



بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



## PATHOLOGY

MID | Lectures (1-3)

# Past Papers

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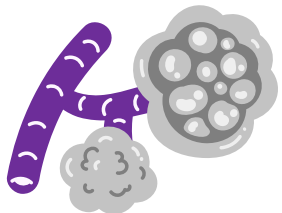


Reviewed by: Salwa Alawi



﴿ وَلَقَدْ نَعْلَمُ أَنَّكَ يَضِيقُ صَدْرُكَ بِمَا يَقُولُونَ ﴿١٧﴾ فَسَبِّحْ بِحَمْدِ رَبِّكَ وَكُنْ مِنَ السَّاجِدِينَ ﴾

سبحان الله وبحمده، سبحان الله العظيم



قبل ما تبلشوا احكوا بسم الله، واحمدوا ربنا على نعمة الصحة والعافية

{ الحمد لله الذي عافانا مما ابتلي به غيرنا وفضلنا على كثيرٍ ممن خلق تفضيلاً }

# **Lecture (1): Atelectasis & ARDS**

Q1: Which of the following is true about atelectasis:

- A) Emphysema is associated with resorption atelectasis
- B) Defined as low lung volume due to alveolar destruction
- C) Mucus plugs cause compression atelectasis
- D) Accumulation of fluid in pleura causes cicatrization
- E) None of the above

\*Option E was not originally included, we added it  
because the other options are mostly NOT true  
“Although option A was marked as the correct answer” !

Ans: E

Q2: Which of the following is true about atelectasis:

- A) In resorption atelectasis, the mediastinum shifts toward the atelectatic lung.
- B) Accumulation of mucus in bronchi is the most common cause of atelectasis in kids.
- C) Air in the parietal cavity causes contraction atelectasis.
- D) All forms of atelectasis are reversible and curable.

Ans: A

Q3: Which of the following is true about acute respiratory distress syndrome:

A) Gradual onset

B) Graded by arterial oxygenation

C) In organized stage, you can find microscopic appearance of fibrin rich edema fluid

Ans: B

Q4: Regarding ARDS, which of the following is true:

- A) It's the milder form of acute lung injury
- B) The most common cause is pancreatitis
- C) It's characterized by the presence of hyaline membranes in the organizing stage
- D) Sepsis is indicative for poor prognosis
- E) It's related to cardiac causes

Ans: D

Q5: 58-year-old man with ischemic heart disease undergoes coronary artery bypass graft surgery under general anesthesia. Two days postoperatively, he experiences increasing respiratory difficulty with decreasing arterial oxygen saturation. On physical examination, his heart rate is regular at 78/min, respirations are 25/min, and blood pressure is 135/85 mmHg. The hemoglobin concentration has remained unchanged, at 13.7 g/ dL, since surgery. After he coughs up a large amount of mucoid sputum, his condition improves. Which of the following types of atelectasis does he most likely have?

- A) Compression
- B) Contraction
- C) Resorption

Ans: C



Q6: A 7-year-old boy accidentally inhales a small peanut, which lodges in one of his bronchi. A chest x-ray reveals the mediastinum to be shifted toward the side of the obstruction. The best description for the lung changes that result from this obstruction is:

- A) Absorptive atelectasis
- B) Compression atelectasis
- C) Contraction atelectasis
- D) Patchy atelectasis
- E) Hyaline membrane disease

Q7: Histologic sections of lung tissue from an individual with adult respiratory distress syndrome (ARDS) are most likely to reveal:

- A) Angio-invasive infiltrates of pleomorphic lymphoid cells
- B) Deposits of needle-like crystals from the membranes of eosinophils
- C) Infiltrating groups of malignant cells having intercellular bridges
- D) Irregular membranes composed of edema, fibrin, and dead cells lining alveoli
- E) Plexiform lesions within pulmonary arterioles

Q8: Which of the following is true regarding ARDS:

Ans: Poor prognosis in case of bacteremia.

Q9: Most common cause of ARDS:

Ans: Sepsis.

Q10: A 70 year old patient in the ICU complaining of shortness of breath, fibrin-rich membrane was seen in his histological findings, what is your diagnosis:

Ans: ARDS.

Q11: Wrong about atelectasis:

Ans: Air in pneumothorax (compression atelectasis) is irreversible.

Q12: ARDS feature:

- A) Hyaline membrane in organizing stage
- B) Sepsis is a predictor of poor prognosis

Ans: B

Q13: Which of the following is true about atelectasis

Ans: Chronic bronchitis causes resorption atelectasis.



Q14: What happens during the organization phase of ARDS:

Ans: Proliferation of type 2 pneumocytes.

Q15: Which of the following statements is true:

Ans: Pleural effusion causes compression atelectasis.

# **Lecture (2): Obstructive Lung Diseases Pt.1**

Q1: A 35-year-old gentleman he is a non smoker & barrel chested suffers from dyspnea & his lower zone of the lung has something , his brother has similar manifestations. What of the following is most likely to be the reason for his disease:

- A) Increase in proteases
- B) Lack of anti-elastases
- C) Active pulmonary infection

Ans: B

Q2: True about chronic bronchitis:

- A) Diagnosed by persistent cough for at least two months for three consecutive years
- B) Associated with metaplasia & dysplasia
- C) Needs regular clinical, lab and histological findings for diagnosis

Ans: B

Q3: Which one of the following is a correct association concerning the pathogenesis of smoking- induced emphysema:

- A) Destruction of distal acinus – centrilobular emphysema
- B) Destruction of distal acinus – paraseptal emphysema
- C) Destruction of entire acinus – panlobular emphysema
- D) Destruction of proximal acinus – centrilobular emphysema
- E) Destruction of proximal acinus – paraseptal emphysema

Q4: A 20-year-old, previously healthy gentleman is jogging one morning when he falls to the ground. He suddenly becomes markedly short of breath. In ER no breath sounds audible over the Rt side of the chest. A CXR shows shift of the mediastinum from right to left. A chest tube is inserted on the right side, and air rushes out. Which of the following underlying diseases is most likely to have produced this complication:

- A) Centriacinar emphysema
- B) Chronic bronchitis
- C) Distal acinar emphysema
- D) Panlobular emphysema

Q5: Choose the correct pair of the disease with its most common symptom:

- A) Idiopathic Pulmonary Fibrosis - non progressive dyspnea
- B) Asthma - chronic progressive dyspnea
- C) Emphysema - hyperventilation
- D) Bronchiectasis - dry cough

Ans: C



Q6: The incorrect statement about emphysema:

Ans: Involves decreased compliance.

Q7: Which of the following statements is incorrect:

Ans: Centriacinar emphysema is associated with alpha 1-antitrypsin deficiency.

Q8: Which of the following statements is true:

Ans: Infection doesn't initiate chronic bronchitis.

Q9: Airway obstruction in chronic bronchitis is due to:

Ans: Bronchiolitis.

Q10: Which of the following statements is wrong about emphysema:

Ans: Inflammation with associated fibrosis.

**Q11: True about COPD:**

**Ans:** Inflammation is involved in the pathogenesis of both emphysema & chronic bronchitis.

Q12: Not correct about chronic bronchitis:

Ans: bacterial infection has a role.

Q13: According to pathogenesis, emphysema occurs because:

Ans: protease — antiprotease imbalance.



# **Lecture (3): Obstructive Lung Diseases pt.2**

Q1: Choose the correct statement regarding the pathophysiology of asthma:

- A) The early stage is inflammatory in nature.
- B) The late stage is characterized by the activation of cell-mediated immunity.
- C) IL-13 stimulates mucus secretions & IgE production.

Ans: C

Q2: Regarding bronchiectasis, one of the following statements is correct:

- A) It's a primary inherited pulmonary disease
- B) Considered as reversible obstructive pulmonary disease
- C) Alveolar sacs are the most involved parts
- D) Heals with complete resolution & no fibrosis
- E) Patients present with cough & purulent sputum

Ans: E

Q3: Regarding the pathogenesis of atopic asthma one of the following statements is correct:

- A) The initial response upon first exposure is associated with type-1 helper lymphocyte activation
- B) IL-4 & IL-5 are secreted from alveolar macrophages during the early phase response
- C) Phago-lysosomal maturation arrest is essential in the pathogenesis during early phase
- D) Eotaxin is a potent chemoattractant and activator of eosinophils in late phase
- E) Early phase is triggered by antigen induced cross-linking of IgG bound to receptor on mast cells

Ans: D

Q4: Which of the following diseases affect the lower lung lobe?

- A) Distal acinar emphysema
- B) Silicosis
- C) Bronchiectasis
- D) Coal worker pneumoconiosis
- E) Hypersensitivity pneumonitis

Ans: C

Q5: Asthma is an irreversible obstructive airway disease:

A) True

B) False

Ans: B

Q6: The correct statement:

- A) The destruction of airways is characteristic in asthma
- B) Asthma is a reversible airway disease
- C) Asthma is a restrictive airway disease

Ans: B

Q7: Choose the correct statement:

- A) The initial airway response after exposure to the inhaled allergens for first time starts with the recognition of the antigen by antigen presenting cells on surface mucosa
- B) The initial airway response after exposure to the inhaled allergens for first time starts with bronchoconstriction & wheezes
- C) The initial airway response after exposure to the inhaled allergens for first time starts with the degranulation of the mast cells & release of preformed mediators

Ans: A



Q8: Choose the correct statement:

- A) Upon re-exposure to the same antigen an inflammatory phase reaction follows
- B) Upon re-exposure to the same antigen IgE production & eosinophil activation and recruitment follows
- C) Upon re-exposure to the same antigen degranulation of the mast cells & release of preformed mediators follows

Ans: C

Q9: Choose the correct statement:

- A) The first wave of reaction upon re-exposure is dominated by bronchoconstriction, increased mucus production & vasodilation.
- B) The first wave of reaction upon re-exposure is dominated by airway remodeling
- C) The first wave of reaction upon re-exposure is dominated by release of inflammatory mediators

Ans: A

Q10: Regarding bronchiectasis, one of the following statements is correct:

- A) Primary process
- B) Irreversible
- C) Restrictive disease
- D) Affects the acini

Ans: B

Q11: Wrong about bronchiectasis:

Ans: Diagnosis is only through biopsy

Q12: Cystic fibrosis causes:

Ans: Bronchiectasis

Q13: Not a cause of bronchiectasis:

Ans: Acute pneumonia

**Q14: Mismatch about asthma:**

Ans: Drug (aspirin) induced asthma is caused by inhibition of lipoxxygenase

Q15: Which of the following is wrong about bronchiectasis:

Ans: Results in reversible dilation



الحمد لله

اللهم إني أستودعك ما قرأت وما حفظت وما تعلمت، فردّه إلي عند حاجتي إليه، إنك على كل شيء قدير  
اللهم أدخلني مدخل صدق، وأخرجني مخرج صدق، واجعل لي من لدنك سلطاناً نصيراً  
ربّ اشرح لي صدري، ويسر لي أمري، واحلل عقدة لساني، يفقهوا قولي، باسم الله الفتاح

لا تنسونا من صالح دعواتكم

# رسالة من الفريق العلمي

اللهم إنّ عمر عطية في ذمتك وحبل جوارك، فقه من فتنة القبر وعذاب النار،  
أنت أهل الوفاء والحق، فاغفر له وارحمه إنك أنت الغفور الرحيم.

"مِنَ الْمُؤْمِنِينَ رِجَالٌ صَدَقُوا مَا عَاهَدُوا اللَّهَ عَلَيْهِ فَمِنْهُمْ مَن قَضَىٰ نَحْبَهُ وَمِنْهُمْ مَن يَنْتَظِرُ وَمَا بَدَّلُوا تَبْدِيلًا"  
وإنّه لجهاد نصرّ أو استشهاد، اللهم ارحم الشهداء وتقبلهم في الفردوس الأعلى

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