

Newer Antihistamines

Key questions and Inclusion criteria

Update #2

Key questions

1. For outpatients with seasonal or perennial allergic rhinitis or urticaria, do newer antihistamines differ in effectiveness?
2. For outpatients with seasonal or perennial allergic rhinitis or urticaria, do newer antihistamines differ in harms?
3. Are there subgroups of patients based on demographics (age, racial groups, gender), socioeconomic status, other medications (drug-drug interactions), co-morbidities (drug-disease interactions), or pregnancy for which one newer antihistamine is more effective or associated with fewer harms?

Inclusion criteria

Populations

- Adult or pediatric outpatients with the following conditions:
 - Seasonal allergic rhinitis
 - Perennial allergic rhinitis
 - Urticaria (acute and chronic)
- Subgroups of interest included, but were not limited to, different races, ages (older adult versus younger adult), concomitant use of other medications (in consideration of drug-drug interactions), persons with various comorbidities (pregnancy and consideration of drug-disease interactions), and sex.

Interventions

Active ingredient	Brand name
Cetirizine hydrochloride	Zyrtec®, Reactine®
Loratadine	Claritin®
Fexofenadine hydrochloride	Allegra®
Desloratadine	Clarinex®
Levocetirizine	Xyzal®*
Azelastine	Astelin®, Astepro®* [†]
Olopatadine	Patanase®* [†]

*not available in Canada, [†]nasal spray

Outcomes

- Efficacy and effectiveness outcomes
 - Symptoms (e.g., nasal congestion, rhinorrhea, sneezing, itching and pain from skin irritations)

- Functional capacity (e.g., physical, social and occupational functioning, quality of life)
- Time to relief of symptoms (e.g., time to onset, duration of relief)
- Duration of effectiveness (e.g., switch rate)
- Harms
 - Total withdrawals
 - Withdrawals due to adverse events
 - Serious adverse events or withdrawals due to specific adverse events (e.g., central nervous system effects, sedation, gastrointestinal effects, dry mouth, urinary retention)

Study design

1. Efficacy and effectiveness
 - a. Randomized controlled trials (RCTs), controlled clinical trials, and systematic reviews of fair or better quality.
 - b. Direct comparisons (head-to-head studies) are preferred over indirect comparisons using active or placebo-controlled trials. Inclusion of indirect evidence will be considered where there is insufficient direct evidence.
 - c. Studies ≥ 1 week in duration will be included.
 - d. Studies conducted in artificial study settings (e.g., antigen exposure chambers) will not be included. Abstracts and conference proceedings are also excluded.
2. Harms
 - a. RCTs, controlled clinical trials, pre-versus post-design studies, and observational studies with comparative groups.
 - b. To be included, reports about overall harms or adverse events had to report total withdrawals, withdrawals due to specific adverse events (e.g., central nervous system effects, sedation, gastrointestinal effects, dry mouth, urinary retention, etc.); or the frequency and severity of these specific adverse events.