > 2 cm diameter and < 5 mm in height

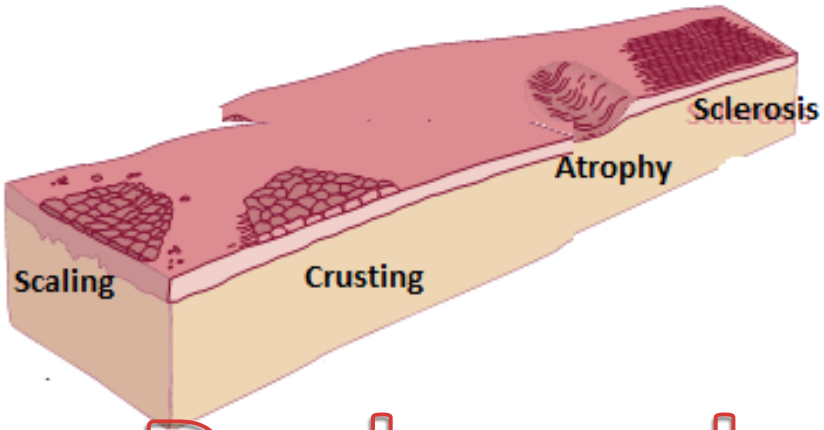
 vesicle	Vesicle	A clear, fluid-filled blister < 5mm
 postule	Pustule	A visible collection of pus in a blister
 Bulla	Bulla	A fluid-filled blister > 5 mm diameter
 wheal	Wheal	Wheal An area of dermal oedema



	Excoriation	A superficial abrasion, often linear, due to scratching
	Fissure	A linear split in epidermis, often just extending into dermis
	Erosion	A superficial break in the epidermis, not extending into dermis, which heals without scarring
	Ulcer	A circumscribed area of skin loss extending into the dermis

	Petechia	A haemorrhagic punctate spot 1-2 mm diameter
	Purpura	Extravasation of blood resulting in red discoloration of skin or mucous membranes

	Telangiectasia	Dilated dermal blood vessels resulting in a visible lesion
	Ecchymosis	A macular red or purple haemorrhage, > 2 mm diameter, in skin or mucous membrane
	Erythema	Redness of the skin due to vascular dilatation



Scales	An accumulation of excess keratin(easily detachable)
Sclerosis	Induration of subcutaneous tissues, which may involve the dermis
Crust	Dried serum and exudates
Lichenification	Chronic thickening of skin with increased skin markings, resulting from rubbing or scratching
Atrophy	Thinning of the epidermis with loss of normal skin markings

Callus	Local hyperplasia of the horny layer, often on palm or sole, due to pressure
Comedo	A plug of sebum and keratin wedged in a dilated pilosebaceous orifice on the face
Cyst	A nodule consisting of an epithelial-lined cavity filled with fluid or semisolid material
Freckle	A macular area showing increased pigment formation by melanocytes
Wheal	A transitory, compressible papule or plaque of dermal oedema, red or white in colour, and usually indicating urticaria

What r skin manifestation of systemic disease ?	
Necrobiosis lipoidica	DM
Erythema nodosum	Sarcoidosis, tuberculosis, IBD
Pyoderma gangrenosum	Ulcerative colitis, rheumatoid arthritis
Dermatitis herpetiformis	Gluten enteropathy/ COELIAC DISEASE
Xanthelasma	Hypercholesterolemia
purpura	ITP, vasculitis
spider Telangiectasia	CLD
Acanthosis nigrican	CA-stomach

Dr.shamol

What do you mean by Petechia, Purpura, Ecchymosis?	
Petechia	A haemorrhagic punctate spot 1-2 mm diameter/ Pinhead-sized
Purpura	Extravasation of blood resulting in red discoloration of skin or mucous membranes
Ecchymosis	A macular red or purple haemorrhage, > 2 mm diameter, in skin or mucous membrane

Define purpura ?

extravasation of blood from the capillary in the skin and mucous membrane that not blanch on pressure is called purpura

Causes of purpuric spot?

h**aematological** –

- acute leukaemia
- aplastic anaemia
- ITP

infective :

- dengue
- meningococcal septicaemia

drugs

vasculitis

- Henoch –schonlein purpura
- Infective endocarditis

others :

senile purpura

SLE, DIC

What is the feature of purpura due to vasculitis ?

it is usually painful and palpable

How will differentiate between purpura from spider telangectasia ?

spider telangectasia	**purpura**
it is arteriolar dilatation	is extravasation of blood from capillary
it doesn't blanch on pressure	it blanch on pressure

What are the DD of purpura?

- Mosquito bite
- Drug rash
- Spider telangectasia
- Campbell de morgan spots : these are small nodular reddish lesion that do not blanch on pressure , occure on trunk and upper abdomen resolve spontaneously . it is benign angioma

What is the bed side test for purpura ?

tourniquet test or Hess test

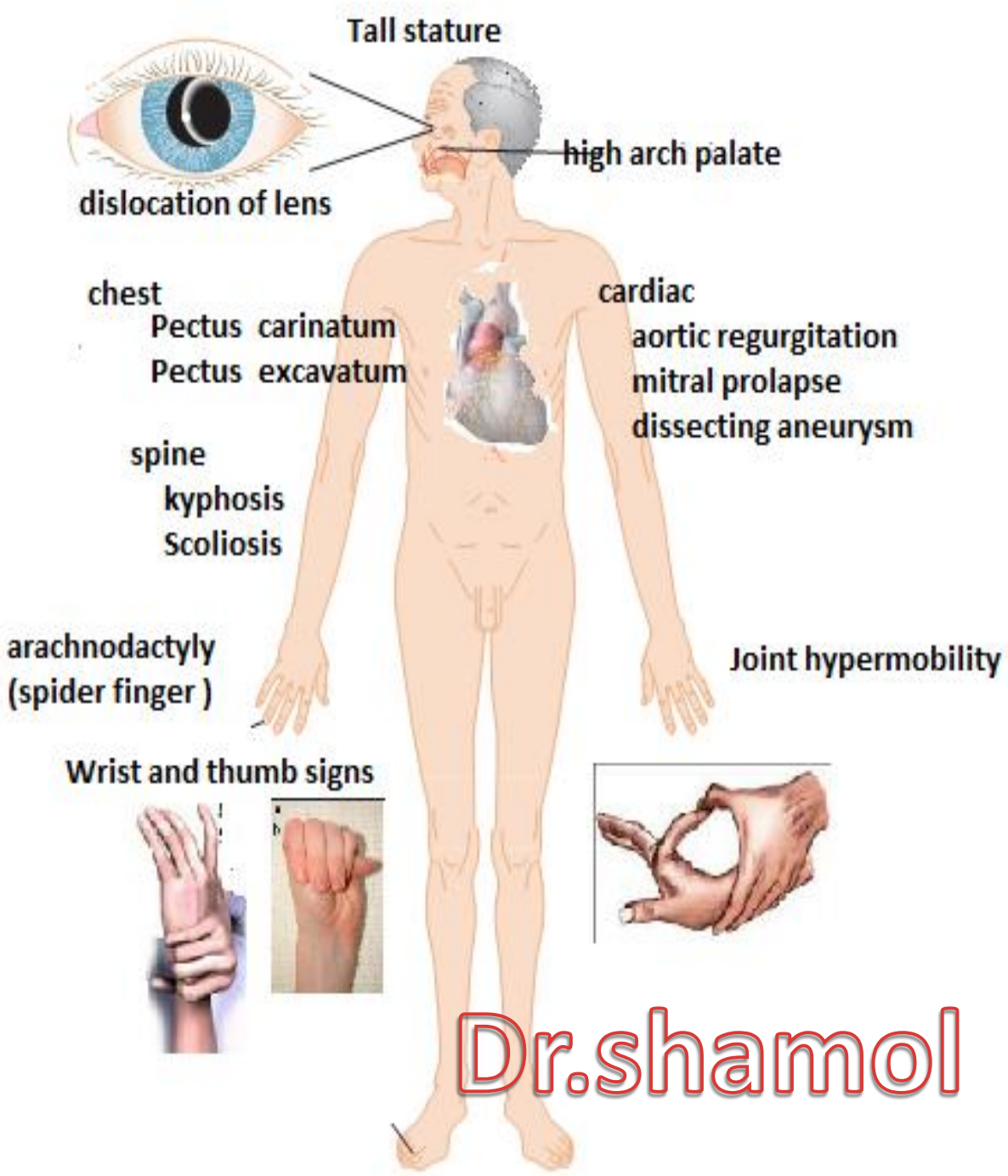
BP machine cuff is inflate over arm keep 5 min in between systolic and diastolic pressure and after deflation look for purpuric spot in anticubital fossa

less 5 spots is normal

test is positive if >10 spots

Causes of purpura with normal platelet count? (remember first 3 only)	
Causes of non-thrombocytopenic purpura **Senile purpura** **Henoch-Schönlein purpura** **Vasculitis** Factitious purpura Paraproteinaemias Purpura fulminans	
what investigation u want to do ?	
CBC PBF Platelet count BT—bleeding time CT—clotting time –PT , APTT	
how will differentiate bleeding to clotting abnormality and thrombocytopenia	
clotting disorder (hameophillla)	thrombocytopenia
deep site ---joint , muscle haematoma	superficial—epistaxis , purpura
family history positive	not so
platelet count normal	decrease
BT—normal CT—increase	BT— increase CT— normal

Causes of thicken skin?	
• hypothyroid • systemic sclerosis • acromegaly • DM • amyloidosis	Dr.shamol
Causes of thin skin	
• cushing	
hypo pigmentation	**hyper pigmentation**
Albinism Vitiligo ptyriasis versicolor leprosy systemic sclerosis	Haemochromatosis Addison CLD CRF Nelson's syndrome Drugs



Eyes,

- ❖upwards subluxation of lens
- ❖blue sclera

mouths

- ❖high arch palate

chest

- ❖pectus carinutum and excavatum

spine

- ❖scoliosis and
- ❖kyphosis

lung

- ❖pneumothorax

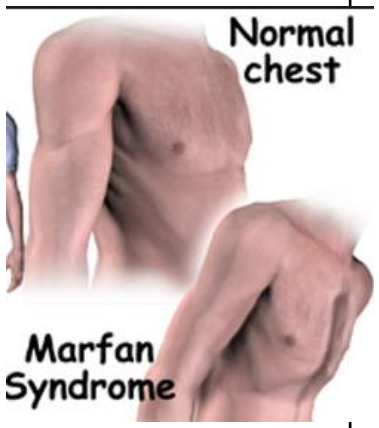
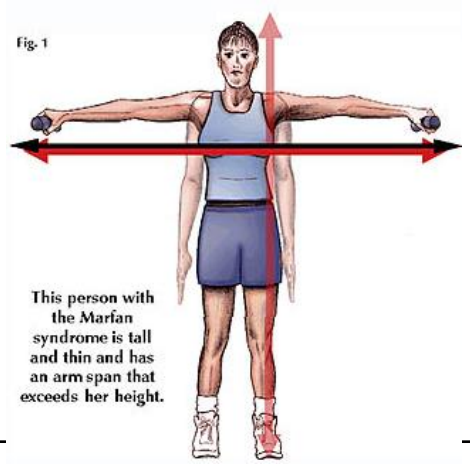
heart

- ❖AR
- ❖Mitral prolapsed
- ❖dissecting aneurysm

MSK

Joint hypermobility

- ❖wrist sign and thumb sign
- ❖arachnodactyly

			
pectus excavatum	arm span > height	thumb sign	wrist sign

thumb sign (Steinberg test): asking the patient to clench his thumb in his fist; the thumb should not exceed beyond the ulnar side of the hand in normal subjects but because of hypermobility and laxity of the joint in Marfan's disease the entire thumbnail projects beyond the border of the hand

- **wrist sign (Walker–Murdoch sign)**:when the wrist is grasped by the contralateral hand, the thumb overlaps the terminal phalanx of the fifth digit by at least 1 cm in 80% of patients

DOWN syndrome

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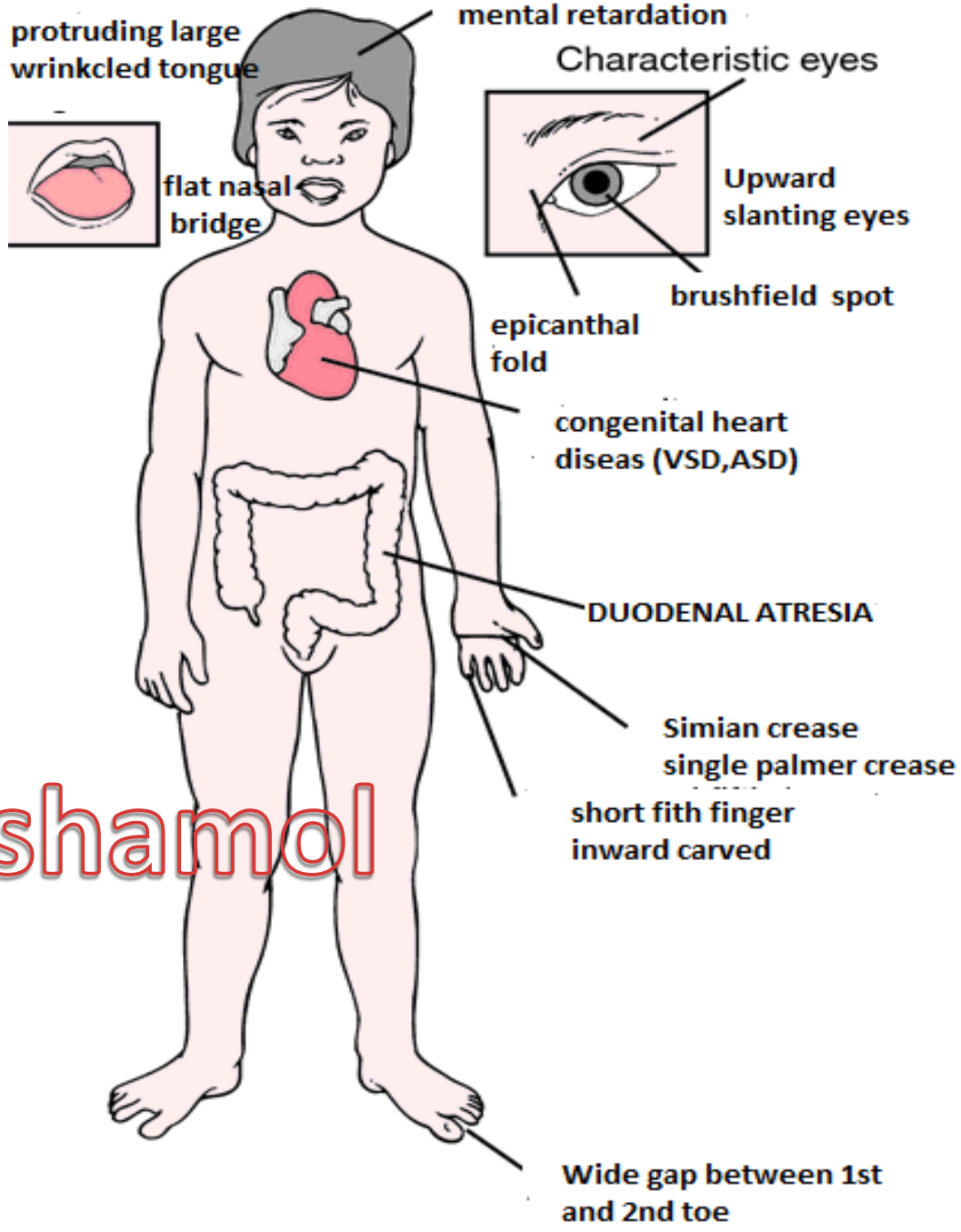
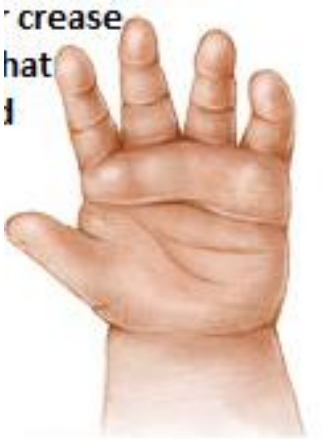

protruding large
wrinkcled tongue
mental retardation
Characteristic eyes
flat nasal
bridge
Upward
slanting eyes
brushfield spot
epicanthal
fold
congenital heart
diseas (VSD,ASD)
DUODENAL ATRESIA
Simian crease
single palmer crease
short fith finger
inward carved
Wide gap between 1st
and 2nd toe

single palmer crease
short 5th finger
curved inward



gap between first
and
second toes

Dr.shamol

flattened nose , upward slanting eye , large tongue

to remember **GOST WALL Narrow**
G=Gynaecomastia
O=Osteoporosis
S=Small testis and penis
T=Tallstature
W=Wide hip and female type of pubic hair
A=Absent of frontal baldness
L=Less hair on chest
L=Less or poor beard growth
Narrow =Narrow shoulder
karyotype 47,XXY,
nondysjunction during meiosis

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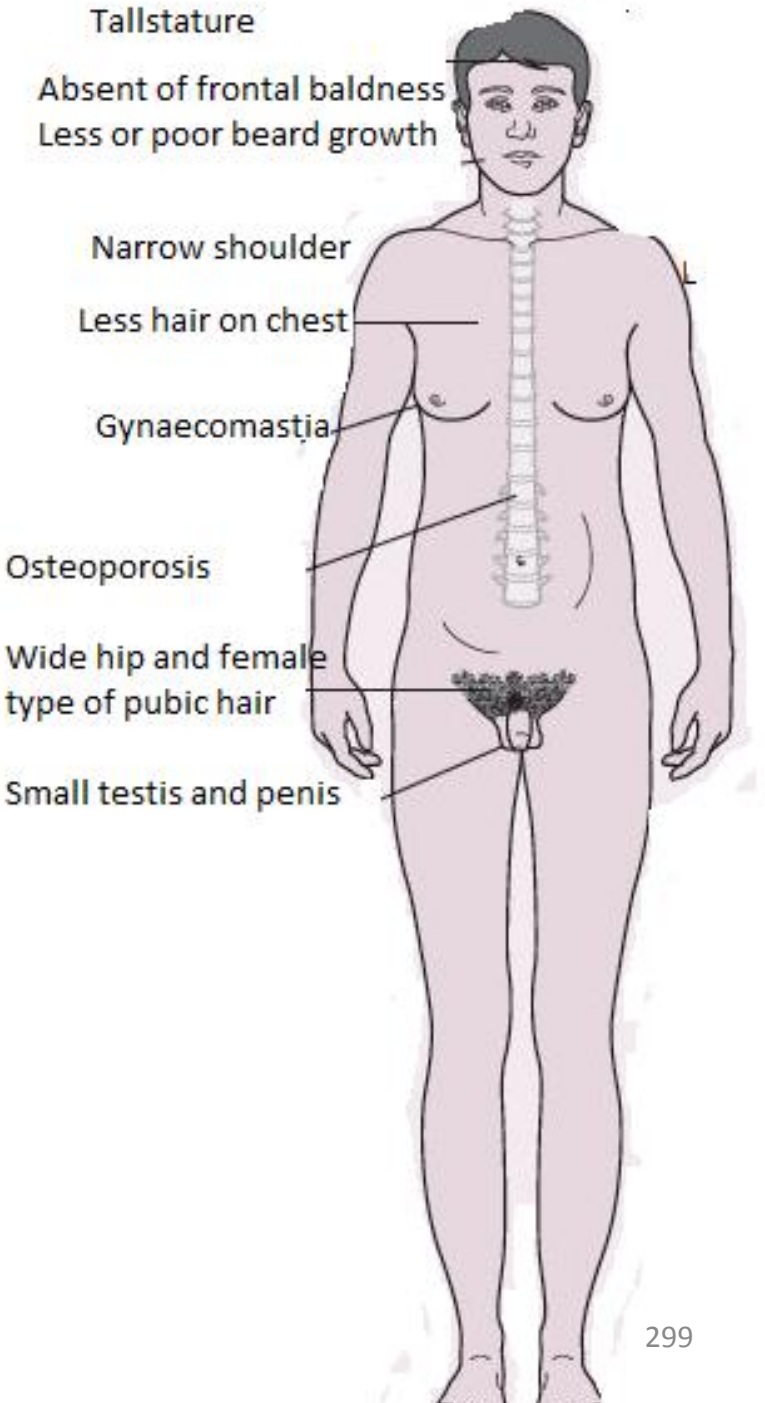

TURNER

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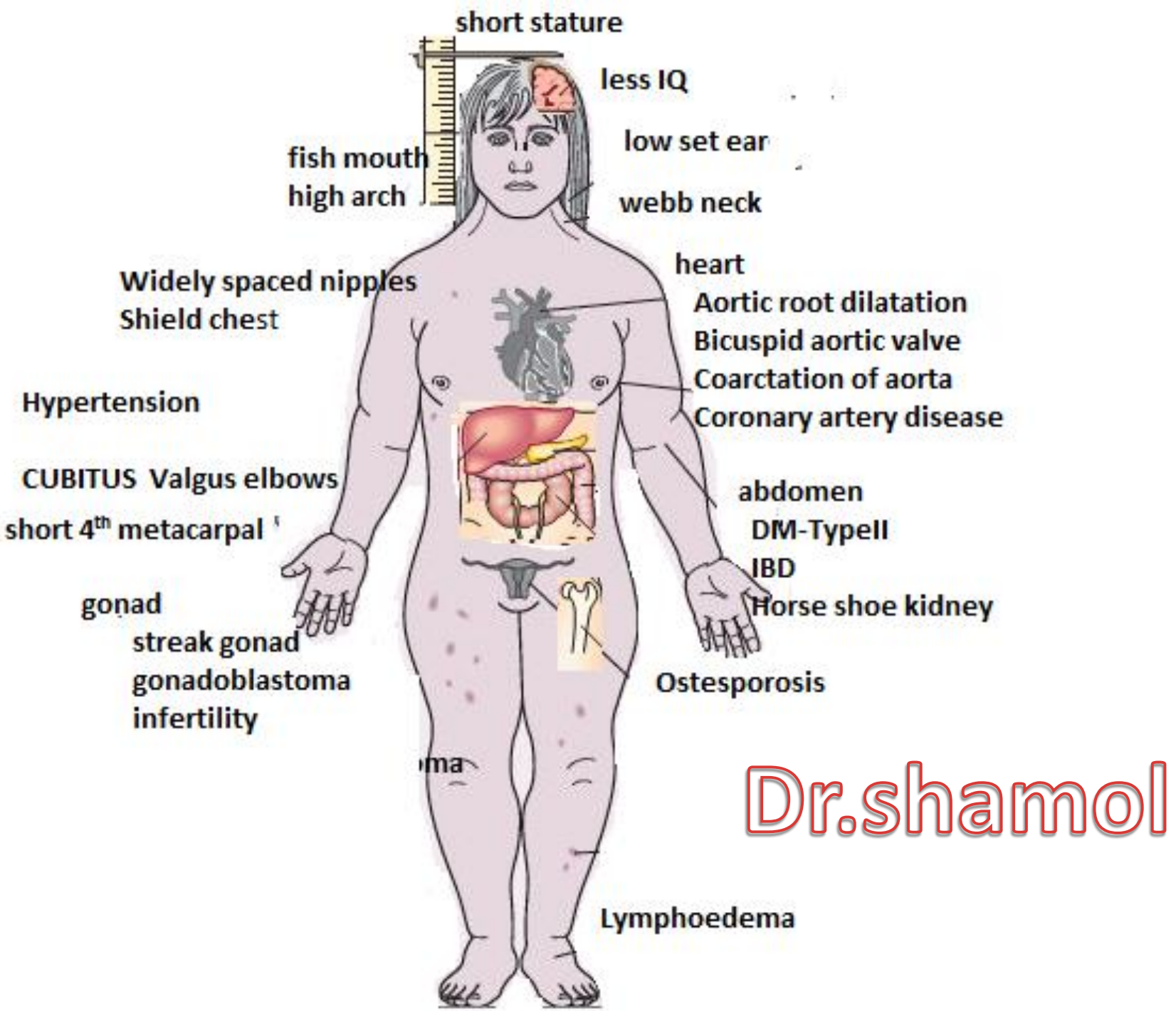
short stature
less IQ
low set ear
webb neck
fish mouth
high arch
Widely spaced nipples
Shield chest
heart
Aortic root dilatation
Bicuspid aortic valve
Coarctation of aorta
Coronary artery disease
Hypertension
CUBITUS Valgus elbows
short 4th metacarpal
abdomen
DM-TypeII
IBD
Horse shoe kidney
gonad
streak gonad
gonadoblastoma
infertility
Ostesporosis
Lymphoedema

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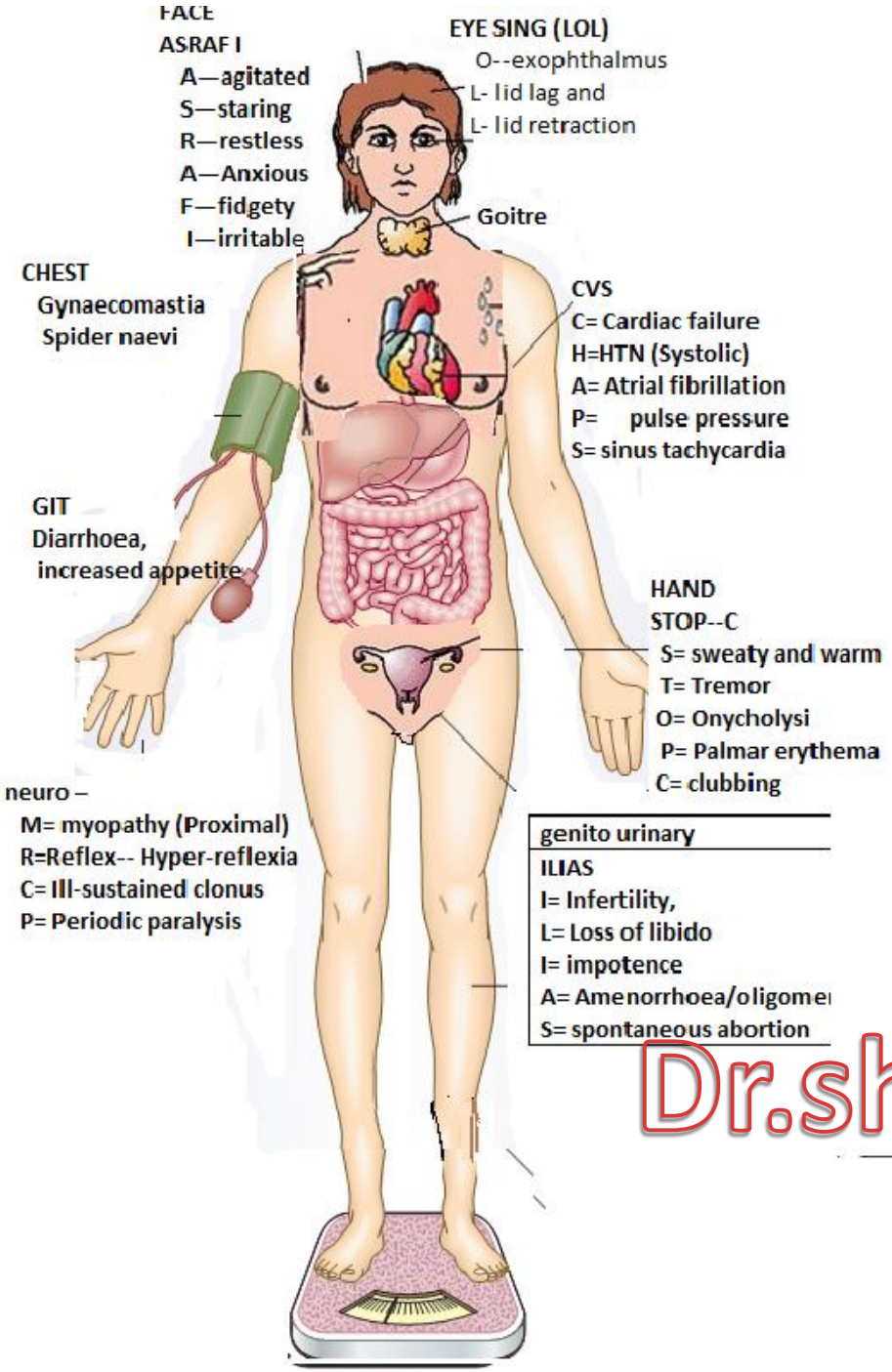
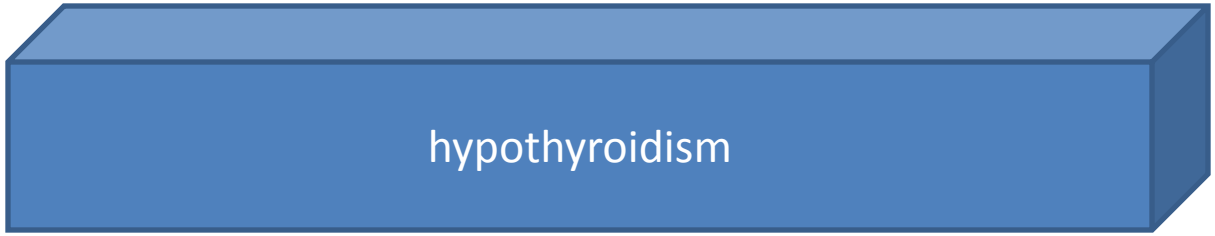
face	chest and heart	abdomen
to remember short **WIFE** **short- Short stature** **w--webb neck** **I-less IQ** **F—fish mouth & high arch** **E—low set Ear**	ABCC --NS A--Aortic root dilatation B--Bicuspid aortic valve C--Coarctation of aorta C--Coronary artery disease N-- nipples IS Widely spaced S--Shield chest	**DISKO** **D—DM Type 2** **I—IBD** **S-- Streak gonads & Gonadoblastoma** **K—**kidneys Is Horseshoe shape **O-- Osteoporosis** amenorrhoea infertility
upper limb		
SHEL S— short 4th metacarpal H— Hypertension E— elbows is CUBITUS Valgus L-- Lymphoedema(hands and feet)		

HYPERTHYROIDISM


FACE
ASRAF I
A—agitated
S—staring
R—restless
A—Anxious
F—fidgety
I—irritable
EYE SING (LOL)
O--exophthalmus
L- lid lag and
L- lid retraction
Goitre
CHEST
Gynaecomastia
Spider naevi
CVS
C= Cardiac failure
H=HTN (Systolic)
A= Atrial fibrillation
P= pulse pressure
S= sinus tachycardia
GIT
Diarrhoea,
increased appetite
HAND
STOP--C
S= sweaty and warm
T= Tremor
O= Onycholysi
P= Palmar erythema
C= clubbing
neuro –
M= myopathy (Proximal)
R=Reflex-- Hyper-reflexia
C= Ill-sustained clonus
P= Periodic paralysis
genito urinary
ILIAS
I= Infertility,
L= Loss of libido
I= impotence
A= Amenorrhoea/oligome
S= spontaneous abortion

face	cvs
ASRAF I A—agitated S—staring R—restless A—Anxious F—fidgety I—irritable **EYE SING (LOL)** O--exophthalmus L- lid lag and L- lid retraction	CHAPS C= Cardiac failure H=HTN (Systolic hypertension) A= Atrial fibrillation P= increased pulse pressure S= sinus tachycardia
	GIT
	Diarrhoea, normal or increased appetite
hand	**genito urinary**
STOP--C S= sweaty and warm hand T= Tremor O= Onycholysi P= Palmar erythema C= clubbing	**ILIAS** I= Infertility, L= Loss of libido I= impotence A= Amenorrhoea/oligomenorrhoea S= spontaneous abortion
chest	**neck**
Gynaecomastia &Spider naevi	Goitre with bruit(only in grave)
general	**neuro –**
WHAT--P W-- Weight loss H-- Heat intolerance A-- Anxiety T-- tremor P--Palpitations	M= myopathy (Proximal) neuro – M= myopathy (Proximal) R=Reflex-- Hyper-reflexia C= Ill-sustained clonus P= Periodic paralysis



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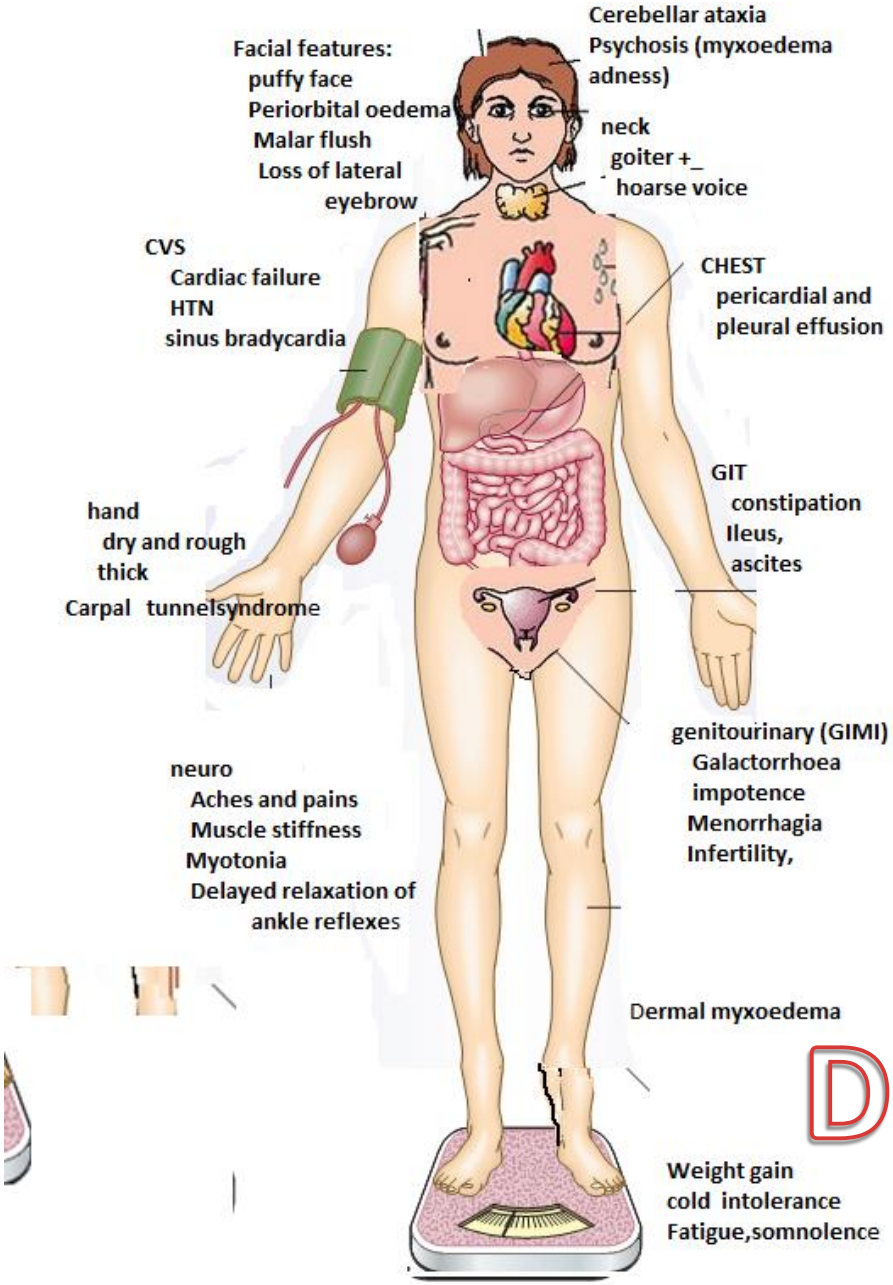

Cerebellar ataxia
Psychosis (myxoedema
adness)
Facial features:
puffy face
Periorbital oedema
Malar flush
Loss of lateral
eyebrow
neck
goiter +_
hoarse voice
CVS
Cardiac failure
HTN
sinus bradycardia
CHEST
pericardial and
pleural effusion
GIT
constipation
Ileus,
ascites
hand
dry and rough
thick
Carpal tunnelsyndrome
genitourinary (GIMI)
Galactorrhoea
impotence
Menorrhagia
Infertility,
neuro
Aches and pains
Muscle stiffness
Myotonia
Delayed relaxation of
ankle reflexes
Dermal myxoedema
Weight gain
cold intolerance
Fatigue,somnolence

Dr.shamol

face	genito urinary
Facial features: **puffy face** Purplish lips Malar flush **Periorbital oedema** **Loss of lateral eyebrow**	**Galactorrhoe**a Infertility, **Menorrhagia** impotence
hand	**cvs**
dry and rough **Carpal tunnel syndrome**	Cardiac failure **HTN** **sinus bradycardia**
chest	**neck**
Pericardial and **pleural effusions**	Goitre present or absent **Hoarse voice**
general	**neuro –**
Weight gain **cold intolerance** **Fatigue**, somnolence Dry skin Depression	**Psychosis (myxoedema madness)** Cerebellar ataxia Carpal tunnel syndrome **Aches and pains** **Muscle stiffness** Myotonia **Delayed relaxation of ankle reflexes** Deafness
GIT **constipation** Ileus, ascites	skin **Dermal myxoedema** **Dry and rough skin** Carotenaemia

Hypothyroidism symptoms

fatigue

cold intolerance

Brady cardia

weight gain

Depress

alopecia

hoarse voice

constipation

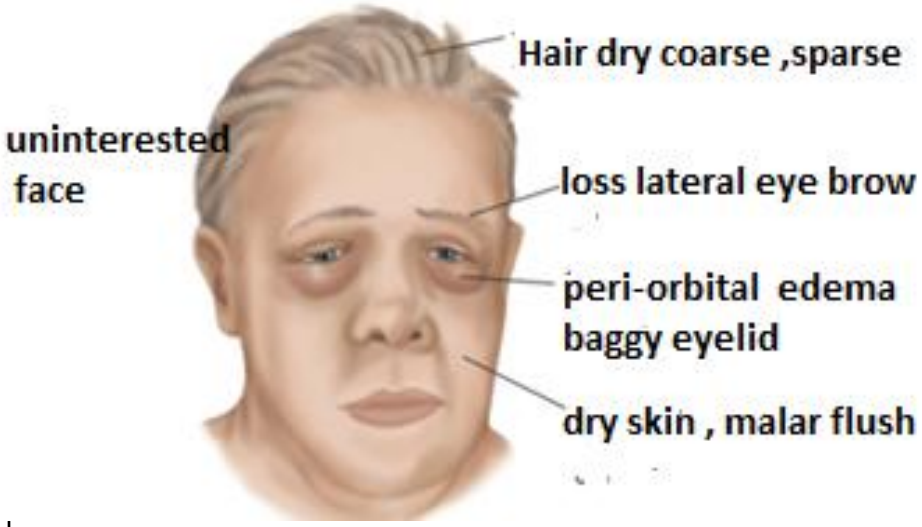
dry skin

muscle cramp

Menorrhagia

Dr.shamol

hypothyroid



- ✓ puffy face ,
- ✓ periorbital edema ,
- ✓ baggy eyelids
- ✓ loss lateral third of eyelash
- ✓ malar flush
- ✓ uninterested face

thyrotoxicosis graves diseases

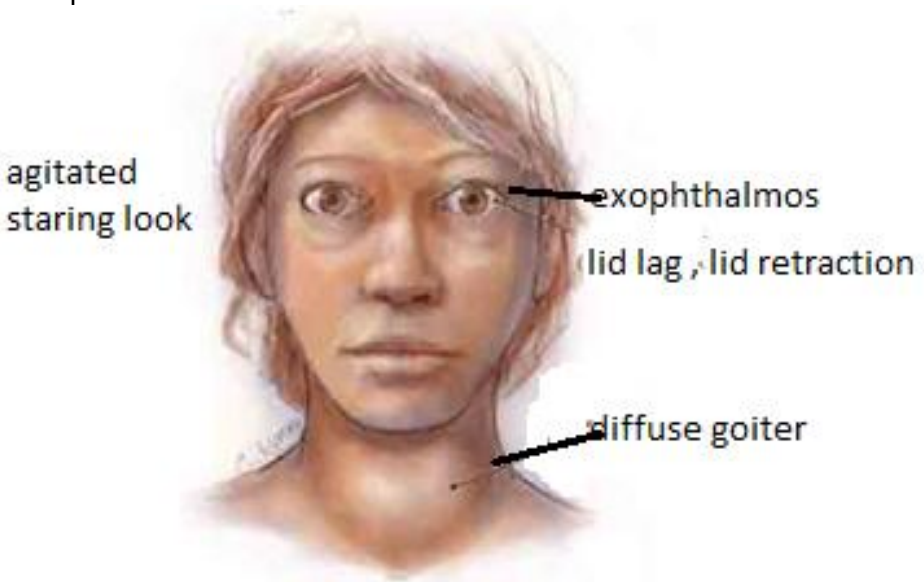


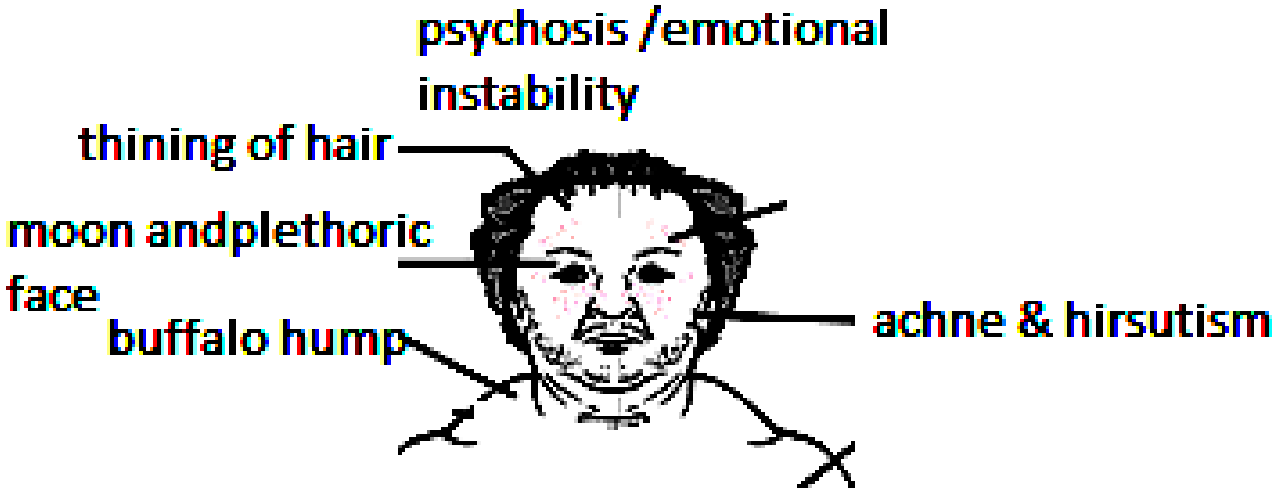
Fig 1: Hyperthyroidism

ASRAF
A—agitated
S—staring
R—restless
A—Anxious
F—fidgety

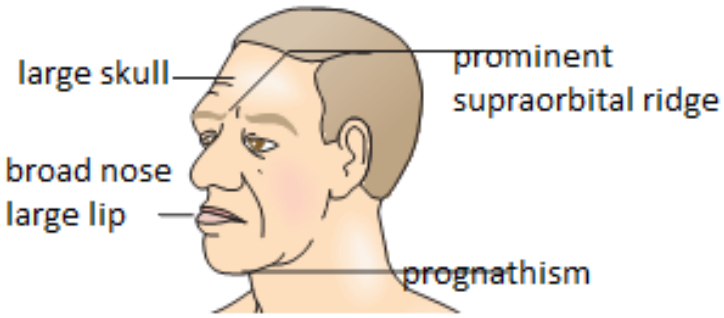
exophthalmos
diffuse goiter
lid lag , lid retraction

Cushing

moon face
puffy ,plethoric face
acne ,hirsutism
buffalo hump(supraclavicular fat)



Acromegaly

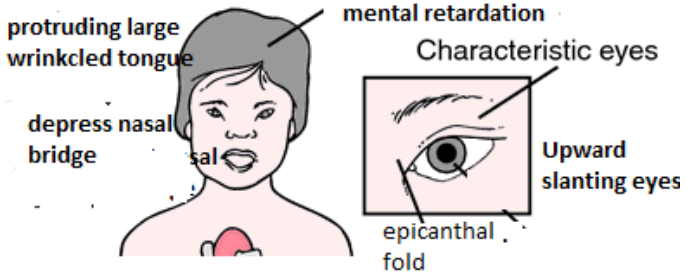


large skull
prominent supraorbital ridge
prognathism (protrusion of lower jaw)
large and coarse facies
large lip, broad nose
malocclusion of teeth

parkinsonism

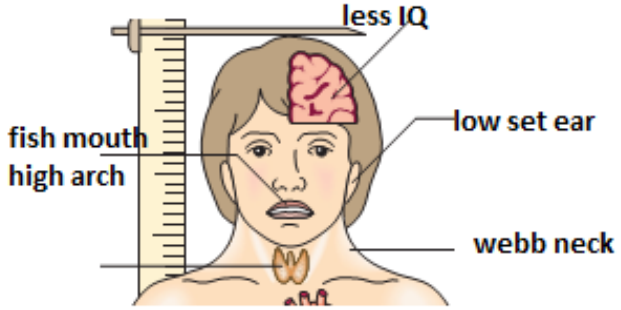
Mask like face
expressionless face
less blinking face
dribbling of saliva

DOWN



Depress nosal bridge
Low-set ears
Epicanthic fold
Large tongue

turner



Low-set ears
Fish-like mouth
High-arched palate
Short stature

Haemolytic anaemia

frontal or parietal bossing
mongoloid face
malar prominence

neprhotic syndrome

puffy face

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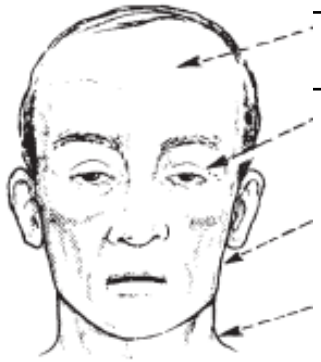
Hepatic face

sunken eye ball
prominent zygometric bone
muddy color
jaundice

Dr.shamol

mytonia dystrophica



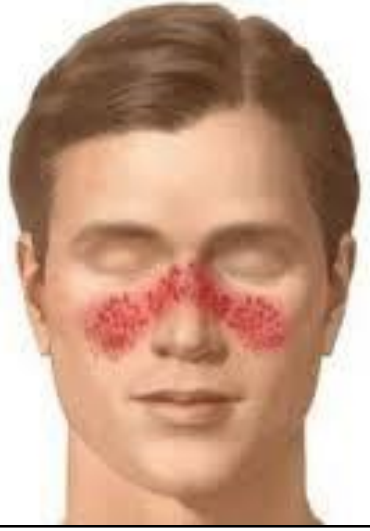
anxiety

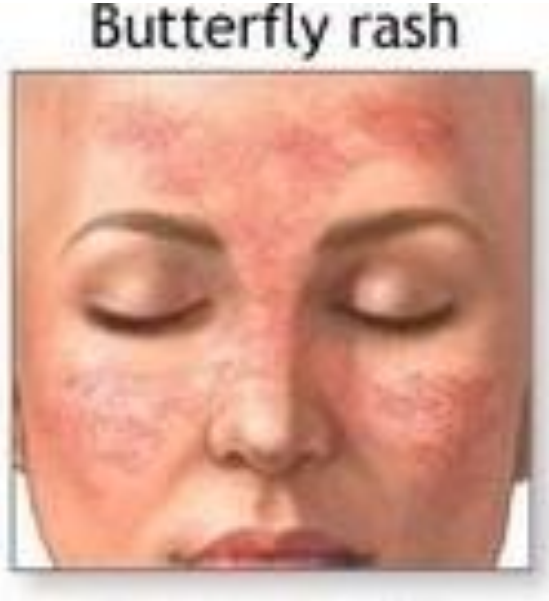
depression

SLE

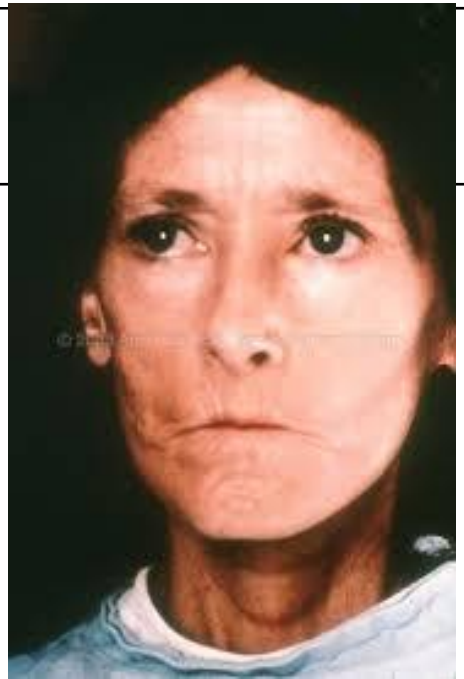
butterfly rash sparing the naso-labial fold

alopecia





systemic sclerosis



pinch up nose

micro-stomia

puckering around the mouth

talengectasia

tightening of the skin

DD of puffy face

The patient has puffy face. I have some DD

- Nephrotic syndrome
- Hypothyroid
- CFR

if want more then only say
cushing syndrome –in cushing usually moon face
superior Vana cava obstruction

How will differentiate these three?

one talking if croaky voice / husky of voice –hypothyroid
then sir ask what else will u see --- pulse bradycardia , ankle jerk –delayed relaxation ankle jerk
if sir ask what 3 we commonly see in hypothyroid –pulse , voice , ankle jerk
next –will see edema –if voice is normal

what is face of cushing ?

usually moon face
plethoric face
acne
if female –hursutism
plus other feature
central or abdominal obesity
striae ---purplish
HTN
skin thin –bruise
proximal myopathy

face in hypothyroid

face is puffy and periorbital swelling ,
baggy eye lids &loss lateral 1/3 of eye brows , malar flush

what else u want to see in this patient

talk with the patient for –husky or croaky voice
see pulse –bradycardia
jerk ankle ---delayed relaxation (bed side test for hypothyroid –called hung up reflex)
skin thick and rough and dry
leg –pretibial myxoedema –non pitting edema

which disease u can diagnosis by telephone ?

hypothyroid

how will differentiate primary and secondary hypothyroidism ?

primary –goiter and myxoedema present
secondary (pituitary) ---goiter and myxoedema absent

What will be the face of in patient with SVO ?

FACE--face is puffy red , plethoric , may cyanoses
EYE--eye congest , red , chemosis (conjuntival edema)
NECK--neck is swellen and engorged nonpulsatile vein
CHEST--visible and engorged vein in chest –direction of flow is downward
UPPER LIMB – edematous , engorged vein
pemberton sign ---if patient elevated hand or upper limb above shoulder level then

cause

- bronchial carcinoma
- lymphoma ,retrosternal goiter ,thymoma


Raynaud’

What is Raynaud's phenomenon and Raynaud's disease? Difference between them?

Exposure to Cold stimuli may causes vasospasm, leading to the characteristic sequence of digital pallor due to vasospasm, cyanosis due to deoxygenated blood, and followed by rubor due to reactive hyperaemia this is called raynaud .

type	**Primary Raynaud's phenomenon (or disease)**	**Secondary Raynaud's phenomenon (or syndrome)**
age	aged 15–30 years	older
sex	young women	male
ulcer and infarction	no	yes
family	present	absent
causes	idiopathic	systemic sclerosis SLE RA
RX	prevent exposure calcium channel blocker	surgery prostacycline
prognosis	benign	bad

Raynaud's Phenomenon

1. Fingers can become white due to the lack of blood flow

2. The fingers may turn blue as the blood vessels dilate to keep the blood in the tissues

3. Finally the fingers may turn red as the blood begins to return

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