

RESPIRATORY PHARMACOLOGY

1. Select the fastest acting inhaled bronchodilator used in asthma
 - A. Ipratropium.
 - B. Salbutamol.
 - C. Tiotropium.
 - D. Salmeterol.
2. The safest drug to relieve an acute attack of asthma in a cardiac patient is:
 - A. Ipratropium.
 - B. Salbutamol.
 - C. Epinephrine.
 - D. Theophylline.
3. All the following inhibit mast cell degranulation **Except:**
 - A. Nedocromil.
 - B. Penicillin
 - C. Cromolyn.
 - D. Salbutamol
4. All the following are long term controllers used in asthma **except**
 - A. Budesonide.
 - B. Salbutamol.
 - C. Montelukast.
 - D. Cromolyn.
5. The following is not a side effect of β_2 agonists:
 - A. Tremors.
 - B. Hyperkalemia.
 - C. Anxiety.
 - D. Tolerance.

1. B

2.A

3. B

4. B

5.B

6. In comparison to inhaled β_2 agonists, the inhaled anticholinergics:
- A. Are more effective in bronchial asthma.
 - B. Are better suited for control of an acute attack of asthma.
 - C. Produce slower response in bronchial asthma.
 - D. Produce little benefit in COPD.
7. All of the following statements regarding theophylline are true **Except:**
- A. It inhibits phosphodiesterase enzyme & increases cyclic AMP in mast cells
 - B. It works in part by blocking adenosine A1 receptors.
 - C. If given with erythromycin, decreased levels of theophylline may occur
 - D. Higher doses may be required to achieve therapeutic levels in smokers
8. Selecting theophylline dose depends on all the following **Except:**
- A. Smoking history
 - B. Presence of renal insufficiency
 - C. Presence of congestive heart failure or cor pulmonale.
 - D. Presence of hepatic failure
9. Toxicities of theophylline include all the following **Except:**
- A. Tachycardia.
 - B. Convulsions.
 - C. Hyperkalemia.
 - D. Insomnia.
 - E. Nausea & vomiting
10. Theophylline is not a first line drug in asthma due to all the following **Except:**
- A. Narrow safety margin.
 - B. Requires frequent serum monitoring.
 - C. Numerous adverse effects and drug interactions.
 - D. Cannot be given orally.

6. C

7. C

8. B

9. C

10. D

11. All the following dilate bronchi during an acute asthmatic attack **Except:**
- A. Ipratropium.
 - B. Salbutamol.
 - C. Nedocromil.
 - D. Theophylline.
12. A drug used in asthma that induces hoarseness of voice and candidiasis is
- A. Ipratropium.
 - B. Fluticasone.
 - C. Salbutamol.
 - D. Salmeterol.
13. All the following reduce side effects of corticosteroids in asthma **Except:**
- A. Using a spacer device.
 - B. Gargling and spitting following inhalation.
 - C. Giving oral medication late in the afternoon.
 - D. Resorting to oral medication only in severe uncontrolled cases.
14. All of the following statements regarding ciclesonide are true **Except:**
- A. Bronchodilator
 - B. Prodrug, activated by bronchial esterases.
 - C. High 1st pass & plasma protein binding → less systemic side effects
 - D. Less frequent candidiasis.
15. Therapeutic uses of cromolyn do not include :
- A. Long term control of mild asthma.
 - B. Long term control of severe asthma.
 - C. Allergic conjunctivitis.
 - D. Allergic rhinitis.
16. The following is not an adverse effects of inhalation of cromolyn
- A. Throat irritation.
 - B. Cough.
 - C. Chest tightness.
 - D. Oral candidiasis.

11. C

12.B

13. C

14. A

15.B

16.D

17. Reflex bronchoconstriction is most likely with inhalation therapy using:

- A. Nebulizers.
- B. Nebulizers with spacer device.
- C. Metered dose spray of drug in solution.
- D. Dry microfine powder inhalation.

18. Advantages of epinephrine in anaphylaxis include all the following **Except**

- A. Rapid β_2 bronchodilator
- B. α_1 vasoconstrictor decongestant effect.
- C. β_1 cardiostimulant.
- D. Wide safety margin with reduced risk of arrhythmia.

19. An asthmatic on salbutamol inhaler, taken as on need basis, experiences an acute exacerbation & uses the inhaler several times/day, every day; you would recommend:

- A. Add an inhaled corticosteroid.
- B. Add an oral corticosteroid 7 day course.
- C. Replace salbutamol by salmeterol.
- D. Add cromolyn Sodium.

20. An asthmatic suffering from moderate bronchospasm & wheezes about twice/week is treated by salbutamol as on need basis plus beclomethazone by inhalation. Salmeterol, may be used in this patient as:

- A. A replacement for the inhaled corticosteroid.
- B. The preferred agent for acute symptom control (rescue medication).
- C. Replacement for salbutamol.
- D. An add-on to current medication for additional prophylaxis.

21. The following drugs should not be given alone but should always be combined with an inhaled corticosteroid for asthma control

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|-----------------|------------------|------------|
| A. Montelukast. | C. Nedocromil. | E. B and C |
| B. Salmeterol. | D. Theophylline. | |

17. D

18. D

19. B

20. D

21. E

22. A patient with severe acute asthma, acidosis & hypoxia received repeated doses of salbutamol which failed to dilate the airways & resulted in dangerous tachycardia. This case might be resolved by:
- Switching to epinephrine.
 - Adding salmeterol.
 - Giving a systemic corticosteroid.
 - Adding cromolyn.
23. All the following concerning management of COPD are correct **Except**:
- Antimuscarinics are more effective than in asthma.
 - Ipratropium is a long acting antimuscarinic used as maintenance therapy.
 - Ipratropium use is associated with tolerance.
 - Theophylline reduces diaphragmatic fatigue.

Cross Match the following drugs to its most suitable feature in anti-asthma therapy

- | | |
|------------------|--|
| 24. Montelukast | A. Preferred reliever in cardiac patients |
| 25. Theophylline | B. Inhaled controller combined with budesonide |
| 26. Salmeterol | C. Preferred controller in cardiac patients |
| 27. Ipratropium | D. Preferred in aspirin - induced asthma |
| | E. Improves diaphragmatic fatigue in COPD |

Cross Match the following drugs to its most suitable indication in asthma

- | | |
|------------------|--|
| 28. Theophylline | A. Maintenance therapy in COPD |
| 29. Prednisolone | B. Improves diaphragmatic fatigue in COPD |
| 30. Budesonide | C. Preferred controller in asthma |
| 31. Tiotropium | D. Add - on systemic controller in resistant asthma only |
| | E. Most rapid reliever |

22. C	23. B	24. D	25.E	26. B	27. A
	28.B	29.D	30. C	31. A	

32. Which of the following is least preferred in status asthmaticus:
- A. Intravenous theophylline. C. Nebulized ipratropium.
B. Nebulized salbutamol. D. Intravenous methylprednisolone.
33. Which of the following is **not** an adverse effect of codeine?
- A. Drowsiness.
B. Paradoxical excitement (in children below 6 years).
C. Mild dependence.
D. Diarrhea.
E. Respiratory depression , when used in large doses as analgesic.
34. Dextromethorphan is preferred to codeine as antitussive because
- A. Less risk of dependence & respiratory depression
B. Acts peripherally not centrally.
C. It has potent analgesic effect while codeine is a selective antitussive .
D. Less constipating
E. A and D.
35. The following is **not true** concerning antihistamines as antitussives:
- A. They are central antitussives.
B. Anticholinergic effect contributes to their antitussive effect.
C. Newer generations of antihistamines are preferred as antitussives.
D. Dryness of mouth is a troublesome side effect.
36. An ingredient of an OTC medication dangerous in hypertensive patients is
- A. Dextromethorphan. C. Pseudoephedrine
B. Bromhexine. D. Guaiphenesin
37. Which of the following is **not correctly** matched
- A. Benzonatate / opioid antitussive.
B. Acetylcysteine/ paracetamol toxicity.
C. Iodides/expectorants & mucolytics.
D. Volatile oils/antitussives & expectorants.

32. A

33. D

34. E

35. C

36. C

37. A

38. Which of the following statements concerning asthma is WRONG?

- A. Ipratropium is the safest drug to relieve an acute attack in a cardiac patient.
- B. Tiotropium is used in long term management of COPD.
- C. Salbutamol is faster acting than ipratropium.
- D. Dose adjustment of theophylline is required in hepatic not in renal dysfunction.
- E. Bambuterol is a pro-drug given only by inhalation .

39. Which of the following statements regarding antiasthma drugs is CORRECT?

- A. Theophylline induces coronary and cerebral vasodilation.
- B. Montelukast is given three times daily .
- C. Beta 2 agonists are faster acting than anticholinergics.
- D. Tiotropium may induce more tolerance than ipratropium.
- E. Omalizumab inhibits lipoxigenase enzyme.

40. A drug given orally daily in asthma

- A. Omalizumab C. Salmeterol.
- B. Montelukast D. Cromolyn E. Tiotropium

Cross Match each of the following drugs to its most suitable indication in asthma

- 41. Montelukast. A. Preferred controller in aspirin - induced asthma
- 42. Prednisolone B. Improves diaphragmatic fatigue in COPD
- 43. Budesonide C. Preferred controller in asthma
- 44. Salbutamol D. Add - on systemic controller in resistant asthma only
- E. Most rapid reliever

Cross Match each of the following drugs to its side effect

- 45. Zafirlukast A. Throat irritation - cough
- 46. Theophylline B. Sedation, tremors, hypoxemia
- 47. Cromolyn C. Cardiac arrest if given rapidly intravenously
- 48. Salbutamol D. Enzyme inhibitor resulting in drug interactions
- E. Anxiety, tachycardia, hypoxemia

38. E	39. C	40. B	41. A	42.D	43.C
44. E	45. D	46. C	47.A	48.E	