

العلم

Respiratory System

Past papers & Test bank

- PBL
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- **Note this file contains Past Paper Questions + Test bank**

L1: past papers

Q1) 30 years old patient came to the ER complaining from fever, cough, shortness of breath and chest pain. Physical examination shows tachycardia, tachypnea, temperature of 38,5 c, O2 saturation of 85% and crackles are heard in the lower posterior lobe, the patient was admitted, which of the following is **false**:

- A) The patient most likely has pneumonia
- B) Emphysema is a complication of this condition
- C) Chest X-ray is mandatory for the investigation of this case
- D) The main choice of treatment is antibiotics
- E) The patient can be treated at home and there's no need for admission

Ans: E

Q2) lady in sixties with DM2 & HTN came with pneumonia, she has acute shortness of breath and tachypnea, which of the following is **true** regarding her case? (a case shows ARDS)

Ans: patient must be given supplemental oxygen therapy and placed on a mechanical ventilator.

Q3) A case about a patient with covid who developed ARDS, which of the is not expected to be in this patient:

- A. The PF ratio is 190
- B. Expiratory wheeze with prolonged expiratory phase
- C. The patient has Adult respiratory distress syndrome

Ans: B

Q4) How to treat severe ARDS?

Ans: Steroids

L2: past papers

Q1) 2 years child presents to the pediatric clinic with dry barking cough and loud breathing sound during inspiration. This was associated with low grade fever and nasal discharge. On physical examination, the child had inspiratory stridor, hoarseness of voice, and signs of respiratory distress. According to this clinical profile, which part of the respiratory system is likely to be affected by this pathology?

- A) Terminal bronchioles
- B) Lung parenchyma
- C) Larynx and upper trachea
- D) Lung interstitial tissue
- E) Paranasal sinuses

Ans: C

Q2) Barking cough with steeple sign?

Ans: Croup

Q3) One of the following is causing acute stridor in children?

- A) Bronchiolitis
- B) Allergic rhinitis
- C) Bacterial pneumonitis
- D) Bacterial Tracheitis
- E) Heart failure

Ans:D

Q4) A 4-year-old child with a harsh, honking cough, inspiratory stridor, and increased respiratory effort presents to the clinic. The child's parents report a recent upper respiratory infection. What is the most likely cause?

- A) Laryngomalacia

- B) Tracheomalacia
- C) Viral croup
- D) Bacterial tracheitis
- E) Epiglottitis

Ans: C

Q5) Which viral infection is commonly associated with croup?

- A) Human metapneumovirus
- B) Parainfluenza virus
- C) Adenovirus
- D) Influenza
- E) Respiratory syncytial virus (RSV)

Ans: B

L1: Test bank

Case-1: A 45-year-old woman presents with a 5-day history of fever, productive cough, and shortness of breath. On examination, she has a respiratory rate of 40 breaths/min, **decreased air entry on the right lower lung**, dull percussion, and inspiratory crackles. Her chest X-ray shows patchy opacity in the right lower zone.

Q1) What is the most likely diagnosis?

- A. Pulmonary embolism
- B. Pneumonia
- C. Asthma exacerbation
- D. Chronic bronchitis

Ans: B

Q2) What is a common complication of pneumonia that may present with worsening dyspnea, chest pain, and fever recurrence?

- A. Pleural effusion
- B. Asthma
- C. Foreign body aspiration
- D. Laryngotracheitis

Ans: A

Q3) Which of the following is considered appropriate initial treatment for **typical pneumonia** in a **hospitalized patient**?

- A. Oral azithromycin
- B. Parenteral cefuroxime
- C. Inhaled corticosteroids
- D. High-dose salbutamol nebulization

Ans: B

Case-2: A 45-year-old man with a 40-pack-year smoking history presents with chronic dyspnea, a minimally productive cough, and fatigue. Spirometry shows **FEV1/FVC < 70%** with no reversibility after bronchodilator administration.

Q1) What is the most likely diagnosis?

- A. Asthma
- B. COPD
- C. Interstitial lung disease
- D. Pneumonia

Ans: B

Q2) Which chest X-ray finding is most indicative of COPD?

- A. Bilateral patchy opacities
- B. Lobar consolidation
- C. Hyperinflation with flattened diaphragm

D. Pleural effusion

Ans: C

Q3) What is the first-line pharmacological treatment for a stable COPD patient with moderate symptoms?

A. Inhaled corticosteroids

B. Short-acting beta-agonists

C. Long-acting muscarinic antagonists

D. Oral theophylline

Ans: C

Case-3: A 64-year-old woman with a history of diabetes and recently treated breast cancer, presents with fever, cough, and dyspnea. Her oxygen saturation on room air is 86%, and chest X-ray shows bilateral patchy opacities. Her ABG shows $PaO_2/FiO_2 = 190$.

Q1) What is the most likely diagnosis?

A. COPD exacerbation

B. Acute Respiratory Distress Syndrome (ARDS)

C. Pulmonary embolism

D. Interstitial lung disease

Ans: B

Q2) What is the primary pathological mechanism underlying ARDS?

A. Airway hyperresponsiveness and inflammation

B. Diffuse alveolar-capillary membrane injury and increased vascular permeability

C. Obstruction of the bronchioles by mucus plugs

D. Lobar consolidation caused by bacterial invasion

Ans: B

Q3) Which of the following is a key component of ARDS management?

- A. Empirical antibiotic therapy
- B. High-flow oxygen therapy and ventilatory support
- C. Immediate bronchodilator administration
- D. Nebulized corticosteroids

Ans: B

L2: Test bank

Case-1: A 2-year-old child presents to the emergency department with a 2-day history of a **dry barking cough, inspiratory stridor, and hoarseness of voice**. The parent reports that the **symptoms worsen at night**, and the child also has **a low-grade fever** and nasal discharge.

Q1) What is the most likely diagnosis?

- A. Epiglottitis
- B. Bacterial Tracheitis
- C. Viral Croup
- D. Foreign Body Aspiration

Ans: C

Q2) What is the primary imaging finding associated with croup on a neck X-ray?

- A. Thumb sign
- B. Steeple sign
- C. Omega-shaped epiglottis
- D. Air-fluid levels in the sinuses

Ans: B

Q3) What is the first-line treatment for moderate to severe cases of croup?

- A. Intravenous antibiotics

- B. Nebulized adrenaline and systemic corticosteroids
- C. Endotracheal intubation
- D. Suctioning of secretions

Ans: B

Case-2: A 4-year-old child is brought to the hospital with a barking cough, high-grade fever, and inspiratory stridor. The child appears toxic and has excessive tracheal secretions. The parent reports no improvement with nebulized adrenaline.

Q1) What is the most likely diagnosis?

- A. Viral Croup
- B. Epiglottitis
- C. Bacterial Tracheitis
- D. Retropharyngeal Abscess

Ans: C

Q2) Which of the following is the most appropriate initial antibiotic regimen for suspected bacterial tracheitis?

- A. Amoxicillin-clavulanic acid
- B. IV vancomycin and ceftriaxone
- C. Oral azithromycin
- D. Nebulized budesonide

Ans: B

Q3) What is a characteristic finding on imaging in bacterial tracheitis?

- A. Steeple sign
- B. Thumb sign
- C. Swollen tracheal mucosa with narrowing on X-ray
- D. Omega-shaped epiglottis

Ans: C

Case-3: A 5-year-old child presents with a sudden onset of drooling, stridor, and high-grade fever. The child appears very ill, prefers to sit leaning forward, and has a hyper-extended neck. The mother states that the child is refusing to eat or drink.

Q1) What is the most likely diagnosis?

- A. Viral Croup
- B. Retropharyngeal Abscess
- C. Epiglottitis
- D. Foreign Body Aspiration

Ans: C

Q2) Which imaging finding is most indicative of epiglottitis?

- A. Steeple sign
- B. Swelling of the soft tissue at the trachea
- C. Omega-shaped epiglottis
- D. Thumb sign

Ans: D

Q3) What is the most critical step in managing a patient with suspected epiglottitis?

- A. Immediate IV antibiotics
- B. Obtaining blood cultures
- C. Avoiding airway irritation and consulting ENT for intubation or tracheostomy
- D. Administering nebulized adrenaline

Answer: C

Case-4: A 3-year-old child presents with a high-grade fever, drooling, neck pain, and difficulty swallowing. On examination, the uvula is deviated, and there is visible bulging in the posterior pharynx.

Q1) What is the most likely diagnosis?

- A. Epiglottitis
- B. Retropharyngeal Abscess
- C. Bacterial Tracheitis
- D. Viral Croup

Ans: B

Q2) What is the initial treatment for a child diagnosed with a retropharyngeal abscess with airway compromise?

- A. Broad-spectrum IV antibiotics and surgical drainage
- B. Nebulized adrenaline and corticosteroids
- C. Oral antibiotics and outpatient monitoring
- D. Endotracheal intubation without ENT consultation

Ans: A

Case-5: A 2-month-old infant presents with inspiratory stridor that worsens with crying, feeding, and upper respiratory infections but improves in the prone position. The child has no cyanosis or history of respiratory distress at birth.

Q1) What is the most likely diagnosis?

- A. Laryngomalacia
- B. Viral Croup
- C. Epiglottitis
- D. Tracheomalacia

Ans: A

Q2) What is the characteristic finding on laryngoscopy in laryngomalacia?

- A. Steeple sign
- B. Omega-shaped epiglottis
- C. Thumb sign
- D. Enlarged tonsils obstructing the airway

Ans: B

Q3) At what age does the stridor in laryngomalacia typically peak and resolve?

- A. Peaks at 6–9 months, resolves by 18–24 months
- B. Peaks at 2–3 months, resolves by 12 months
- C. Peaks at 1 year, resolves by 3 years
- D. Peaks at birth, resolved by 6 months

Ans: A