

- I. Asthma
  - A. Pathophysiology
  - B. Therapy goals
  - C.  $\beta_2$ -Adrenergic agonists
    - 1. Quick relief
      - a. SABAs
      - b. albuterol (Proair, Proventil, Ventolin)
      - c. levalbuterol (Xopenex)
    - 2. Long-term control
      - a. LABAs
      - b. salmeterol (Serevent)
      - c. formoterol (Foradil, Perforomist)
  - D. Corticosteroids
    - a. ICS
      - 1. administration routes
        - a. inhalation
        - b. oral
      - 2. medications
        - a. fluticasone (Flovent)
        - b. budesonide (Pulmicort)
        - c. mometasone (Asmanex)
  - E. Alternative asthma treatments
    - 1. leukotriene modifiers
      - a. pathway
        - 1) 5-lipoxygenase
      - b. medications
        - 1) montelukast (Singulair)
        - 2) zafirlukast (Accolate)
      - c. pharmacokinetics
    - 2. theophylline (Elixophyllin, theo-24, Uniphyll)
    - 3. omalizumab (Xolair)
- II. COPD - Chronic Obstructive Pulmonary Disease
  - A. Background
    - 1. irreversible
    - 2. progressive
    - 3. symptoms
  - B. Therapies
    - 1. bronchodilators - inhaled
      - a.  $\beta_2$ -adrenergic agonists
      - b. cholinergic antagonists
        - 1) ipratropium (Atrovent)
        - 2) tiotropium (Spiriva)
    - 2. corticosteroids
    - 3. other
      - a. roflumilast (Daliresp)
- III. Inhaler Technique
  - A. MDIs - metered-dose inhalers
  - B. DPIs - dry powder inhalers
  - C. Spacers

#### IV. Allergic Rhinitis

- A. Background
- B. Antihistamines
  - 1. background
  - 2. first generation
    - a. diphenhydramine (Benadryl)
    - b. chlorpheniramine (Chlor-trimenton)
  - 3. second generation
    - a. fexofenadine (Allegra)
    - b. loratadine (Claritin)
    - c. desloratadine (Clarinex)
    - d. cetirizine (Zyrtec)
    - e. azelastine (Astelin, Astepro)
- C. Corticosteroids
  - 1. background
  - 2. medications
    - a. fluticasone (Flonase)
    - b. budesonide (Rhinocort)
    - c. mometasone (Nasonex)
- D.  $\alpha$ -Adrenergic agonists
  - 1. short acting
    - a. phenylephrine (Sudafed PE, Neosynephrine)
    - b. pseudoephedrine (Sudafed)
  - 2. longer acting
    - a. oxymetazoline (Afrin, Dristan)
- E. Other
  - 1. cromolyn

#### V. Cough

- A. Background
- B. Opioids
  - 1. Codeine
  - 2. dextromethorphan
  - 3. guaifenesin
- C. benzonatate