KMU Top 60 Pulmonology

ADULT & PAEDS PULMO • REPEATED CONCEPTS **KMU - FINAL YEAR MBBS**

AIRWAY DISEASES (1-10)

1. COPD Target O2: **88-92%**. Higher O2 kills hypoxic drive -> CO2 retention/Narcosis.

2. COPD Diagnosis: Spirometry FEV1/FVC < 0.7 (Irreversible). "Blue Bloater" = Bronchitis. "Pink Puffer" = Emphysema.

3. Acute COPD Mgmt: Bronchodilators + Steroids + Antibiotics (if purulent). If pH < 7.35 + High CO2 -> **NIV (BiPAP).**

4. Alpha-1 Antitrypsin: Young non-smoker + Basal Emphysema + Liver disease.

5. Asthma Diagnosis: Reversibility >12% & >200ml FEV1 after Salbutamol.

6. Acute Asthma: O2 + Nebulized SABA/Ipratropium + Systemic Steroids. Severe -> IV MgSO4.

7. Life-Threatening Asthma: Silent Chest, Normal/High CO2 (means tiring), Bradycardia, Confusion.

8. Chronic Asthma: GINA Guidelines: **SABA-only banned.** Use ICS-Formoterol as reliever.

9. Bronchiectasis: "Tram-tracking" or "Signet Ring" on HRCT. Copious foul sputum.

10. Cystic Fibrosis: Meconium ileus (Newborn), Recurrent infections (Pseudomonas). Dx: Sweat Chloride >60.

PNEUMONIA & TB (11-25)

11. CAP Organism: Strep Pneumoniae (Lobar, Rusty Sputum). Rx: Amoxicillin.

12. Atypical Pneumonia: Mycoplasma (Young, dry cough, bilateral infiltrates). Rx: Macrolide (Azithromycin).

13. HAP/VAP Organism: Pseudomonas or MRSA. Rx: Pip-Taz or Meropenem.

14. Lung Abscess: Aspiration/Alcoholic. Anaerobes. Air-fluid level. Rx: Clindamycin.

15. TB Diagnosis: Gold Std = Culture. Rapid = GeneXpert (Detects Rif resistance).

16. Rifampicin SE: Red/Orange urine (Counsel patient!). Enzyme Inducer.

17. Isoniazid SE: Peripheral Neuropathy (Give Pyridoxine B6). Hepatotoxic.

18. Ethambutol SE: Optic Neuritis (Check Color Vision/Acuity). Renal dosing needed.

19. Pyrazinamide SE: Hyperuricemia (Gout), Hepatotoxic.

20. TB in Pregnancy: All First-line safe. **Streptomycin is Teratogenic (Ototoxic).**

21. TB Pleural Effusion: Exudate + High Lymphocytes + High ADA. Gold Std = Biopsy.

22. Miliary TB: "Millet seed" shadows on CXR. Choroidal Tubercles in eye.

23. Pneumatocele: Staph Aureus Pneumonia complication (especially in kids).

24. CURB-65: Confusion, Urea>7, RR>30, BP<90, Age>65. Score 3+ -> ICU.

25. Staph Pneumonia: Post-Viral (Influenza). Cavitating lesions. Severe.

TUMORS & INTERSTITIAL (26-35)

26. Squamous Cell Ca: Central, Cavitating, Smoker. Secretes PTHrP -> **Hypercalcemia.**

27. Small Cell Ca: Central, Early Metastasis. Paraneoplastic: SIADH (Low Na), Cushing (ACTH), LEMS.

28. Adenocarcinoma: Peripheral. Most common in Non-Smokers/Females.

29. Pancoast Tumor: Apical. Horner's Syndrome (Ptosis, Miosis, Anhidrosis) + Shoulder pain (C8-T1).

30. Lung Ca Diagnosis: Central = Bronchoscopy. Peripheral = CT Biopsy. Staging = PET-CT.

31. ILD/Fibrosis: Dry cough, Fine Velcro Crackles, Clubbing. HRCT: Honeycombing. Restrictive PFT.

32. Sarcoidosis: Bilateral Hilar Lymphadenopathy + Erythema Nodosum. High ACE. Non-caseating Granuloma.

33. Silicosis: "Eggshell Calcification" of hilar nodes. TB risk.

34. Asbestosis: Lower lobes fibrosis. Risk of Mesothelioma (Pleura) & Bronchogenic Ca.

35. Kartagener's: Situs Inversus + Bronchiectasis + Sinusitis (Ciliary Dyskinesia).

PLEURAL & VASCULAR (36-45)

36. Tension Pneumothorax: Tracheal shift away, hypotension. **Rx: Needle Decompression (2nd/5th ICS).** No CXR.

37. Pulmonary Embolism: Dyspnea + Pleuritic Pain + Tachycardia. ECG: S1Q3T3. Dx: CTPA (Gold). Rx: LMWH.

38. Pleural Effusion: Light's Criteria. Exudate if Protein Ratio > 0.5.

39. Empyema: pH < 7.2 or Glucose < 60. Rx: **Chest Tube Drainage Mandatory.**

40. Hemoptysis: Massive = Bronchial Artery source. Mgmt: Bad Lung Down -> Embolization.

41. Transudate Causes: Heart Failure, Cirrhosis, Nephrotic Syndrome.

42. Chylothorax: Milky fluid. High Triglycerides. Thoracic Duct trauma.

43. OSA: Snoring, Daytime sleepiness, Obesity. Dx: Polysomnography. Rx: CPAP.

44. ARDS: Bilateral infiltrates, Non-cardiogenic edema. Rx: Low Tidal Volume ventilation.

45. Foreign Body (Adult): Right Main Bronchus. Rx: Rigid Bronchoscopy.

PAEDS RESPIRATORY (46-60)

46. Croup: Parainfluenza. Barking Cough + Stridor. "Steeple Sign". Rx: Dexamethasone + Nebulized Epinephrine.

47. Epiglottitis: Hib. Drooling, Toxic, Tripod. "Thumb Sign". **NO Tongue Depressor.** Rx: Intubation (OT).

48. Bronchiolitis: RSV. < 2 years. Wheeze + Hyperinflation. Rx: Supportive/O2.

49. Bronchiolitis Prevention: Palivizumab for Preterms/CHD.

50. Whooping Cough: Pertussis. Paroxysmal cough + Whoop. Rx: Macrolide (Azithromycin).

51. Foreign Body (Child): Sudden choking. Unilateral wheeze. Hyperinflation on CXR.

52. Paeds Pneumonia Organism: < 3 weeks = GBS/E.Coli. > 5 years = Mycoplasma.

53. WHO Tachypnea: <2mo (>60), 2-12mo (>50), 1-5y (>40).

54. IMCI Severe Pneumonia: Chest Indrawing. Action: Admit + IV Antibiotics.

55. Cystic Fibrosis Screening: Newborn IRT (Immunoreactive Trypsinogen).

56. Bacterial Tracheitis: "Croup that gets toxic". Pus in trachea. Staph Aureus.

57. Tonsillitis: Centor Criteria. 10 Days Penicillin to prevent Rheumatic Fever.

58. Secondary Hemorrhage: Post-Tonsillectomy (5-10 days). Due to Infection. Rx: Antibiotics.

59. Adenoid Hypertrophy: Mouth breathing, Snoring, Glue Ear (OME).

60. Round Pneumonia: Spherical opacity in kids. Not cancer. Rx: Antibiotics.

FINAL EXAM TIP: If a child presents with "Stridor at rest", it is SEVERE Croup -> Give **Nebulized Epinephrine** immediately.