Management of RHINITIS
Taking a Closer Look at Intranasal Antihistamines

November 12, 2009
7:45 AM – 9:00 AM
Session 1: Management of Rhinitis: Taking a Closer Look at Intranasal Antihistamines

Learning Objectives

1. Describe delineating features of rhinitis subtypes that are key to the differential diagnosis.
2. Consider drug classes and formulations used to treat rhinitis with respect to symptom relief, adverse effects, and patient compliance.

Faculty

Carman A. Ciervo, DO, FACOFP
Associate Professor and Chairman
Department of Family Medicine
University of Medicine and Dentistry of New Jersey
School of Osteopathic Medicine
Stratford, New Jersey

Carman A. Ciervo, DO, FACOFP, is chairman and associate professor of the Department of Family Medicine at the University of Medicine and Dentistry of New Jersey – School of Osteopathic Medicine (UMDNJ-SOM) in Stratford, New Jersey. He is also the Chief of Service, Family Practice in the Kennedy Health System – University Medical Center in Stratford.

Dr Ciervo is a 1988 graduate of Philadelphia College of Osteopathic Medicine. He completed his family medicine residency at UMDNJ-SOM in 1991 and served as chief resident from 1990 to 1991. Dr Ciervo was the program director of the Residency Program in Family Medicine at UMDNJ-SOM from 1994 to 1998 and was involved in implementing numerous grant initiatives. He has been the principal investigator in various clinical trials in the Department of Family Medicine.

Dr Ciervo actively serves on many national, regional, and institutional committees. He is the immediate past president of the New Jersey Chapter of the American College of Osteopathic Family Physicians (ACOFP) and a Fellow in the National ACOFP. He has received numerous awards, including the UMDNJ-SOM Excellence in Teaching Award and the New Jersey Association of Osteopathic Physicians and Surgeons’ Distinguished Service and Special Service Awards in 2002.

Dr Ciervo has authored and co-authored numerous articles and abstracts, and lectures on a variety of topics affecting family practice, including cultural competency in medical practice and the management and treatment of community-acquired respiratory tract illnesses.

Michael Parker, MD
Associate Professor
Department of Otolaryngology
University of Pittsburg School of Medicine
Pittsburg, Pennsylvania

As a board certified otolaryngologist, a fellow of the American Academy of Otolaryngology–Head and Neck Surgery, and fellow of The American Academy of Otolaryngic Allergy, Dr Parker has excelled in the teaching of medical students, physician extenders, residents, and postgraduate physicians for the past 15 years.

Dr Parker is a regular contributor to ongoing continuing medical educational events at both the local and national level. He has actively contributed to lecture education series for otolaryngology residents at SUNY Health Science Center and Family Practice Residents in Syracuse, New York and on a daily basis is involved with resident education.

On a national basis, Dr Parker has played a key role in the development of CME curriculum for the American Academy of Otolaryngic Allergy. His efforts have included the development of an Asthma workshop for Otolaryngic Allergists, the development and presentation of basic and advanced educational material pertaining to otolaryngology and allergy, and ongoing efforts to continue to improve physician education within the American Academy of Otolaryngic Allergy.

Dr Parker is on the National Speaker’s Bureau/Advisory Board of several major pharmaceutical companies, including Sanofi-Aventis, GlaxoSmithKline, MedPoint, and ALK/Abelo.

Dr Parker has been invited to participate in a variety of local and regional interspecialty outreach programs, including an educational series availing ENT/allergy specialty concepts to internists, pediatricians, and family practice physicians.

Dr Parker’s recreational interests include a lifelong pursuit of high adventure/endurance activities. His personal accomplishments include (as a team physician) the successful summiting of several previously unclimbed peaks in the Arctic’s Baffin Island region.
ascents of Mt Kilimanjaro and Mt Rainier, and the completion of 17 Ironman distance races, including 6 consecutive trips to Hawaii to compete in the Ironman World Championship.

As a member of a single specialty private practice group of three otolaryngologists, Dr Parker has been able to develop a practice that focuses primarily on the management of sinonasal disease, allergy and asthma. His personal athletic interests coupled with his educational background have allowed his practice to attract athletes with disease states germane to his expertise.

On two occasions, Dr Parker has been the recipient of The American Academy of Otolaryngic Allergy’s Golden Apple award for teaching excellence.

Dr Parker continues to be interested in exchanging specialty knowledge amongst the broadest group of physicians and is continually energized about evolving educational opportunities.

**Faculty Financial Disclosure Statements**
The presenting faculty reported the following:

Dr Ciervo is a member of the speakers’ bureaus for sanofi-aventis and MEDA Pharmaceuticals. Dr Ciervo is a consultant for Sepracor Inc.
Dr Parker has no financial relationships to disclose.

**Content Collaborator Financial Disclosure Statements**
The content collaborators at Haymarket Medical Education LP have reported the following:

Mary Jo Krey, senior project editor, has no significant financial relationships to disclose.

**Drug List**

<table>
<thead>
<tr>
<th>Generic</th>
<th>Trade</th>
<th>Generic</th>
<th>Trade</th>
</tr>
</thead>
<tbody>
<tr>
<td>azelastine HCl</td>
<td>Astelin, Astepro</td>
<td>loratadine</td>
<td>various</td>
</tr>
<tr>
<td>beclomethasone</td>
<td>Beconase, Vancenase</td>
<td>mometasone</td>
<td>Nasonex</td>
</tr>
<tr>
<td>budesonide</td>
<td>Rhinocort</td>
<td>montelukast</td>
<td>Singulair</td>
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<tr>
<td>cetirizine</td>
<td>Zyrtec</td>
<td>olopatadine</td>
<td>Patanase</td>
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<tr>
<td>ciclesonide</td>
<td>Alvesco, Omnar/Omniair</td>
<td>oxymetazoline</td>
<td>Afrin, Dristan,</td>
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<tr>
<td>diphenhydramine</td>
<td></td>
<td></td>
<td>Nasivin, Vicks Sinex</td>
</tr>
<tr>
<td>hydrochloride</td>
<td>Benadryl</td>
<td></td>
<td>Sudafed PE</td>
</tr>
<tr>
<td>fexofenadine</td>
<td>Allegra, Telfast, Fastofen</td>
<td>phenylephrine</td>
<td>Sudafed</td>
</tr>
<tr>
<td>flunisolide</td>
<td>AeroBid, Nasalide, Nasarel</td>
<td>pseudoephedrine</td>
<td></td>
</tr>
<tr>
<td>fluticasone propionate</td>
<td>Flonase, Veramyst</td>
<td>triamcinolone</td>
<td>Nasacort AQ</td>
</tr>
<tr>
<td>ipratropium bromide</td>
<td>Atrovent, Apovent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>levocetirizine</td>
<td>Xyzal</td>
<td>astemizole</td>
<td>Hismanal (withdrawn from US market)</td>
</tr>
</tbody>
</table>

**Suggested Reading List**


Hampel F, Ratner P, Diaz J, Sacks H. Efficacy and safety of azelastine hydrochloride and fluticasone propionate combined in a single nasal spray delivery device in patients with seasonal allergic rhinitis. Poster presented at: 65th Annual Meeting of the American Academy of Allergy, Asthma & Immunology; March 12-17, 2009; Washington, DC.


Management of RHINITIS
Taking a Closer Look at Intranasal Antihistamines

Rhinitis: Strategies for Evaluation and Diagnosis
Carman A. Ciervo, DO, FACOFP
Associate Professor and Chairman
Department of Family Medicine
University of Medicine and Dentistry of New Jersey
School of Osteopathic Medicine
Stratford, New Jersey

Objectives
- Describe delineating features of rhinitis subtypes that are key to the differential diagnosis
- Consider drug classes and formulations used to treat rhinitis with respect to symptom relief, adverse effects, and patient compliance

Allergic Rhinitis (AR): A Widespread Problem
- One of the most common chronic conditions in the US, AR may affect up to 20% of the population
- Prevalence by age:
  - 21.6% are younger than 18 years of age
  - 43.1% are 18-44 years of age
  - 23.9% are 45-64 years of age
  - 11.4% are 65 years of age or older
- Of patients with AR surveyed, 59% consulted a primary care physician

Global Impact of AR

Cost QoL AR Comorbidity

Economic Impact of AR
- Increased school absenteeism
  - 2 million school days per year or 10,000 absences per day
  - Contributes to loss of productivity of parents
- Productivity loss is estimated at >$3 billion per year
- Direct costs for AR were ~$3.4 billion in 1996

References:
### AR and Comorbid Airway Disease

- **Allergic Rhinitis**
- **Upper respiratory infection**
- **Sleep apnea syndrome**
- **Otosis media**
- **Hearing/speech development impairment**
- **Rhinosinusitis**
- **Nasal polyps**
- **Asthma**

### Which of the following is true about allergic rhinitis?

1. Triggers include environmental irritants and weather changes
2. Diagnosis requires positive skin-prick tests or IgE-specific determination
3. Vasomotor rhinitis is the most common subtype

### Rhinitis Subtypes

- **Seasonal allergic rhinitis (SAR)/Perennial allergic rhinitis (PAR)**
  - Diagnosis requires positive skin-prick tests or IgE-specific determination that correlates with patient history
- **Nonallergic (vasomotor) rhinitis (VMR)**
  - Diagnosis established by history and negative skin testing
  - VMR is the most common nonallergic rhinitis subtype
  - Triggers include environmental irritants and weather changes
- **Mixed rhinitis**
  - Seasonal/perennial allergies
  - Nonallergic triggers (environmental irritants)

### Classification of Allergic Rhinitis

**Classification prior to ARIA**

- **Seasonal allergic rhinitis (SAR)**
  - Due to seasonally variable allergens
  - Trees
  - Grass pollens
  - Weed pollens
  - Mold spores
- **Perennial allergic rhinitis (PAR)**
  - Nonseasonal allergens in air
  - Mites
  - Animal dander
  - Fungal spores
  - Exposure to workplace antigens

### Early-Phase Nasal Allergic Response

- **Allergen** → **Mast Cell** → **Preformed mediators**
  - Histamine
  - Proteases (heparin)
- **Degranulation** → **Newly synthesized mediators**
  - CysLTs (LTC4, D4, E4)
  - Prostaglandins (PGD2)
  - Platelet-activating factor

### Late-Phase Nasal Allergic Response

- **Allergen** → **Mast Cell** → **Chemotactic factors**
  - CysLTs, PAF, ECP
- **Eos** → **Histamine, CysLTs**
  - IL-4, IL-5, IL-13
  - Baso
  - T-lympho
Which of the following symptoms of AR is most bothersome to the patient?

1. Nasal congestion
2. Rhinorrhea
3. Sneezing
4. Itching

Nonallergic Rhinitis vs. Allergic Rhinitis

- Nasal smear will be devoid of eosinophils
  - Eosinophils present in 90% of allergic rhinitis
  - Neutrophils suggest bacterial infection
- Skin-prick tests or in vitro testing negative
  - Negative allergy testing is the best predictor of the nonallergic state

AR Represents Less Than Half the Causes of Rhinitis

- Allergic rhinitis
- Mixed rhinitis
- Nonallergic (vasomotor) rhinitis

(N = 975)


Signs and Symptoms of Rhinitis

- Nose
  - Symptoms: stuffiness, runny nose, clear mucus, sneezing, hyposmia, snoring
  - Signs: nasal crease, mucosal pallor/edema, rhinorrhea
- Eyes
  - Symptoms: clear mucus, watering, puffiness
  - Signs: injected sclerae, "shiners," Dennie-Morgan lines, cobblestoning
- Ears
  - Symptoms: congestion, popping, pain, decreased acuity
  - Signs: tympanic membrane retraction/bulging
- Throat
  - Symptoms: clear mucus, soreness, drainage, hoarseness, throat clearing
  - Signs: mouth breathing, erythema, cobblestoning, clear-to-mucoid drainage

Symptoms of Rhinitis

<table>
<thead>
<tr>
<th>Allergic Rhinitis</th>
<th>Symptoms</th>
<th>Nonallergic Rhinitis (VMR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>++++</td>
<td>Congestion</td>
<td>++++</td>
</tr>
<tr>
<td>++++</td>
<td>Sneezing</td>
<td>++++</td>
</tr>
<tr>
<td>++++</td>
<td>Nasal/Throat itch</td>
<td>++++</td>
</tr>
<tr>
<td>++++</td>
<td>Rhinorrhea</td>
<td>++++</td>
</tr>
<tr>
<td>++++</td>
<td>Postnasal drip</td>
<td>++++</td>
</tr>
</tbody>
</table>

Rhinitis Algorithm

Preferred treatment: Nasal antihistamine (esp. with decongestant) and nasal corticosteroid (1 spray of each BID)

Alternative treatment: Oral antihistamines (esp. with eye itch) and nasal corticosteroids

Preferred treatment: Nasal antihistamine and nasal corticosteroid (1 spray of each BID)

Negative relevant epicutaneous skin test OR Positive relevant RAST tests (3+ or greater)


Most Bothersome Symptom: Nasal Congestion

How bothersome are symptoms?

<table>
<thead>
<tr>
<th>Symptom</th>
<th>Extremely</th>
<th>Moderately</th>
<th>Patients (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Congestion</td>
<td>40%</td>
<td>38%</td>
<td>26%</td>
</tr>
<tr>
<td>Runny nose</td>
<td>20%</td>
<td>36%</td>
<td></td>
</tr>
<tr>
<td>Repeated sneezing</td>
<td>25%</td>
<td>31%</td>
<td></td>
</tr>
<tr>
<td>Itching</td>
<td>18%</td>
<td>28%</td>
<td></td>
</tr>
</tbody>
</table>

N = 2,500


AAAAI Guidelines for Management of AR

- Environment
  - Avoid factors that cause symptoms
- Use of appropriate therapy
  - Palliative (nonpharmacologic) therapy
  - Pharmacotherapy
- Allergen immunotherapy
  - Evaluate the appropriateness and need for immunotherapy
- Patient education
  - Educate the patient regarding the disease process and follow-up

AAAAI = American Academy of Allergy, Asthma, and Immunology.

Management of Rhinitis: Pharmacologic Therapy

- Corticosteroids
- Antihistamines
- Decongestants
- Chromones
- Anticholinergics
- Antileukotrienes

Do you use intranasal antihistamines to treat rhinitis?

1. Yes
2. No

“Drugs Don’t Work If People Don’t Take Them”

- Allergies in America 2006 survey
  - Nasal congestion is the most frequent and troublesome symptom
  - Nasal medications do not provide 24-hour relief
  - Effectiveness wears off
  - Nonadherence is the result of dissatisfaction with effectiveness; some patients simply give up
  - Patients want better education
  - Proper administration technique can affect efficacy


Therapeutic Options for Optimal Patient Outcomes

Michael J. Parker, MD
Community General Hospital North
Syracuse, New York
Center for Sinus & Allergy
Camillus, New York
**ARIA Guidelines for AR**

**Options Common in a Stepwise Approach**

<table>
<thead>
<tr>
<th>Mild intermittent</th>
<th>Moderate to severe intermittent</th>
<th>Mild persistent</th>
<th>Moderate to severe persistent</th>
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<tbody>
<tr>
<td>Intranasal corticosteroid</td>
<td>Cromolyn sodium</td>
<td>Patient education and allergy avoidance</td>
<td>Intranasal decongestant (&lt;5 days) or oral decongestant</td>
</tr>
<tr>
<td>Oral or local/topical antihistamine</td>
<td>Immunootherapy, if other therapies fail</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


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**Intranasal Steroids**

- Considered the mainstay of therapy for rhinitis
- Can be highly effective in patients with symptoms of both AR and nonallergic rhinitis
- For mixed rhinitis, there may be significant benefit to the combination of an intranasal antihistamine with an intranasal steroid

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**Intranasal Antihistamines**

- Effective for SAR and VMR
- Have clinically significant rapid onset of action, thus appropriate for PRN use in episodic AR
- Effectiveness for AR equal or superior to oral 2nd-generation antihistamines, with clinically significant effect on nasal congestion
- Considered generally less effective than INS for nasal symptoms
- Appropriate choice for mixed rhinitis because also approved for vasomotor rhinitis
- Side effects:
  - Intranasal azelastine: bitter taste, somnolence
  - Intranasal azelastine new formulation: unusual/sweet/bitter taste
  - Intranasal olopatadine: bitter aftertaste or epistaxis

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**Rhinitis Guidelines for Intranasal Antihistamines: Joint Task Force on Practice Parameters 2008**

- Intranasal antihistamines:
  - May be considered for use as 1st-line treatment for AR and nonallergic rhinitis
  - Have rapid onset of action
  - Are efficacious and equal or superior to oral 2nd-generation antihistamines for treatment of SAR
  - Because systemic absorption occurs, currently available intranasal antihistamines have been associated with sedation and can inhibit skin test reactions
  - Have been associated with a clinically significant effect on nasal congestion
  - Are generally less effective than intranasal steroids
  - May provide benefit in combination with intranasal steroids

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**Intranasal Antihistamines**

<table>
<thead>
<tr>
<th>Drug</th>
<th>Indications</th>
<th>Dosages</th>
<th>Age</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Azelastine*</td>
<td>Seasonal rhinitis, nonallergic rhinitis</td>
<td>1-2 sprays, per nostril, BID</td>
<td>5-5 years of age</td>
<td>Works in the same manner as systemic antihistamines but is applied locally</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5-11 years of age</td>
<td>Rapid onset of action</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>11-17 years of age</td>
<td>In some patients, may be sedating or have a bitter aftertaste</td>
</tr>
</tbody>
</table>

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**Benefits of Intranasal Antihistamines and Intranasal Steroids (INS)**

- Increased level of active drug delivered to target tissue
- Minimization of unwanted side effects
- Increased bioavailability of some drugs with poor bioavailability
- Ease of administration

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*Pregnancy Category C.*

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**ARIA Guidelines for AR**

**Options Common in a Stepwise Approach**

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<td></td>
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</table>

Intranasal Antihistamines

<table>
<thead>
<tr>
<th>Drug</th>
<th>Indications</th>
<th>Dosages</th>
<th>Age Restrictions</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Azelastine 0.15%</td>
<td>Seasonal allergic rhinitis, perennial allergic rhinitis</td>
<td>For SAR: 1-2 sprays per nostril, BID. For PAR: 3 sprays per nostril, BID. 2 sprays per nostril, BID.</td>
<td>1-12 years of age</td>
<td>Higher, once-daily dose of azelastine new formulation, works in the same manner as new azelastine formulation.</td>
</tr>
<tr>
<td>Olopatadine</td>
<td>Seasonal allergic rhinitis</td>
<td>2 sprays per nostril, BID.</td>
<td>12 years of age</td>
<td>Works in the same manner as systemic antihistamines but is applied locally.</td>
</tr>
</tbody>
</table>

*Pregnancy Category C.*


Prescribing information.


*Pregnancy Category C.*

Sensory Study: New Formulation of Azelastine Nasal Spray With Reduced Bitterness

- Randomized, double-blind study involving 12 panelists trained in sensory testing methods
- Panelists received both doses (1 and 2 sprays per nostril) of both original and new formulation in order to subjectively evaluate bitterness
- The new azelastine formulation with sorbitol and 0.15% sucralose had significantly less bitterness (71%, P<.05) than the original azelastine formulation

New Once-Daily Formulation of Azelastine Nasal Spray

- Randomized, double-blind, placebo-controlled study of azelastine 0.15% once daily vs. placebo in 536 patients with moderate-to-severe SAR during Texas Mountain Cedar season
- After 2 weeks, improvement in 24-hr instantaneous TNNS was significantly (P<.001) improved with azelastine 0.15% vs. placebo
- Azelastine 0.15% was effective and well tolerated in patients with SAR with once-daily dosing, with adverse events incidence similar to placebo except for bitter taste and nasal discomfort

TNNS = total nasal symptoms score.

Olopatadine vs. Azelastine

Comparable Efficacy

Olopatadine vs. Azelastine

Rhinitis Guidelines for Intranasal Antihistamines: Joint Task Force Practice Parameters 2008

- Intranasal antihistamines:
  - May be considered for use as 1st-line treatment for AR and nonallergic rhinitis
  - Have rapid onset of action
  - Are efficacious and equal or superior to oral 2nd-generation antihistamines for treatment of SAR
  - Because systemic absorption occurs, currently available intranasal antihistamines have been associated with sedation and can inhibit skin test reactions
  - Have been associated with a clinically significant effect on nasal congestion
  - Are generally less effective than intranasal steroids
  - May provide benefit in combination with intranasal steroids


What is a reasonable time to expect symptom relief from allergy therapy?

1. Within 30 minutes
2. Within 2 hours
3. Within 1/2 day
4. Within 1 day
**Oral H₁ Blockers: Onset of Action**

- Cetirizine: 59-126 minutes
- Loratadine: 102 minutes
- Fexofenadine: 60 minutes

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**Onset of Effect for Selected Intranasal Sprays**

- Cetirizine: 59-126 minutes
- Fluticasone propionate: 12 hours – 3 days

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**Rhinoconjunctivitis Quality-of-Life Questionnaire (RQLQ) Scores¹,²**

- **ACT I**
  - 27% Improvement in QoL Measures Over Cetirizine
- **ACT II**
  - 36% Improvement in QoL Measures Over Cetirizine

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**Results reported above represent overall mean improvement over 14 days.**

- Beclomethasone: within 3 days
- Budesonide: 24 hours
- Flunisolide: 4 – 7 days
- Fluticasone propionate: 12 hours – 3 days
- Mometasone: 12 hours – 3 days
- Triamcinolone: 24 hours
- Azelastine: 15 – 30 minutes
- Olopatadine: within 30 minutes
- Azelastine new formulation: within 30 minutes

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**Rhinitis Guidelines for Intranasal Antihistamines: Joint Task Force Practice Parameters 2008**

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Currently Available Decongestants

- Oral: Pseudoephedrine,* phenylephrine
- Nasal: Oxymetazoline, phenylephrine nasal spray
- Generally recommended for short-term therapy
- Possible irritability, dizziness, headaches, tremor, insomnia, tachycardia, and elevated blood pressure
- May aggravate urinary retention in males with preexisting prostate enlargement
- Topical use may lead to rhinitis medicamentosa

*Restricted access.

Olopatadine: Relief of Congestion and Other Nasal Symptoms

- Comparable efficacy for each drug vs. baseline
- Azelastine -19.2
- Fluticasone -21.1

N=51, 12 yr old, SAR and moderate-severe symptoms, treated for 2 wks.


Intranasal Antihistamine and Steroid

- Double-masked, randomized, 2-arm, parallel-group, 2-week SAR clinical trial
- 130 patients (65 patients per treatment arm)
- Patients were dosed with 2 sprays BID of olopatadine HCl nasal spray 0.6% or 2 sprays QD fluticasone propionate for a 2-week treatment period
- End points: Total nasal symptoms score (TNSS), total ocular symptoms score (TOSS)

Intranasal antihistamines:

Primary efficacy variable

Wallace DV, et al.
Kaliner MA, et al.
Ratner PH, et al.

Mean Average TNSS Scores

May provide benefit in combination with intranasal steroids

Have rapid onset of action

Are efficacious and equal or superior to oral 2nd--generation

Because systemic absorption occurs, currently available intranasal steroids

Have been associated with a clinically significant effect on nasal symptoms

Are generally less effective than intranasal steroids

5 sites during the 2005-2006 Texas mountain cedar season

Change from baseline to day 14 in the total nasal symptom scores

Randomized, double-blind, parallel-group

Primary efficacy variable

Change from baseline to day 14 in the total nasal symptoms score (TNSS):

Sneezing, itchy nose, rhinorrhea, and congestion

Azelastine Plus Fluticasone Compared With Either Agent Alone

Study design

Randomized, double-blind, parallel-group

5 sites during the 2005-2006 Texas mountain cedar season

Primary efficacy variable

Change from baseline to day 14 in the total nasal symptoms score (TNSS):

Sneezing, itchy nose, rhinorrhea, and congestion

Azelastine Plus Fluticasone Sustained Symptom Improvement

Combination provided 40% more improvement than fluticasone alone

*P<.05 vs. azelastine.  †P<.05 vs. fluticasone.


Intranasal Antihistamine vs. Steroid: Average TNSS

Olopatadine demonstrated faster onset of action than fluticasone

Both drugs had comparable efficacy on overall nasal symptom scores

Both drugs had comparable efficacy on individual symptoms, including congestion

Study results provide evidence that intranasal antihistamines are as efficacious as intranasal steroids

Intranasal Antihistamine vs. Steroid: Conclusions

Rhinitis Guidelines for Intranasal Antihistamines: Joint Task Force Practice Parameters 2008

\[ \text{Olopatadine} = 6.72 \quad \text{Fluticasone} = 6.51 \]

\[ \text{Steroid: Average TNSS} \]

\[ \text{Azelastine Plus Fluticasone} \]

\[ \text{Sustained Symptom Improvement} \]

\[ \text{Azelastine Plus Fluticasone} \]

\[ \text{Sustained Symptom Improvement} \]

\[ \text{Azelastine + Fluticasone} \]

\[ \text{Fluticasone} \]

\[ \text{Azelastine} \]

Improvement (%)

- Azelastine + fluticasone; P < .05 vs. fluticasone.
- Azelastine + fluticasone; P < .05 vs. azelastine.

TNSS = total nasal symptom score.


Azelastine Plus Fluticasone: Total Nasal Symptom Score and Individual Symptoms

Combination Trial: Additive Benefit

- Flunisolide + loratadine
- This study also concluded that the combination was better than either agent alone


Other Available Therapies

- Ipratropium bromide – anticholinergic nose spray, not systemically absorbed. Reduces rhinorrhea, has no effect on other nasal symptoms
- Montelukast (LTD-4 receptor antagonist) was FDA approved in January 2003 for allergic rhinitis; leukotriene antagonists are less effective than intranasal steroids
- Immunotherapy may be appropriate for some patients; careful patient evaluation is required

Which barrier to adherence do you see most often in your patients?

1. Reimbursement (cost to patient)
2. Side effects
3. Dosing schedules
4. Negative attitudes/perceptions about steroids
5. Preference for oral route of administration

Proper Administration of an Intranasal Spray

- Clear your nose
  - Clear your nostrils by blowing your nose
- Look down
  - Tilt your head down to keep the medicine from going into your throat
- Sniff gently
  - Spray once per nostril*
  - Remember to sniff gently
  - Do not spray into the eyes

*Number of sprays is determined by the clinician.

Case Study

Carman A. Ciervo, DO, FACOFP
Associate Professor and Chairman
Department of Family Medicine
University of Medicine and Dentistry of New Jersey
School of Osteopathic Medicine
Stratford, New Jersey
Case Study: Patient Presentation

- A 36-yr-old woman presents to you complaining of itchy nose and rhinorrhea
- She recently started a job in a spa and noticed that her symptoms started at the same time
- Her symptoms are interfering with her work situation because clients think she is always sick: she must constantly wipe her dripping nose, and she has itching and sneezing

Case Study: Patient Presentation and History

- She feels extremely frustrated by this and also says it is more difficult to breathe at night because of rhinorrhea and congestion
- PMHx: Migraine headache, endometriosis, SAR as a child
- PSHx: Appendectomy at the age of 11 years
- Meds: OTC allergy meds (loratadine, cetirizine), stopped diphenhydramine (too sedating)

Case Study: Clinical Information

- Physical examination
  - HENT: + rhinorrhea, turbinates with erythema, nares with mild excoriation
  - Lungs: CTA bilaterally

Which of the following diagnoses do you suspect?
1. Seasonal allergic rhinitis
2. Nonallergic rhinitis
3. Mixed rhinitis
4. Asthma

How would you classify the patient's rhinitis?
1. Mild
2. Moderate
3. Severe

Case Study: Management Possibilities

Patient With Rhinitis

- Intranasal Steroid
- Intranasal Antihistamine
Case Study Management and Follow-up

- The patient was told to discontinue oral allergy medication, was placed on fluticasone nasal spray, and was asked to return to the office in 3 weeks
- When she returns, she says that she has been adherent with taking the nasal spray each morning
- She also states that she still has significant congestion

Case Study Management and Follow-up Recommendations

- At this time, you continue the fluticasone nasal spray and add azelastine HCl, 2 puffs each nostril BID, and ask the patient to return to your office in 2 weeks
- When the patient returns, she notes that the symptoms have resolved

Conclusion

- Differentiate allergic/nonallergic/mixed rhinitis
- Practice Parameters guidelines state that intranasal antihistamines may be considered as 1st-line treatment for AR and nonallergic rhinitis
- Combination therapy with intranasal antihistamine and intranasal steroid may provide added relief of rhinitis symptoms
- New intranasal product formulations may improve patient adherence

Will you consider using intranasal antihistamines to treat rhinitis?

1. Yes
2. No