Objectives

- Understand the relationship between asthma and allergic rhinitis
- Understand what is going on in your body with allergic asthma
- Learn the role of environmental control, medication therapy, and allergen immunotherapy in allergic asthma
- Know the HAP Formulary Drug List

Rhinitis and Asthma

- High prevalence, high cost illnesses
- Both illnesses have a major effect on the sufferer’s quality of life
- Both illnesses have a strong association with allergy
- Both rhinitis and asthma have common inflammatory pathways
- Improved control of rhinitis leads to improved asthma outcomes

Allergic Rhinitis (AR): Risk Factor for ASTHMA

- Prevalence of AR: Adults 31.5% Children 40%
- About 50-80% of asthmatics have AR
- About 40% of allergic rhinitis cases have Bronchial Asthma
Allergic Rhinitis

What is Allergic Rhinitis?

Inflammatory "swell up" reaction to an airborne allergen

- Exposure to a foreign substance (mold, pollens) through the nose and causes a series of reactions in the body to make the nasal passages to become inflamed leading to runny nose and itchy watery eyes.

Epidemiology Of Allergic Rhinitis

- Most common chronic nasal disease in the United States (U.S.)
- Affects up to 22% of U.S. population
  - 2.5% of all clinician visits
  - > $1 billion spent on over-the-counter and prescription medications
- 70% experience onset before age 30
- Genetic predisposition
Signs And Symptoms Of Allergic Rhinitis

- General Appearance
- Eyes
- Nose
- Ears
- Sinuses
- Mouth
- Throat
- Chest

Impact of Allergic Rhinitis

- Sleep disturbances
- Limit in daily activities
- Harder to concentrate and make decisions
- Missed work and school days
- Trigger asthma

Management of Allergic Rhinitis

- Environmental Control
- Drug Therapy
- Physician and Patient relationship – this includes the allied team i.e.) nurses, pharmacists and care coordinators

Management of Allergic Rhinitis and Asthma

- Education
- Environmental Control
- Proper Drug Treatment
Environmental Control

- Major triggers of Allergic Rhinitis and Asthma
  - Pollens
  - Molds
  - House dust mites
  - Animals
  - Insect aeroallergens (e.g., moths)

Environmental Control Measures: Pollen

- Close windows, doors
  - Avoid window/attic fans
  - A/C on recirculate
- Reduce outdoor exposure as practicality allows:
  - When pollen counts are high
    - Highest in early AM
  - On sunny, windy days with low humidity
  - Shower or bathe following exposure

Environmental Control Measures: Molds

- Remain in closed environment as practicality allows
  - A/C units, though helpful, can harbor mold
- Avoid lawn mowing, raking leaves, etc.
  - Face masks can be of some value
- Avoid/remedy dampness
  - Dehumidifier
- Minimize humidifier use
  - If used, keep very clean

Reducing Exposure to House Dust Mites

- Use bedding encasements
- Wash bed linens weekly at 130° F
- Avoid down fillings and use allergen proof pillows and mattresses
- Limit stuffed animals to those that can be washed
- Switch to hardwood floors
Reducing Exposure to Pets

- People who are allergic to pets should not have them in the house.
- At a minimum, do not allow pets in the bedroom.

Pharmacologic Therapy

- Nasal corticosteroids – GOLD STANDARD OF TREATMENT
- Antihistamines (oral)
- Combination agents (oral) – oral antihistamine and nasal spray and antibiotic – USUALLY NOT NECESSARY
- Intranasal antihistamines

Nasal Corticosteroids

- Best in managing all 4 symptoms of rhinitis: sneezing, itchy nose, nasal drip and congestion
- Takes about 10 days to work, so overlap with an oral antihistamine
- Take it consistently every day

Nasal Corticosteroids HAP Formulary

- Generic and lowest tier 1:
  - Fluticasone (Flonase)
  - Triamcinolone (Nasacort AQ)
- Brand and Tier 3 and Requires Prior Auth.:
  - Budesonide (Rhinocort)
  - Beclomethasone (Beconase)
  - Mometasone (Nasonex)
  - Fluticasone furoate (Veramyst)
Antihistamines (oral)

- Reduce allergic symptoms
  - Itching
  - Sneezing
  - Runny Nose
  - Little effect on nasal congestion – many of them come with a decongestant

- HAP Formulary
  - Over-the-counter claritin generic
  - Not all patients have this covered as a prescription benefit

Intranasal Antihistamine

- Used as alternatives to the oral antihistamines
- Physicians seem to prescribe when nasal corticosteroids and oral antihistamines do not work
- HAP Formulary
  - Azelastine (Astelin) – generic lowest tier

Asthma

What Is Asthma?
Epidemiology of Asthma

- Asthma affects nearly 17 million Americans
- Asthma accounts annually for:
  - 11 million office visits to the doctor
  - 1 million urgent care department visits
  - 1.6 million emergency department visits
  - 500,000 hospitalizations
  - 5,500 deaths

Asthma

- Coughing
- Wheezing
- Shortness of breath
- Chest tightness

Pharmacologic Management of Asthma

Long-term control

Quick relief

Airway inflammation
Airway hyper-responsiveness

Bronchoconstriction

Long-Term Control Medications

Preventive, taken daily to achieve and maintain control of asthma symptoms

- Inhaled corticosteroids
- Oral corticosteroids
- Long-acting beta-2 agonists (inhaled and oral)
- Leukotriene modifiers
**Inhaled Corticosteroids**

- Most effective long term treatment – GOLD STANDARD
- Lowers inflammation in the lungs to allow for breath and to keep the lung airways open
- Lower emergency room visits
- Decrease death
- Must take daily

**Inhaled Corticosteroids Side effects**

- In general less side effects and safer than oral steroids (prednisone)
- Side effects
  - Oral thrush – yeast infection on tongue
    Side effects can be reduced by mouth-rinsing with warm water after use and using a spacer
- Long term use of high dose inhaled steroids can affect bone strength, and development of cataracts or glaucoma

**Inhalation Devices**

**Metered Dose Inhaler**

- Requires coordination
- Can use a spacer if you have trouble with coordination

**Inhalation Device**

**Dry Powder Inhalers**

- Need to be able to perform rapid inhalation

**Nebulizer**

- Machine produces a mist of the medication
- Used for small children or elderly or for severe asthma episodes
HAP Formulary Inhaled Corticosteroids

- Lowest tier 1
  - Beclomethasone (Qvar)
  - Budesonide (Pulmicort) – comes as a flex-inhaler
  - Fluticasone Diskus and HFA (Flovent)
- Tier 2
  - Pulmicort Turbuhaler (similar to diskus)
- Tier 3
  - Ciclesonide (Alvesco)
  - Mometasone (Asmanex)

Oral Steroids

- Used when asthma out of control and the inhalers are not working
- Used for short term (3-10 days) and have to taper off
- Rarely used as long term use
- Side Effects (many)
  - Increase in blood sugar, osteoporosis, weaken your immune system, increase blood pressure, insomnia

Long-Acting Beta-2 Agonists

- Keeps the lungs open to allow for breathing
- Helps the inhaled corticosteroids work better
- Never to be used alone, only in combination with inhaled corticosteroids

HAP Formulary

- Combination Inhaled Corticosteroids and Long-Acting Beta-2 Agonists
  - Tier 2
    - Fluticasone/salmeterol (Advair)
    - Budesonide/formoterol (Symbicort)
  - Tier 3
    - Mometasone/formoterol (Dulera)
**Short Acting Beta-2 Agonist**

- Only to be used for fast relief of shortness of breath
- They are a good indicator for control - the more you are using it the less controlled is your asthma
- Side Effects – short term - rapid heart rate - tremor

**HAP Formulary**

- **Tier 1**
  - Albuterol – solution for nebulizer and tablets and syrup
- **Tier 2**
  - Proair HFA Inhaler
  - Ventolin HFA Inhaler
- **Tier 3**
  - Xopenex HFA Inhaler

**LEUKOTRIENES - Montelukast (Singulair)**

- Used in mild asthma
- Lowers inflammation, but not as good as inhaled corticosteroids
- Works well in children
- Comes as 5mg and 10mg tablets taken once daily
- Generic Tier 1

**Anti-IgE Antibody Omalizumab (Xolair)**

- Used for moderate to severe asthma - on high dose inhaled corticosteroids and not controlling asthma and - 3 or more oral steroid treatments - 2 or more hospital admissions
- It’s administered as a subcutaneous injection once a month
- It does not replace the inhaled corticosteroid
- Only given by a pulmonologist (lung doctor)
HAP TOOLS

- HAP Care Track Program
  - Open to all HAP members 18 years and older
  - Comprehensive disease management program that supports your relationship with your doctor by helping you stick to your prescribed treatment plans

HAP's CareTrack™ Program

Services may include:

- Nurse Health Coach who works one on one with you over the phone
- Pharmacist who monitors if you are taking more medications than needed, not taking the appropriate medications or if there needs to be dosage adjustments.
- Behavioral Health Specialist to help you identify emotional triggers and behavioral conditions that impact your ability to follow your doctor's treatment plan.

HAP’s CareTrack™ Program

- A six-week education program to teach you how to effectively manage your conditions. Sessions are held in convenient locations throughout the year.
- A report sent to your primary care doctor, listing any gaps in care.

Thank You!
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