Chapter 30

- Drugs Used to Treat Upper
- Respiratory Disease
- Learning Objectives
- State the causes of allergic rhinitis and nasal congestion
- Explain the major actions (effects) of sympathomimetic, antihistaminic, and corticosteroid decongestants and cromolyn
- Define *rhinitis medicamentosa*, and describe the patient education needed to prevent it
- Identify essential components involved in planning patient education that will enhance adherence with the treatment regimen
- Upper Respiratory Tract Anatomy and Physiology
- Nose and turbinates
- Sinuses
- Nasopharynx
- Pharynx
- Tonsils
- Eustachian tubes
- Larynx
- Common Upper Respiratory Diseases
- Rhinitis
    - Inflammation of nasal mucous membrane

- Caused by common cold, bacterial infection, presence of foreign body, drug-induced congestion (rhinitis medicamentosa)

- Allergic rhinitis
  - Caused by allergic reaction
  - Releases large amounts of histamine

- Treatment of Upper Respiratory Diseases

- Common cold
  - Limited to relieving symptoms
  - Antihistamines are of some benefit
  - Analgesics, antipyretics, expectorants, antitussive agents also beneficial, depending on cold symptoms

- Treatment of Upper Respiratory Diseases (cont'd)

- Allergic rhinitis
  - Identify allergens (skin testing)
  - Avoid exposure, if possible, to allergens
  - Treat with antihistamines, decongestants, intranasal antiinflammatory agents
  - Use saline nasal spray to reduce nasal irritation

- Treatment of Upper Respiratory Diseases (cont'd)

- Rhinitis medicamentosa
  - Prevention is best treatment
  - Withdraw topical decongestant
  - Nasal steroid solutions also can be used

- Nursing Process for Upper Respiratory Diseases

- Assessment

- Description of symptoms
- History of treatment
- History of concurrent medical problems

- Planning
  - Symptoms and treatment
- Implementation
- Patient Education and Health Promotion
- Patient understands importance of adequate rest, hydration, personal hygiene
- Discuss specific medications prescribed
- Patient understands when to take medication
- Patient Education and Health Promotion (cont'd)
- Explain proper technique in administering medications
- Teach patient to monitor temperature, pulse, respiratory rate, and blood pressure, as appropriate
- Learning Objectives
- Explain why all decongestant products should be used cautiously in people with hypertension, hyperthyroidism, diabetes mellitus, cardiac disease, increased intraocular pressure, or prostatic disease
- State the premedication assessments and nursing assessments needed during therapy to monitor therapeutic response and side effects to expect or report from using decongestant drug therapy
- Learning Objectives (cont'd)

- Review the procedure for administration of medications by nose drops, sprays, and inhalation

- Sympathomimetic Decongestants
- Actions
  - Stimulate alpha adrenergic receptors of nasal mucous membranes causing vasoconstriction
- Uses
  - Relieve congestion associated with rhinitis
  - Administered orally or topically as nasal spray
- Therapeutic outcomes
  - Reduced nasal congestion, easier breathing
- Nursing Process for Sympathomimetic Decongestants
- Premedication assessment
  - Check patient history
  - Take baseline vital signs
- Planning
  - Availability
- Administration
  - Nose drops, nasal spray
- Nursing Process for Sympathomimetic Decongestants (cont'd)
- Evaluation
  - Side effects to expect

        - Mild nasal irritation
    - Side effects to report
        - Hypertension
    - Drug interactions
        - Drugs that enhance toxic effects
    - Methyldopa, reserpine
        - Concurrent therapy not recommended

- Antihistamines
- Actions
    - Compete with allergy-liberated histamine
    - Reduce symptoms of allergic reaction
- Uses
    - Systemic treatment of allergic rhinitis and conjunctivitis
    - Best taken on scheduled basis
- Therapeutic outcomes
    - Reduced symptoms of allergic rhinitis

- Nursing Process for Antihistamines
- Premedication assessment
    - Review patient history for glaucoma, prostatic hyperplasia, asthma
    - Assess patient’s work environment
    - Individualize patient assessment with underlying pathologic condition
- Planning

- Implementation
  - Nasal spray, tablets/capsules, syrup, injection, suppository
- Nursing Process for Antihistamines (cont'd)
- Side effects to expect
  - Sedative effects
  - Cognitive impairment
  - Drying effects
  - Fluid intake
  - Blurred vision, constipation, urinary retention; dryness of mouth, throat, and nasal mucosa
- Drug interactions
  - Central nervous system (CNS) depressants
- Learning Objectives
- Explain why all decongestant products should be used cautiously in people with hypertension, hyperthyroidism, diabetes mellitus, cardiac disease, increased intraocular pressure, or prostatic disease
- State the premedication assessments and nursing assessments needed during therapy to monitor therapeutic response and side effects to expect or report from using decongestant drug therapy
- Learning Objectives (cont'd)
- Review the procedure for administration of medications by nose drops, sprays, and inhalation
- Intranasal Corticosteroids
- Actions

- Exact mechanism that reduces inflammation is unknown

- Uses
  - Given to patients who don't respond to antihistamines or sympathomimetic agents
- Therapeutic outcomes
  - Reduced rhinorrhea, rhinitis, itching, sneezing
- Nursing Process for Intranasal Corticosteroid Therapy
- Premedication assessment
  - Treat blocked nasal passages with topical decongestant just before beginning intranasal corticosteroids
  - Patient blows nose thoroughly before administering
- Planning
  - Availability

- Nursing Process for Intranasal Corticosteroid Therapy (cont'd)
- Implementation
  - Nasal aerosol, nasal spray
  - Counseling
  - Preparation before administration
  - Maintenance therapy
- Evaluation
  - Side effects to expect—nasal burning
- Cromolyn Sodium (Nasalcrom)
- Actions
  - Antiinflammatory agent that inhibits release of histamine

- Uses
  - In conjunction with other medications to treat severe allergic rhinitis
- Therapeutic outcomes
  - Reduced rhinorrhea, itching, sneezing
- Nursing Process for Cromolyn
- Premedication assessment
  - Taken before exposure to stimulus that initiates attack of allergic rhinitis
  - Determine if concurrent use of antihistamines or nasal decongestants has been ordered
  - Patient blows nose thoroughly before administering
- Planning
  - Availability
- Nursing Process for Cromolyn (cont'd)
- Implementation
  - Nasal spray, nasal aerosol
  - Counseling
- Evaluation
  - Side effects to expect
    - Nasal irritation
  - Side effects to report
    - Bronchospasm coughing
  - No drug interactions reported