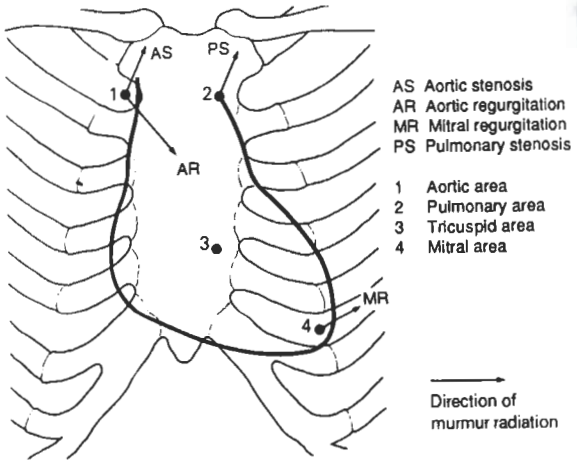


Fig. 2.1 Sites of cardiac auscultation.

RESPIRATORY SYSTEM

- Central and peripheral cyanosis, dyspnoea at rest, digital clubbing, tar staining of fingers, wasting of 1st dorsal interossei muscles in the hand (sign of possible apical lung tumour), signs of carbon dioxide retention (coarse flapping tremor, warm peripheries, bounding pulse, confusion, papilloedema).
- Record respiratory rate (normally 12–14 breaths/min) and breathing pattern (normal/Cheyne-Stokes/Kussmaul).
- Always compare both sides of the chest during the examination.
- Observe chest wall movement during both quiet breathing and deep inspiration and expiration. Measure chest expansion in both lateral and anteroposterior directions (should be at least 5 cm). Note presence of intercostal indrawing and the use of accessory muscles of respiration.
- Palpate for subcutaneous emphysema.
- Palpate the position of the trachea.
- Palpate for tactile fremitus.
- Percuss, auscultate and assess vocal resonance/whispering pectoriloquy of both the anterior and posterior aspects of the chest, including the apices and in both axillae. Listen to the quality of the breath sounds (normal/absent/bronchial) and for any additional sounds (crackles/wheezes/pleural rubs).
- Always examine any sputum (pink, frothy/purulent/mucoid/haemoptysis).

GASTROINTESTINAL SYSTEM

- Stigmata of chronic liver disease (leuconychia, palmar erythema, spider telangiectasiae, flapping tremor, lack of secondary sexual hair, jaundice, testicular atrophy, gynaecomastia, caput medusae, ascites, scratch marks).
- Check the appearance of dentition, tongue and fauces.
- Inspect the abdomen (scars, movement with respiration, peristalsis, swellings, cough impulses, herniae).
- Palpate gently and superficially with a warm hand having asked first about any particularly tender areas. Then palpate each area of the abdomen a little deeper. Feel for the liver, spleen and kidneys specifically, and check size by percussion (always percussing in the direction of resonant to dull).
- Differentiate spleen from kidney by identifying the anterior notch of the spleen, the dullness to percussion over the spleen, and the inability to 'get above' the spleen.
- Percuss gently throughout the abdomen and demonstrate any shifting dullness (ascites).
- Auscultate paying attention to the character of the bowel sounds (normal/diminished/increased in intensity/tinkling in obstruction/absent), and the presence of any bruits.
- Examine genitalia.
- Perform a PR and PV examination.

NERVOUS SYSTEM

- Level of consciousness; (see Table 17.1)
- Assess speech:
  Cerebellar dysarthria: slow, staccato, scanning
  Pseudobulbar palsy: 'Donald Duck' speech
  Bulbar palsy: nasal slurring
  Expressive dysphasia: difficulty word finding, retains comprehension
  Receptive dysphasia: fluent but unintelligible, no comprehension
  Nominal dysphasia: unable to name specific objects
- Assess gait:
  Cerebellar: wide-based gait, Romberg sign negative
  Spastic paraplegia: stiff, scissor-like gait
  Parkinson's disease: hesitant, shuffling gait, no arm swing
  Sensory ataxia: wide-based, stamping gait, Romberg sign positive
  Foot drop: high-stepping gait
- Cranial nerves:
  I – smell; test each nostril separately
  II – fundi, visual fields, acuity, direct and consensual pupillary response

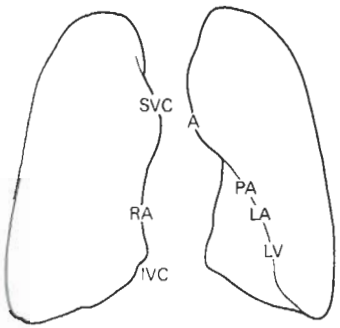
Percutaneous pleural biopsy *This is useful in the diagnosis of* tuberculosis, carcinoma and mesothelioma.

CT scanning This has largely replaced tomography in the accurate localization and staging of pulmonary lesions. High-resolution CT scanning is useful in the diagnosis of pulmonary fibrosis and bronchiectasis and spiral CT scanning in the diagnosis of PE.

CHEST X-RAY

The chest X-ray is an important part of the investigation of any patient with either cardiac or lung disease. Its examination should be systematic (→ Figs 4.3 & 4.4):

- Check the name on the film and L and R markers.
- Check whole chest is on film and penetration satisfactory.
- Note trachea is central, mediastinum of normal width and hila position and size normal (the L hilum may be up to 2 cm higher than the R). (→ Tables 4.1 & 4.2).
- Assess cardiothoracic ratio (the sum of the maximum width of the heart on either side of the midline divided by the maximum internal diameter of the chest): this should be less than 50% in healthy adults on a PA film and is increased in cardiac failure, pericardial effusion, L or R ventricular hypertrophy.
- Pulmonary vessels: plethoric in L to R shunts and hyperdynamic states; oligaemic in recent pulmonary emboli, cardiac tamponade, RV failure and R to L shunts. In pulmonary hypertension large central arteries rapidly 'prune' to give peripheral oligaemia. Pulmonary venous hypertension, most often due to LV failure, is manifest as distension of upper lobe veins (→ Tables 4.1 & 4.2).



SVC Superior vena cava
RA Right atrium
LA Left atrium
IVC Inferior vena cava
PA Pulmonary artery
LV Left ventricle
A Aorta

Fig. 4.3 A normal CXR.

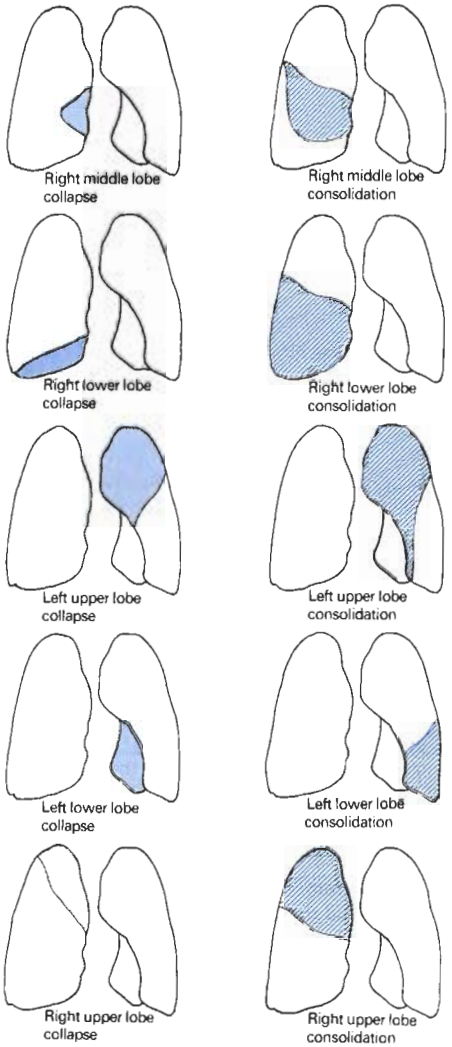


Fig. 4.4 Common CXR abnormalities.