

- * PaCO₂ is the most reliable assessment of adequacy of ventilation.
- * **Heimlich procedure** is especially applicable with obstruction due to an inhaled bolus of food.
- * Obstruction to air flow during both inspiratory and expiratory phases occurs in fixed tracheal obstruction.
- * Tuberculin and various fungus antigen skin tests are usually negative even when these infections are present in sarcoidosis.
- * The patient in sarcoidosis is relatively asymptomatic even in the presence of obvious clinical disease.
- * Renal failure due to glomerulitis and pulmonary failure is the usual cause of death in Wegner's granulomatosis.
- * Eosinophilia usually does not occur in extrinsic allergic alveolitis (Hypersensitivity pneumonitis).
- * *Herpes simplex* facial lesions are often present in pneumococcal pneumonia.
- * **Pseudocavitation** is seen in pneumococcal pneumonia.
- * Bullae of varying sizes may be seen in
 - (i) Upper lung fields — chronic bronchitis
 - (ii) Lower lung fields — Emphysema
- * **Pink puffers** (emphysema) denotes predominant panacinar emphysema (deficiency of alpha 1 antitrypsin).
- * **Blue bloaters** (chronic bronchitis)—centrilobular emphysema (cigarette smoking irritant inhalations).
- * The only symptom may be relatively sudden onset of dyspnea with or without pleuritic chest pain is associated with pulmonary embolism.
- * **Pulmonary angiography** is necessary for the definitive diagnosis of clinically significant pulmonary emboli.
- * The presence of calcification in solitary pulmonary nodule is strong evidence against pulm. malignancy.
- * Reduction in cardiac output is one of the most significant side effects of PEEP.
- * The optimal level of PEEP is the pressure just below that at which cardiac output becomes reduced.
- * The **adult respiratory distress syndrome** (ARDS) has been defined clinically by the triad of (i) refractory hypoxemia, (ii) decreased lung compliance, and (iii) diffuse alveolar infiltrates once a stable chronic pulmonary process and hydrostatic pulmonary edema have been excluded. ARDS usually presents clinically as tachypnea and laboured breathing, reflecting a reduced lung compliance. Arterial blood gases generally reveal preserved ventilation with profound hypoxemia resistant to supplement oxygen.

- * **Kellock's Sign**
 - Increase of vibration of ribs on sharp percussion with Rt. hand, and Lt. hand being placed firmly on thorax
- * **Koranyi's Sign**
 - Increase in resonance over dorsal segment on percussion of spinal process of thoracic vertebrae.
- * **Sicar's Sign**
 - Metallic resonance is heard on percussion with two coins on front of the chest and auscultation at the back.
- * **William's Sign**
 - Dullness over second intercostal space

Pneumothorax with Pleural effusion:

- * **Hoover's Sign**
 - Movement of costal margins toward midline in inspiration - Bilaterally in pulmonary emphysema and unilaterally in pleural effusion and pneumothorax
- * **Williamson's Sign**
 - Markedly diminished BP in leg as compared with that in the arm on the same side.

Pneumonia with Pleural Effusion:

- * **Skoda's Sign**
 - Tympanitic note heard on percussion of chest above the level of pleural effusion

Pleurisy:

- * **Andral's Sign** (early stages of pleurisy)
 - patient prefers to lie on same side
- * **Ramond's Sign** (pleurisy with pleural effusion)
 - rigidity of the erector spinae muscles
- * **Schepelmann's Sign** (Dry pleurisy)
 - increased pain when patient bends his body towards normal side
- * **Spinal Sign**
 - Tonic contraction of spinal muscles on diseased side

Cavity of lung:

- * **Seitz's Sign**
 - On inspiration bronchial sound is heard which begins harshly and then becomes faint
- * **Wintrich's Sign**
 - Change in the pitch of percussion note when mouth is opened and closed

CAUSES OF HYPOXAEMIA

- * Venous admixture
effect (poorly ventilated lung)
- * Alveolar underventilation
(raised PaCO₂)
Corrected by oxygen
- * Impairment of diffusion (less important at rest)
- * Right-to-left shunts (circulatory channels bypassing lungs)
- * Reduced oxygen content (PaCO₂ may be normal) (anaemia, in-activated haemoglobin)

TYPES OF COUGH (WITH SOME EXAMPLES)

Freely productive	Bronchiectasis
Paroxysmal	Chronic bronchitis, asthma
Painful	Pneumonia with pleurisy
'Bovine'	Recurrent laryngeal paralysis
(lacking explosive element)	
Accompanied by stridor	Whooping cough; partial laryngeal or tracheal obstruction

TYPES OF SPUTUM

White	Mucoid
Gray	Mucoid (dust inhalation)
Black	Mucoid + coal dust (melanoptysis)
Yellow or green	Purulent
Rusty	Altered blood (pneumococcal pneumonia)
Pink frothy	Pulmonary oedema
Blood-stained	Haemoptysis

CAUSES OF HAEMOPTYSIS

- | | |
|---|------------------------|
| * Pulmonary tuberculosis | * Pulmonary infarction |
| * Bronchial tumours
(carcinoma, adenoma) | * Bronchiectasis |
| | * Mitral stenosis |

RESPIRATORY VARIABLE IN THE NEONATE

Total Volume (Vt)	7 ml/kg
Dead space (Vd)	Vr X 0.3 ml
Respiratory rate	Age 1-3 (24..age/2)breath/min

* COMPARISON OF RESPIRATORY VARIABLES IN NEWBORNS, INFANTS, CHILDREN AND ADULTS

Age	Weight (Kg.)	Respiratory Rate (breaths/min)	Tidal Volume (ml)	Minute Ventilation (ml/min)	FRC (ml)	VC (ml)	Vd (ml)
Newborn	3	35	15	525	70	90	7
6 months	6	30	30	900	150	200	14
12 months	10	24	70	1,680	260	470	21
5 years	18	20	135	2,700	660	1,100	49
23 years	70	12	500	6,000	3,000	4,600	150

Abbreviations: FRC, functional residual capacity, VC, vital capacity; Vd, respiratory dead space

LOEFFLER SYNDROME:

- * Allergic manifestation
- * Widespread transitory pulmonary infiltrations
- * Blood eosinophilia (70%)
- * Paroxysmal attacks of coughing, dyspnea, pleurisy & little or no fever
- * Hepatomegaly in infants & young children
- * Hyperglobulinemia
- * Localized pneumonic consolidation with associated eosinophilia
- * Most common pathogen is the *Toxocara canis*

CHEST

A. Coin Shaped (Solitary Circumscribed Nodules)

- * Granulomas-Tuberculosis, Histoplasmosis, Coccidioidomycosis
- * Cyst-bronchial, Hydatid
- * Bronchial Adenoma