Update on the Drug Therapy Management of Allergic Rhinitis

Maria Marzella Sulli, Pharm.D., CGP
Associate Clinical Professor
St. John’s University College of Pharmacy and Allied Health Professions
Wellness Coordinator
King Kullen Pharmacy Wellness Place

Objectives

At the end of this presentation, the participant should be able to:

1. State key questions to ask patients in order to determine type and severity of rhinitis and if physician referral is necessary.
2. Describe the difference between intermittent and persistent allergic rhinitis and outline the treatment options available for each.
3. Describe the mechanism of action, proper administration, common adverse events, and key patient counseling points of medications used in the treatment of allergic rhinitis.
4. Explain the level of efficacy for each class of medication in symptom reduction for allergic rhinitis.
5. Describe steps to improve patient adherence with treatment regimens.
Prevalence and Ramifications

- Allergic rhinitis affects 10-40% of the population
  - 30-60 million people
  - Children > adults
- Significant cause of lost work and school days
- Symptoms range in severity and can interfere with daily activities

Allergic Rhinitis

- Characterized by > 1 of the following symptoms
  - Nasal congestion
  - Rhinorrhea
  - Sneezing
  - Itching
- Differentiate from other causes of rhinitis and common cold
  - If wheezing/ SOB – refer to physician
Case 1 - PT

- Pt is a 35 year-old mother of 2 who comes to the pharmacy asking “Where is the Benadryl?”
  - What should the pharmacist do in this situation?
  - What questions should you ask PT?

Patients Seeking Self-Treatment: Assessment and Triage

- Patients commonly present to the pharmacist seeking self-treatment of allergic rhinitis
- Pharmacists role is to assess and triage patient to determine if they are candidates for self-treatment
- If self-treatment is appropriate, pharmacist must provide counseling on appropriate use of the medication and follow-up
QuEST/ SCHOLAR

- Quickly and accurately assess the patient
- Establish that the patient is an appropriate self-care candidate
- Suggest appropriate self-care strategies
- Talk with the patient

Questions to help determine if it is a cold or allergic rhinitis

- “Have you ever been diagnosed with allergies, hay fever, or asthma?” or “Do you have a history of allergies?”
- “When did it start?”
- “What may have brought it on?”
- “When you blow your nose, what does it look like?”
- “What other symptoms do you have?”
Questions to ask to determine if it is a Cold or Allergic Rhinitis

- “Does it “come and go” or is it happening all day?”
- “What have you tried to relieve your symptoms?”
  - “Did it provide relief?”

### Allergic Rhinitis vs. Common Cold

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Common Cold</th>
<th>Allergic Rhinitis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sneezing</td>
<td>Usual</td>
<td>Usual</td>
</tr>
<tr>
<td>Congestion</td>
<td>Common</td>
<td>Common</td>
</tr>
<tr>
<td>Runny nose</td>
<td>Common</td>
<td>Common</td>
</tr>
<tr>
<td>Sore throat</td>
<td>Common</td>
<td>Sometimes</td>
</tr>
<tr>
<td>Cough</td>
<td>Common</td>
<td>Sometimes</td>
</tr>
<tr>
<td>Fatigue, weakness</td>
<td>Sometimes</td>
<td>Sometimes</td>
</tr>
<tr>
<td>Aches and pains</td>
<td>Slight</td>
<td>Never</td>
</tr>
<tr>
<td>Fever</td>
<td>Rare</td>
<td>Never</td>
</tr>
<tr>
<td>Itchy eyes</td>
<td>Rare – never</td>
<td>Common</td>
</tr>
<tr>
<td>Duration</td>
<td>New, recent, 3-14 days</td>
<td>Recurrent, prior diagnosis, weeks</td>
</tr>
</tbody>
</table>
Symptoms usually NOT associated with Allergic Rhinitis

- Unilateral symptoms
- Congestion without any other symptoms
- Mucupurulent rhinorrhea
- Posterior rhinorrhea
- Pain
- Recurrent epistaxis
- Anosmia

Exclusions for Self-treatment

- Age
  - Under 12 if no previous diagnosis
- Pregnancy or breast-feeding
- Presence of certain associated symptoms
- Severe persistent
- Symptoms of undiagnosed or uncontrolled asthma
- Earache
- Symptoms not responding to treatment
PT states she has had episodes of sneezing and runny nose (clear) for the past 3 days – it is worse in the morning but it “comes and goes” throughout the day.

She denies any wheezing, fever or body aches, and says her eyes get itchy when she goes outside.

Whenever these symptoms happen (usually every Spring), she takes Benadryl.

---

Does PT have allergic rhinitis?

Is PT a candidate for self-treatment?

How is allergic rhinitis classified according to symptoms?
Allergic Rhinitis Updated Classification

**Intermittent**
- Symptoms < 4 days per week or < 4 weeks

**Mild**
- Normal sleep
- No impairment of daily activities, sport, leisure
- Normal work and school
- No troublesome symptoms

**Persistent**
- Symptoms > 4 days per week and > 4 weeks

**Moderate–severe**
*One or more items*
- Abnormal sleep
- Impairment of daily activities, sport, leisure
- Abnormal work and school
- Troublesome symptoms


---

Review of Pharmacotherapy – Focus on Patient Counseling

- Intranasal Corticosteroids
- Antihistamines – oral and intranasal
- Leukotriene Receptor Antagonist
- Mast Cell Stabilizer
- Intranasal Anticholinergics
Patient Counseling Techniques – Quick Review

- Interactive Approach – PRIME Questions
  - “What were you told this medication was for?”
  - “How were you told to use it?”
  - “What were you told to expect?”
  - Verification

- Show and Tell Questions
  - “Why do you take this medication?”
  - “How do you use it?”
  - “What have you noticed that is different?”

General Counseling Points

- An allergen is an allergen – medications block the allergic response regardless of what is causing it
- Best to start therapy prior to symptoms occurring if possible
- Medications have no long-lasting effect once stopped – they treat symptoms
- Prolonged therapy is generally safe and effective
Management of Allergic Rhinitis – Environmental Control

- All patients should receive counseling on allergen avoidance techniques
- Allergen avoidance
  - Pollens
  - Mold
  - Dust mites
  - Animals/pets
  - Cockroaches
  - Smoke/irritants

Treatments for Allergic Rhinitis

<table>
<thead>
<tr>
<th>Therapy</th>
<th>Sneezing</th>
<th>Rhinorrhea</th>
<th>Itch</th>
<th>Congestion</th>
<th>Side Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>1&lt;sup&gt;st&lt;/sup&gt; Generation Antihistamine (A)</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+</td>
<td>+++</td>
</tr>
<tr>
<td>2&lt;sup&gt;nd&lt;/sup&gt; Generation Antihistamine (2&lt;sup&gt;nd&lt;/sup&gt; gen)</td>
<td>+++</td>
<td>++</td>
<td>+++</td>
<td>+</td>
<td>– to +</td>
</tr>
<tr>
<td>Nasal Antihistamine</td>
<td>+++</td>
<td>++</td>
<td>+++</td>
<td>+</td>
<td>– to +</td>
</tr>
<tr>
<td>2&lt;sup&gt;nd&lt;/sup&gt; gen + decongestant</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
</tr>
<tr>
<td>Leukotriene antagonist</td>
<td>+ to ++</td>
<td>+ to ++</td>
<td>+ to</td>
<td>++</td>
<td>– to +</td>
</tr>
<tr>
<td>Cromolyn</td>
<td>++</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>–</td>
</tr>
<tr>
<td>Intranasal Steroid (INS)</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+</td>
</tr>
<tr>
<td>2&lt;sup&gt;nd&lt;/sup&gt; gen + INS</td>
<td>++++</td>
<td>+++</td>
<td>+++</td>
<td>+++</td>
<td>+</td>
</tr>
</tbody>
</table>
Intranasal corticosteroids are the most effective medication class for allergic rhinitis and are considered first-line therapy.

2nd generation oral antihistamines are preferred over 1st generation due to side effects.

Intranasal antihistamines are equal or superior to 2nd generation oral antihistamines.

Intranasal cromolyn is effective in some patients for prevention and treatment or symptoms but inconvenient due to frequency of use.

Intranasal anticholinergics may reduce rhinorrhea but do not affect other symptoms.

Oral leukotriene receptor antagonists, alone, or in combination with antihistamines have proven useful in treating allergic rhinitis.
Intranasal Corticosteroids

- Beclomethasone (Beconase AQ®)
- Budesonide (Rhinocort Aqua®)
- Ciclesonide (Omnaris®)
- Flunisolide (Nasarel®)
- Fluticasone furoate (Veramyst®)
- Fluticasone propionate (Flonase®)
- Mometasone (Nasonex®)
- Triamcinolone (Nasacort AQ®)

Gently blow nose before using the medication
- Be sure you can sniff air through the nostril before spraying

Remove the cap and shake the bottle
- Prime the canister prior to first use – pump or spray 6 or 7 times until a fine mist is released
- Wash the canister device at least once a week
- AIM STRAIGHT-point the nozzle toward the back of your head to avoid waste of medicine and decrease irritation to nose
Nasal Sprays

- Tilt your head forward slightly and breathe out slowly
- Hold the bottle with your thumb on the bottom and index and middle finger on top
- With the opposite hand, hold the nostril not receiving the medication closed
- Squeeze the pump as you begin to breathe in slowly through your nose
- Repeat these steps for the other nostril if necessary or if multiple sprays are needed
- Try not to sneeze or blow your nose just after using the spray

Counseling on Intranasal Corticosteroids

- Proper use of nasal spray – refer to patient information provided from manufacturer
- Effects will not be immediate – may require 1-2 weeks continued use before maximum benefit
- Consistent use is necessary to maintain benefit
- Only use the bottle for the recommended number of sprays
- If no relief after 3 weeks – contact physician
Antihistamines

2nd generation
1st generation
Intranasal
Ocular

2nd Generation Antihistamines

<table>
<thead>
<tr>
<th>Generic Name</th>
<th>Product</th>
<th>Side Effects Drowsiness</th>
<th>Side Effects Anticholinergic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acrivastine^a</td>
<td>Semprex –D®</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td>Cetirizine</td>
<td>Zyrtec®</td>
<td>+/++</td>
<td>+/-</td>
</tr>
<tr>
<td>Desloratidine</td>
<td>Clarinex®</td>
<td>+/-</td>
<td>+/-</td>
</tr>
<tr>
<td>Fexofenadine</td>
<td>Allegra®</td>
<td>+/-</td>
<td>+/-</td>
</tr>
<tr>
<td>Levocetirizine</td>
<td>Xyzal®</td>
<td>+/-</td>
<td>+/-</td>
</tr>
<tr>
<td>Loratadine</td>
<td>Claritin®, Alavert®</td>
<td>+/-</td>
<td>+</td>
</tr>
</tbody>
</table>
Counseling on 2\textsuperscript{nd} Generation Antihistamines

- Provide almost immediate symptom relief
- Single agent products dosed once daily – may be beneficial to dose at bedtime
- Available alone or in combination with decongestant
- If sustained release – do not crush or chew
  - Available in a variety of dosage forms
- Watch for therapeutic duplication with antihistamines in cough/cold products

Counseling on 2\textsuperscript{nd} Generation Antihistamines

- Side effects minimal – some drowsiness, dry mouth
  - Alcohol will increase sedation
  - Cetirizine most likely to be sedating
- Avoid antacids within 15 minutes of fexofenadine
- Do not take fexofenadine with acidic juices such as apple, orange, or grapefruit
1st Generation Antihistamines

<table>
<thead>
<tr>
<th>Generic Name</th>
<th>Product</th>
<th>Side Effects</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Drowsiness</td>
<td>Anticholinergic</td>
</tr>
<tr>
<td>Brompheniramine</td>
<td>Dimetane®</td>
<td>+</td>
<td>++</td>
</tr>
<tr>
<td>Chlorpheniramine</td>
<td>Chlor-Trimeton®</td>
<td>+</td>
<td>++</td>
</tr>
<tr>
<td>Clemastine</td>
<td>Tavist®</td>
<td>++</td>
<td>+++</td>
</tr>
<tr>
<td>Cyproheptadine</td>
<td>Periactin®</td>
<td>+</td>
<td>++</td>
</tr>
<tr>
<td>Dexampheniramine</td>
<td>Drixoral®</td>
<td>+</td>
<td>++</td>
</tr>
<tr>
<td>Diphenhydramine</td>
<td>Benadryl®</td>
<td>+++</td>
<td>+++</td>
</tr>
<tr>
<td>Hydroxyzine</td>
<td>Atarax®</td>
<td>++</td>
<td>+</td>
</tr>
<tr>
<td>Promethazine</td>
<td>Phenergan®</td>
<td>+++</td>
<td>+++</td>
</tr>
</tbody>
</table>

Counseling on 1st Generation Antihistamines

- Require multiple doses per day for 24-hour relief
- Side effects
  - Drowsiness – avoid combining with other sedating agents
  - Anticholinergic – avoid in the elderly – may cause urinary retention, confusion, constipation
  - Photosensitivity/heat intolerance
- Watch for therapeutic duplication with cough/cold products
- May have role in short-term, intermittent prevention/treatment
Ophthalmic Antihistamines

- Azelastine (Optivar®)
- Emedastine (Emidine®)
- Epinastine (Elestat®)
- *Ketotifen (Zaditor®, Alaway®)
- Olopatadine (Patanol®, Pataday®)

* Available without a prescription

- Used 1 to 3 times daily
- Beneficial if itchy eyes are only symptom or if it persists despite other treatment
- Proper administration of eye drops
- May cause burning, stinging, blurred vision
Eye Drop Administration

- Wash hands with soap and water before use
  - If the drop is a suspension – SHAKE WELL
- Remove contact lenses
- Lie or sit down & tilt head back
- With your index finger, pull down lower lid of eye to form a pocket

Eye Drop Administration

- With the opposite hand, hold the dispenser close to the eye
- Drop the correct number of drops (wait about 1 min. between each drop) into the pocket made between the lower lid and eyeball
Eye Drops

- Gently close eyes and place index finger on inner corner of eye for about 1 min.
- Do not rub eyes
- Put cap back on bottle right away
- Do NOT wipe, rinse or allow the tip to touch anything to avoid contamination
- If a second type of drop is needed wait at least 10-15 min. before administering
- Wash hands when finished

Intranasal Antihistamines

Azelastine (Astelin®, Astepro®)
Olopatdadine (Patanase®)
Nasal Antihistamines

- Nasal spray administration
- Dosed twice daily
- May cause drowsiness
  - Avoid combining with other sedating medications
- Burning, stinging, bad taste
  - “Nose to toes” to minimize bad taste
  - Astepro® is formulated with sorbitol and sucralose to mask the bad taste reported with Astelin

Miscellaneous Agents for Allergic Rhinitis

Montelukast (Singulair®)
Cromolyn
Decongestants
Montelukast (Singulair®)

- Not considered first-line therapy
- Approved for the treatment of allergic rhinitis in children 6 months of age and older
- Available in oral tablets, chewables, and granules
  - Granules can be administered directly into the mouth, or mixed with breast milk, formula, applesauce, carrots, rice, or ice cream
- Dosed once per day – at any time of day
  - May recommend bedtime if patient reports sedation or headache

Cromolyn (Intranasal and Ocular)

- Less effective than other available treatments most likely due to need for multiple doses per day and need for consistent use
- Patient adherence is an issue – inconvenient to administer
- Latent efficacy
- Better efficacy if started before symptoms begin
- Excellent safety profile
Decongestants in Allergic Rhinitis

- Helpful in certain patients where congestion persists despite other treatment
- Do not recommend combination therapy as first-line
  - Antihistamines and INS effective at treating congestion
- Pseudoephedrine vs. phenylephrine

Case 2 - OJ

- OJ is a 46 year-old patient who comes to the pharmacy to buy more Claritin®
  - He is complaining that although it is helping a little, he still is congested and he doesn't want to take any decongestants because he is trying to keep his blood pressure under control
  - His profile reveals that last month he got a prescription for Nasonex®
- What should you ask OJ?
OJ – continued…..

- OJ states the Nasonex® didn’t work for him
- He tried it for 2 days with no relief
- He still has it at home
- He is annoyed he wasted his money
- What would you tell OJ?

Conclusions

- Community pharmacists are in a unique position to help patients manage their allergic rhinitis
- Since many of the treatments are user-dependent, patient counseling is essential for optimal treatment
- Pharmacists should capitalize on all opportunities to help their patients achieve the best outcomes