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Section 7: Rheumatology

Section 8: Nervous system

Section 9: Miscellaneous

Bonus online cases (mixed presentations)

General and systemic physical examination

Physical examination

General examination

Proceed as follows:

- Address the patient as your custom "Hi, Hallo, good morning, Aslamoalaicum."
- Introduce yourself and tell your role. Always stand on the right side of patient.
- Maintain **3Ps** (**P**ermission, **P**osition, and **P**roper exposure):
  - **P**ermission: Take verbal consent to examine the patient.
  - **P**osition: Start general examination in supine position, then at 45°, and finally in sitting position.
  - **P**roper exposure: Expose the patient without embarrassing.
  - Within this time you have got idea about consciousness and cooperation.
- Look at the patient (from head to toe) and assess appearance (Fig. I.1), body built (Fig. I.2, Fig. I.3), nutrition, and any gross abnormalities.
- Start from scalp: look at the scalp (alopecia) and palpate for any swelling.
- Place the dorsum of your left hand to guess the temperature.
- Look for jaundice (Fig. I.4) by lifting upper eyelids and asking the patient to look down, anemia (Fig. I.5) by pulling down lower eyelids and asking the patient to look up. Check cyanosis at the tip of nose, lips, and ear lobules.
- Ask the patient to open mouth and put out tongue: assess anemia, jaundice (undersurface), cyanosis, dehydration, and papillae; shine a torch to see hygiene of oral cavity, gum, and dentition.
- Pick up both hands and look for clubbing (in profile view, fluctuation, Schamroth's sign) (Fig. I.6a, b), koloinychia (Fig. I.7), leuconychia (Fig. I.8), splinter

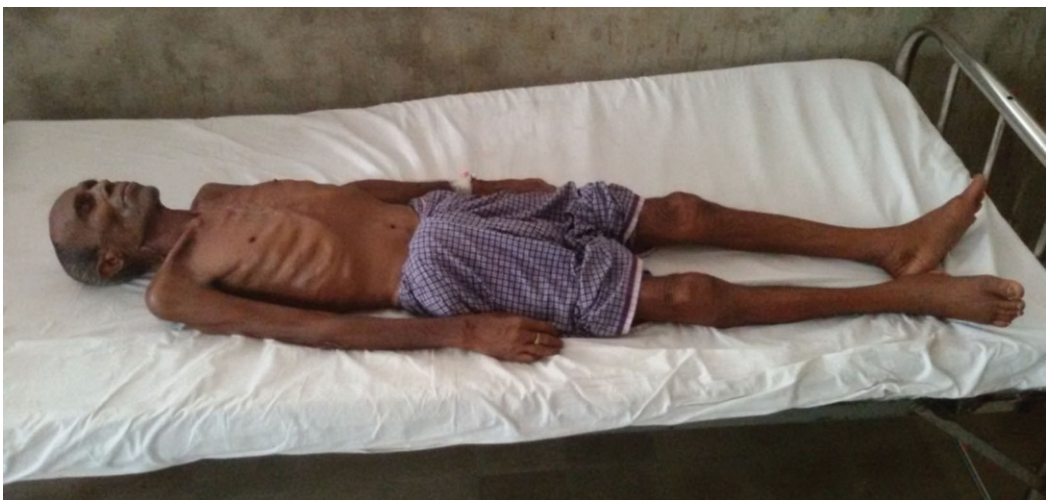

Figure I.1 **Cachexia**

Figure I.2 **Short stature**

Figure I.3 **Tall stature**

hemorrhage, anemia, jaundice, palmar erythema, and Depuytren's contracture.
- Palpate radial pulse (rate, rhythm, volume, character, radio-radial symmetry, and radio-femoral delay) and count respiratory rate.
- Inspect chest for spider navie, gynocomastia (Fig. I.9), hair distribution, and any scar.
- Look at the abdomen for obvious abnormality (swelling, umbilicus, and hernia) and assess dehydration (by pinching skin with two fingers and release—skin goes back slowly in dehydration).
- Palpate inguinal lymph nodes: feel for horizontal (superficial) group by placing four fingers of each hand just above inguinal ligament on each side looking at face and for vertical (superficial) group along femoral veins.
- Palpate popliteal lymph nodes: feel the lymph nodes behind knee against tibia with fingers of both hands after bending the knee at 90°.
- Detect edema (Fig. I.10) by pressing over both malleoli with thumbs for 15 s.
- Examine feet and look for clubbing, leuconychia, koloinychia, and ulcer.
  Now, ask the patient to rise from supine position and give back rest at 45°.
- Examine neck vein at this position.
  Ask the patient to sit facing you.
- Look at the neck and ask the patient to swallow (better to give a glass of water and take a sip of water to swallow) to detect any thyroid swelling.
- Palpate epitrochlear lymph nodes (Fig. I.11): Hold right elbow with your right hand and palpate with thumb (node lies within 3–5 cm above medial epicondyle); palpate on left side with left hand.
- Palpate axillary lymph nodes: place your right palm over patient's right shoulder to fix and palpate right axilla with your left hand supporting patient's forearm on your forearm. Feel apical, central, and anterior group of lymph nodes with left hand and then lateral group with right hand. Follow same procedure on left side with opposite hand.
  Ask the patient to turn with back toward you.
- Now palpate lymph nodes in neck: palpate submental lymph node with one hand. Ask the patient to flex slightly and bend toward the side of palpation. Palpate right side with right hand and feel submendibular, anterior chain, supraclavicular, posterior chain, occipital, postauricular and preauricular lymph nodes sequentially, and follow same thing on left side.

Figure I.4 **Jaundice**

Figure I.5 **Anemia**

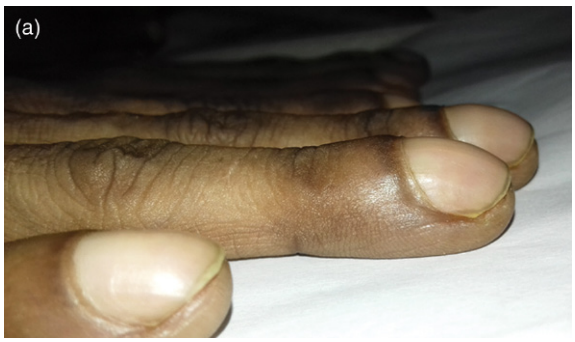

Figure I.6 (a) Clubbing and (b) flactuation test

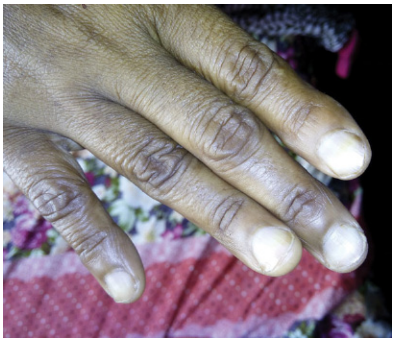

Figure I.7 **Koloinychia**

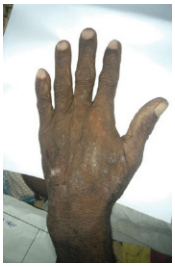

Figure I.8 **Leuconychia**

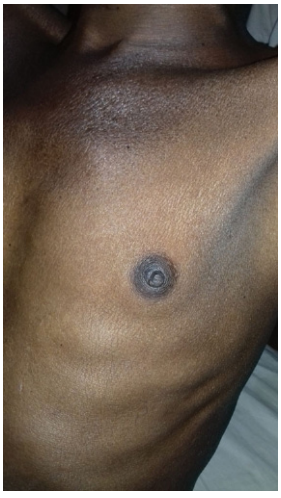

Figure I.9 **Gynaecomastia**

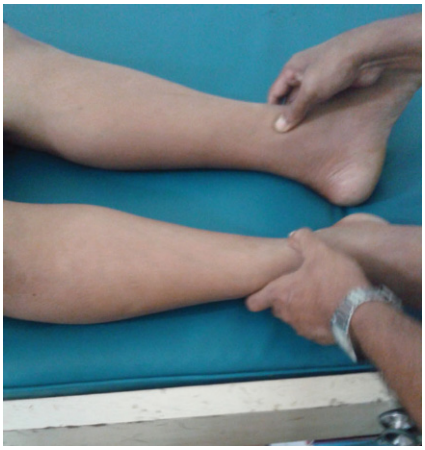

Figure I.10 **Edema**

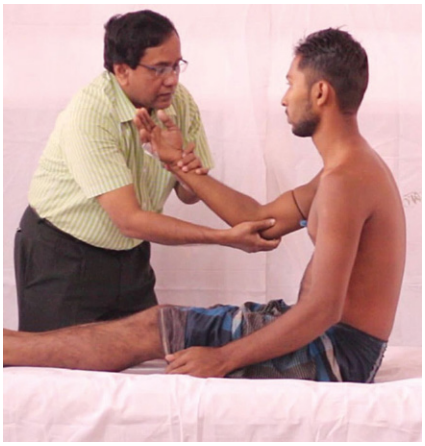

Figure I.11 **Epitrochlear lymph node**

- Palpate thyroid: start by palpating the isthmus and then lobes with fingers of both hands; ask the patient to swallow during palpation.
- Palpate posterior group of axillary lymph nodes from behind: ask the patient to keep hands on head and then palpate.
- Press over sacrum to elicit edema (if no edema in legs or bedridden patient).
- At last, help the patient to dress and give thanks.

Examination of respiratory system

During examination you may be asked to examine respiratory system or examine the chest. If you are asked to examine respiratory system (as in MRCP), you should start with general survey, then parts of general examination related to respiratory system (relevant examination), for example, clubbing, cyanosis, and at last chest. If you are asked to examine the chest, you should start with general survey, then chest, and at last relevant examination.

Proceed as follows:

- Address the patient as your custom "Hi, Hallo, Aslamoalaicum."
- Introduce yourself and tell your role. Always stand on the right side of patient.
- Maintain 3Ps (Permission, Position, and Proper exposure):
  - **P**ermission: Take verbal consent to examine the patient
  - **P**osition: Position the patient reclining at 45° with backrest.
  - **P**roper exposure: Expose the chest up to umbilicus (be careful in case of female patient, not to embarrass her).
- Within this time you have got idea about breathless either at rest or from the effort of removing his clothes.
- Look at the patient (from head to toe) and assess appearance: weight loss (Ca bronchus and tuberculosis), puffy plethoric face (SVC obstruction), Purse lips (COPD), kyphoscoliosis (ankylosing spodylitis), lupus pernio (sarcoidosis), systemic sclerosis and rheumatoid arthritis, and surroundings—sputum pot for purulent sputum or hemoptysis, nebulizer machine, inhalers, oxygen cylinder (see flow rate), and temperature chart.
- Start with handshake and notice whether the hand is warm (type II respiratory failure) or cold. Look for clubbing, tobacco stain, cyanosis, wasting of small muscles of the hands, rheumatoid hands, systemic sclerosis, and hypertrophic pulmonary osteoarthopathy. Palpate radial pulse whether it is bounding (type II respiratory failure) or not and count respiratory rate. Elicit flapping tremor if bounding pulse and cyanosis and fine tremor (β_2 agonist). Look for ptosis (Horner's syndrome), purse lips, central cyanosis (tongue), raised JVP (pulsatile: corpulmonale, non-pulsatile: SVC obstruction). Palpate supraclavicular and axillary lymph nodes. Look for edema by pressing over malleolus. (**Relevant examinations**)
- **Chest:**
  Inspection: Inspect the chest from side and head or foot end of bed and observe:
  - Features of labored breathing: Prominent accessory muscles of respiration, recession of suprasternal and supraclavicular fossae, indrawing of intercostals space and costal margins.
  - Shape of chest: normal or barrel shape (Fig. I.12), localized flattening (fibrosis or pneumonectomy) or bulging.
  - Movement: normal or diminished (symmetrical—emphysema, asymmetrical—fibrosis, collapse, pleural effusion, pneumothorax, pneumonectomy, or focal—apical fibrosis due to tuberculosis).

Figure I.12 **Barrel chest**

Figure I.13 **Expansion**

- Needle puncture or pleural biopsy mark, engorged vein, scar mark (thoracotomy or thoracoplasty scar) or the presence of radiotherapy field markings (Indian ink marks) or radiation burns on the chest and any other abnormality.

Palpation:

- Palpate the trachea to ascertain its position (place the index and ring fingers on the sternoclavicular joints and feel the median ridge of trachea by middle finger and compare paratracheal spaces on both sides). Assess tracheal tug (i.e., the middle finger being pushed upward against the trachea by the upward movement of the chest wall) and measure cricosternal distance (normally three fingers) if appropriate.
- Palpate apex beat.
- Assess expansibility (Fig. I.13): assess expansibility at the level of clavicle (less producible), sternal angle, and xiphisternum. Grip the chest symmetrically with the fingers over apex and in the rib spaces on either side and approximate the thumbs to meet in the midline in a straight horizontal line at each level and compare both sides. Ask the patient to take deep breath in and out and note the distance between each thumb and the midline (may give information about asymmetry of movement) and between both thumbs and try to express the expansion in centimeters (it is better to produce a tape measure for a more accurate assessment of the expansion in centimetres).
- Vocal fremetus: less used now a days. Place ulnar side of right hand over supraclavicular, infraclavicular spaces and in rib spaces along midclavicular and midaxillary lines on both sides, and ask the patient to tell ninety-nine or one-one while you place your hand and compare.

Percussion (Fig. I.14):

- Percuss along midclavicular and midaxillary line and notice percussion note, presence of normal cardiac and liver dullness. Percuss by placing left middle finger (pleximeter finger) over supraclavicular space, clavicle (percussion on the bare clavicle may cause discomfort to the patient), infraclavicular spaces and in rib spaces along midclavicular and midaxillary lines on both sides and striking with right middle finger (percussing finger) at right angle, and compare on both sides.

Auscultation:

- Auscultate chest along midclavicular and midaxillary lines and listen to breath sound and any added sound. Start from supraclavicular space to auscultate apex with bell of stethoscope and proceed downward with diaphragm of stethoscope.
- If you have heard bronchial breath sound, check for egophony and whispering pectoriloquy. If

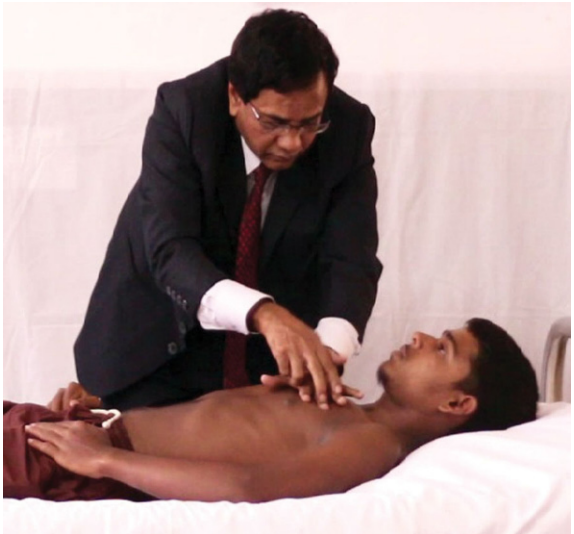

Figure I.14 **Percussion**

you have heard crepitations, ask the patient to cough and auscultate again (crepitations alter after coughing except that of interstitial lung disease but rub does not alter). Ascertain whether crepitation is early inspiratory (chronic bronchitis, asthma), early and mid-inspiratory and recurring in expiration (bronchiectasis—altered by coughing), and late inspiratory (ILD, pulmonary edema).
    - Assess vocal resonance by placing diaphragm along midclavicular and midaxillary lines and asking the patient to tell ninety-nine or one one.
- Examine the back of the chest by inspection, palpation, percussion, and auscultation (to examine the back of the chest, make the patient to sit forward and ask to touch opposite shoulder (it will help to pull the scapulae further apart).
- At last, help the patient to dress and give thanks.

Examination of cardiovascular system

During examination you may be asked to examine cardiovascular system or examine the precordium. If you are asked to examine cardiovascular system (as in MRCP), you should start with general survey, then parts of general examination related to cardiovascular system (relevant examination), for example. anemia, cyanosis, splinter haemorrhage, and at last precordium. If you are asked to examine the precordium, you should start with general survey, then precordium and at last relevant examination.

Proceed as follows:

- Address the patient as your custom "Hi, Hallo, Aslamoalaicum."
- Introduce yourself and tell your role. Always stand on the right side of patient.
- Maintain 3Ps (Permission, Position, and Proper exposure):
    - Permission: Take verbal consent to examine the patient.
    - Position: Position the patient reclining at 45° with backrest.
    - Proper exposure: Expose the chest up to umbilicus (be careful in case of female patient, not to embarrass her).
- Look at the patient (from head to toe) and surroundings: breathless at rest or on minimal exertion, pale, cyanosis, malar flush, and oxygen cylinder.
- Start with handshake and look for clubbing (cyanotic congenital heart disease and subacute bacterial endocarditis), cyanosis, and splinter hemorrhages, Osler's node, and Janeway lesions (infective endocarditis). Palpate radial pulse (rate, rhythm, volume, character, and radiofemoral delay) (Fig. I.15); if pulse is of large volume, ascertain whether the pulse is collapsing by lifting the arm or not. Look for anemia, cyanosis in tongue, malar flush, raised JVP (congestive cardiac failure, tricuspid regurgitation), forceful carotid pulsations (Corrigan's sign in aortic incompetence and vigorous pulsation in coarctation of the aorta), and dependent pitting edema (**relevant examinations**)

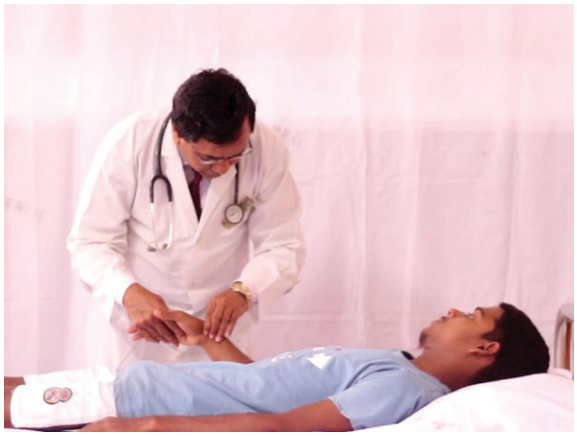

Figure I.15 **Pulse**

- **Precordium:**

Inspection:

- Inspect the precordium and observe shape, visible cardiac impulse, scar (left thoracotomy scar—mitral valvotomy or midsternotomy scar-valve replacement or CABG), epigastric, suprasternal, supraclavicular pulsation, engorged vein, and any other abnormality (e.g., Pacemaker or cardioverter defibrillator box).

Palpation:

- Palpate the apex (Fig. I.16) by placing flat of your hand and localize apex with a finger. Ascertain

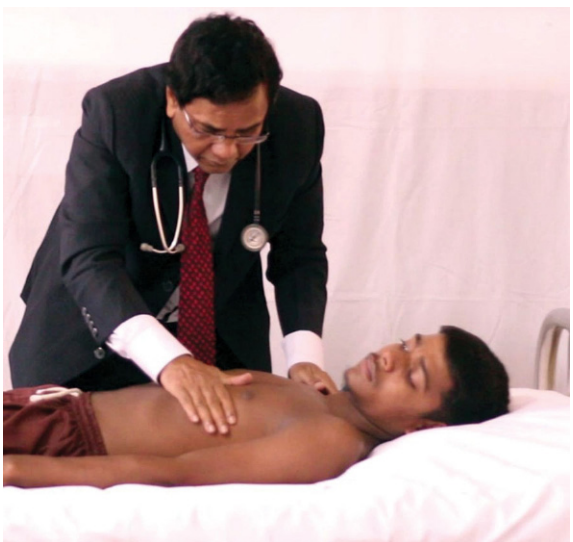

Figure I.16 **Apex beat**