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Review Article

Levocetirizine in Treatment of Urticaria and Allergic Rhinitis

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Abstract

Allergic rhinitis (AR) and urticaria are the two most common allergic disorders that affect people globally. Nearly 400 million people worldwide have been affected by AR. Increased urbanization and environmental pollutants are some of the causes that lead to an increased prevalence of AR. Second-generation antihistamines like levocetirizine are approved for the treatment of seasonal AR, perennial AR, and chronic idiopathic urticaria in patients aged ≥2 years as oral drop formulations and ≥6 years as tablet formulations. The current work discusses an overview of levocetirizine, its efficacy, and its safety in the treatment of allergic disorders like AR and urticaria.

Keywords: Allergic rhinitis, Efficacy, Levocetirizine, Safety, Urticaria.

INTRODUCTION

Allergy diseases are frequently underestimated in terms of their prevalence and their negative effects on quality of life (QoL). Immunoglobulin E (IgE), which is found on the surface of mast cells and basophils, plays a crucial role in the allergic reaction. These cells become activated when an allergen interacts with IgE and its receptor complex, causing the production of chemicals like histamine that induce allergic symptoms. Allergic rhinitis (AR) and urticaria are one of the most common allergic conditions.[1]

Globally, AR is reported to impact approximately 25% children and 40% of adult. Approximately 80% of AR symptoms develop before the age of 20 years and increases during the age 20–40 years before gradually declining. The occurrence rate of AR in children over the first 5 years of life was reported to be 17.2%, with a peak age at diagnosis between 24 and 29 months (2.5%). Sex-specific differences in the prevalence of AR with male predominance in childhood and a female predominance in adolescents are reported.[2] Other symptoms are itching of the palate, postnasal drip and cough. Figure 1 demonstrates the symptoms of AR.

Urticaria is another prevalent illness. Patients with urticaria frequently experience angioedema, wheals (hives), or both. Typically, angioedema is present in around half of all urticaria cases. Acute conditions are those that have a duration of <6 weeks. It is considered chronic if it lasts >6 weeks or recurs. The symptoms of the disorder could last for months or even years. Up to 15–25% of people may experience acute urticaria at some point in their lives, and the most common causes are virus infections (particularly those that impact the upper respiratory tract), food allergies, and pharmacological side effects.[1]

Antihistamines are used to treat a variety of allergic disorders, such as AR and urticaria, due to the crucial role of histamine in allergic reactions.[1] Levocetirizine is an effective second-generation histamine receptor antagonist. It is reported to function efficiently against AR in children to improve the QoL.[3]

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MECHANISM OF ACTION OF LEVOCETIRIZINE

Non-sedating (second-generation) histamine H1 receptor antagonists are considered to be a principal therapy for allergic disorders. Levocetirizine is the active R-enantiomer of cetirizine, a second-generation, long-acting, selective peripheral histamine H1 receptor antagonist. The antihistaminic properties of racemic cetirizine reside with the R-enantiomer rather than the S-enantiomer. Figure 2 demonstrates the advantages of Levocetirizine.

Levocetirizine showed a longer duration of action after discontinuation of treatment than other antihistamines. Levocetirizine may be more effective than desloratadine, fexofenadine or loratadine in allergy challenge chamber tests. Levocetirizine is an excellent addition to the class of oral H1 receptor antagonists that are used to treat AR and as first-line therapy in urticaria sufferers.[4]

EFFICACY AND SAFETY ASSESSMENT

Desloratadine, levocetirizine, and placebo were assessed in the Yonekura *et al.*[5] three-arm, randomized, double-blind, and crossover design, which compared the effectiveness of various antihistamines in groups of the same participants. 50 individuals with moderate to severe AR caused by Japanese cedar pollen were randomized to receive placebo,

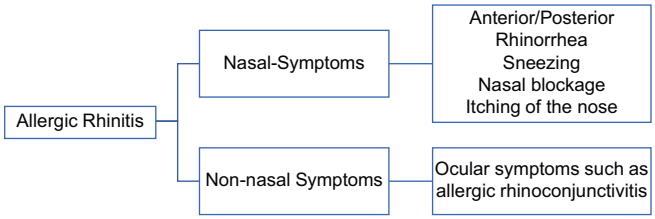

Figure 1: Allergic rhinitis classification

Figure 2: Advantages of levocetirizine

desloratadine (5 mg), or levocetirizine (5 mg). Levocetirizine and desloratadine both significantly outperformed the placebo in terms of controlling symptoms, with a difference in total nasal symptom score (TNSS) from placebo of −2.42 ($P < 0.0001$) for levocetirizine and −1.66 ($P < 0.01$) for desloratadine [Figure 3]. However, there was no statistically significant difference between the two medications. No serious adverse events were reported in the patients.

TNSS: Total nasal symptom score, TOSS: Total ocular symptom score; TNOSS: Total nasal-ocular symptom score, LS mean: Least square mean.

Desloratadine and levocetirizine considerably reduced nasal symptoms in the current randomized, crossover, comparative study in an environmental challenge chamber as compared to placebo, and their safety was also established. Levocetirizine has a tendency to control nasal symptoms more effectively than desloratadine.

Staevska *et al.*[6] evaluated the effectiveness and safety of using levocetirizine and desloratadine, two second-generation antihistamines, up to four times the doses typically indicated for individuals with difficult-to-treat chronic urticaria. The success rate of treatment more than doubled when the medicine dose was increased above the standard 5 mg. Increasing the drug dose above the conventionally prescribed 5 mg for either drug more than doubled the success rate of treatment.

According to this study, at the end of week 3, the overall success rate for the 22 patients taking levocetirizine was significantly ($P < 0.04$) greater than the rate for the 12 patients taking desloratadine. Analysis of the visual analog scores (VAS) for urticaria-related discomfort showed that levocetirizine considerably ($P < 0.003$) outperformed desloratadine in terms of overall improvement. Increasing doses of levocetirizine and desloratadine both improved QoL; however, levocetirizine proved to be superior. With either medicine, there were no severe or serious side effects that resulted in stopping the course of treatment.

In young atopic children, Simons[7] evaluated the possibility that the piperazine H1-antihistamine levocetirizine would have a similar safety profile to a placebo. For 18 months, 510 atopic children between the ages of 12 and 24 months were given levocetirizine 0.125 mg/kg twice a day or a placebo. The treatment groups were similar demographically, and with regard to number of children with: One or more adverse events (levocetirizine, 96.9%; placebo, 95.7%). This study confirmed the safety of levocetirizine in young atopic children. Levocetirizine's therapeutic effectiveness

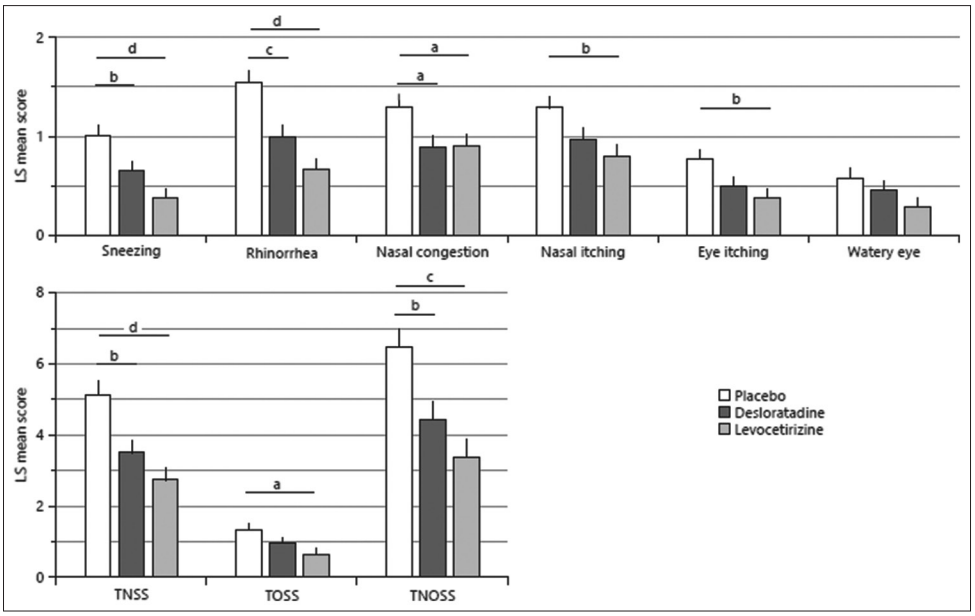

Figure 3: Comparison of mean symptom scores from 120 to 180 min in environmental challenge chamber. Values represent means ± SE. [a]*P* < 0.05, [b]*P* < 0.01, [c]*P* < 0.001, [d]*P* < 0.0001 versus placebo group

and safety in AR and skin allergies were reported by Hair *et al.*[4] This indicates that levocetirizine's therapeutic effectiveness in the treatment of seasonal AR, perennial AR, persistent AR (PER), and chronic idiopathic urticaria (CIU) has been established.

Allergen challenge chamber studies revealed that patients who received levocetirizine had a significantly greater reduction in major symptom complex (MSC) scores from baseline in comparison to fexofenadine, desloratadine, and loratadine. Primary end points showed a significantly greater reduction in MSC scores in the levocetirizine group than in the fexofenadine group at 22–24 h post-dose. At 24–26, and 28 h post dose, the minimization in MSC scores from baseline compared to placebo was significantly ($P < 0.001$) higher in patients who received levocetirizine (2.26 and 2.33) than fexofenadine (0.98 and 1.00).

In comparison to other antihistamines, levocetirizine has a longer duration of antihistaminic effect. In addition, it also resulted in a greater reduction in histamine-induced nasal temperature rise than fexofenadine. Levocetirizine 5 mg reduced the histamine-induced nasal temperature in healthy people more effectively than fexofenadine 120 mg, 24 h after the treatment (0.32 vs. 0.44°C increase; $P = 0.024$).[4]

CONCLUSION

The treatment of allergic disorders such AR and CIU with levocetirizine is successful and generally well tolerated. According to allergen challenge chamber studies, levocetirizine has better efficacy than desloratadine, or fexofenadine. Overall, levocetirizine is a beneficial addition to the oral H1 receptor antagonists currently used to treat AR and as first-line therapy in patients with CIU.

Dr. S K Srivastav
Skin and VD (Ex HOD, DMCH, Laheriasarai), Darbhanga, Bihar

Levocetirizine controls urticaria and is also effective in controlling allergies and other dermatological conditions. I have observed that it has better efficacy than other antihistamines. According to me, Levocetirizine and Fexofenadine provide an equal level of 24-h-long-lasting relief; however, Bilastine is less effective than the former drugs. As per the latest guidelines, 2nd generation H1-antihistamines are strongly recommended for all patients with urticaria, regular use of these is suggested for chronic urticaria. Before considering any other treatment, a 4-fold up dosing of 2nd generation H1-antihistamines is recommended. Current guidelines oppose the simultaneous use of multiple antihistamines. Due to good safety, tolerability and efficacy, Levocetirizine is preferred over other antihistamines.

Dr. Rajeev Setia
M.S. (ENT), Hanumangarh, Rajasthan

I found Levocetirizine efficacious in AR and other respiratory allergies. It is more potent and better in terms of efficacy and safety as compared to other antihistamines. Levocetirizine provides long-lasting effects and has lesser

side effects and quick onset of action. Levocetirizine, in my opinion, offers the finest 24-h-long-lasting relief. It is safe to use for long-term treatments. I believe low-dose levocetirizine provides better safety and tolerability in different types of respiratory allergies. Levocetirizine improves the QoL by providing better relief from symptoms of respiratory allergies with fewer side effects. I have found better results with Levocetirizine as compared to other antihistamines.

Dr. Vinayak Revenkar
M.B.B.S., DNB (Pediatrics), Solapur, Maharashtra

AR has the worst impact on the QoL and sleep of children. As per the Early Prevention of Asthma in Atopic Children (EPAAC) study, Levocetirizine can safely be used for 18-month therapy in children who were in the age group of 12–24 months. Levocetirizine did not have any side effects on developmental milestones and other clinical parameters. In my opinion, Levocetirizine is a better choice for symptom control as compared to Fexofenadine over 24 h among children. As per my knowledge, a good pharmacological treatment option must have a coating of unionized Montelukast to prevent any interaction of stomach acids with Levocetirizine. There should not be any cross-reaction between Levocetirizine and the coating of Montelukast. The coating must not precipitate in the acidic environment of the stomach as it will affect the bioavailability of the drug. Overall, Levocetirizine provides promising results in the management of acute and perennial AR in children.

Dr. Jyoti Dhawan
M.B.B.S., M.D. (Dermatology), Delhi

As per my experience, Levocetirizine provides excellent efficacy in urticaria and other dermatological allergic conditions with superiority over other antihistamines. Levocetirizine is far more efficient in providing 24-h-long-lasting relief when compared to Bilastine and Fexofenadine. The use of 2nd generation H1-antihistamines is strongly advised for all patients with urticaria, and frequent usage is advised for those with chronic urticaria, according to the most recent guidelines. Second-line treatment is advised to start with a 4-fold up-dosing of second-generation H1-antihistamines before considering any other options. Multiple antihistamines taken at once are discouraged by current guideline recommendations. Although it causes sedation in a few patients, due to its safety and tolerability, Levocetirizine is my first choice in patients with urticaria.

Dr. Tushar Anand Shinde
M.B.B.S., DDV, Pune, Maharashtra

Levocetirizine is an efficacious and safe option for treating allergies and dermatological disorders as well as urticaria. I found that it worked more effectively than other antihistamines as it causes less sedation. Levocetirizine, in my opinion, offers the finest 24-h-long-lasting relief; whereas, Fexofenadine and Bilastine are less efficient. The use of 2nd generation H1-antihistamines is strongly recommended for all patients with urticaria, and frequent usage is advised for those with chronic urticaria, according to the most recent guidelines. Second-line treatment is advised to start with a 4-fold up-dosing of second-generation H1-antihistamines before considering any other options. Multiple antihistamines taken at once are discouraged by current recommendations. Levocetirizine is safe, efficacious, and useful in day-to-day dermatological practice.

Dr. Deepak Kumar Gupta
M.B.B.S., MD (Pediatrics), Delhi

Children with AR experience the worst effects on their sleep and QoL. According to the EPAAC trial, children between the ages of 18 and 24 months can safely receive Levocetirizine treatment for 18 months. The adverse effects of Levocetirizine on developmental milestones and other clinical indicators are not significant. Levocetirizine, in my opinion, is superior to Fexofenadine for symptom management. According to me, a proper pharmaceutical regimen must include unionized Montelukast as a coating to avoid any potential stomach acid–Levocetirizine interactions. It consistently produces great outcomes in the treatment of both acute and perennial AR in children.

Dr. Ojas Deokate
MD, DCH, Solapur, Maharashtra

The worst sleep and QoL consequences are experienced by children with AR. Levocetirizine medication for 18 months is safe for children between the ages of 12 and 24 months, according to the EPAAC trial. Levocetirizine had no negative effects on developmental milestones or other clinical markers. I believe that Levocetirizine is a better alternative for treating symptoms than Fexofenadine. According to me, a proper pharmaceutical regimen must include unionized Montelukast as a coating to avoid any potential stomach acid–Levocetirizine interactions. The coating of Montelukast and Levocetirizine should not interact in any way. The coating must not precipitate in the stomach's acidic environment because this will decrease the drug's bioavailability. As per my experience, Levocetirizine is efficacious and has a high safety profile even in long run.

Dr. Mukesh Ruparelia
MD (Skin), Rajkot, Gujarat

I believe that Levocetirizine provides excellent efficacy in the treatment of urticaria and other dermatological

allergies, unlike other antihistamines. Levocetirizine is more effective in providing 24-h-long-lasting relief when compared to other molecules such as Bilastine and Fexofenadine. Second-line treatment is recommended to start with a 4-fold up-dosing of second-generation H1-antihistamines before considering any other options. Levocetirizine provides excellent safety and tolerability.

Dr. T V Ramanikanth
FRCS (Edin), FRCS (Glasgow), DLO, Coimbatore, Tamil Nadu

Levocetirizine is useful and efficacious for the treatment of AR. It has higher efficacy than other antihistamines. It shows quick action in reducing eye and nose symptoms of seasonal and perennial rhinitis with better efficacy than other 2nd generation antihistamines. Levocetirizine is far more efficient in providing 24-h-long-lasting relief when compared to Fexofenadine. It is relatively safe; however, some patients complain of drowsiness despite the drug being non-sedative. Patients had good compliance except for a few who experienced drowsiness after daytime consumption of Levocetirizine. This drug also improves the QoL in patients with AR. Overall clinical experience with Levocetirizine is excellent.

Dr. J Muni. Sekhar
MD (Pediatrics), Tirupati, Andhra Pradesh

Children with AR experience the worst sleep and QoL effects. The EPAAC trial was conducted involving atopic children in the age group of 12–24 months. Clinical indicators or developmental milestones were not adversely affected by levocetirizine. I think Fexofenadine is not as effective in treating symptoms as Levocetirizine. Montelukast coating must not precipitate in the acidic environment of the stomach, as it will reduce the drug's bioavailability. Overall, patients had a good experience and better relief.

Dr. Rakesh
MD (Pediatrics), Chennai, Tamil Nadu

As per my experience, children with AR have a moderate impact on QoL and quality of sleep. The EPAAC trial is a randomized double-masked trial involving 510 atopic children who were in the age group of 12–24 months. As per my opinion, Levocetirizine provides moderate 24-h-long-lasting relief. According to me, a good pharmacological treatment must offer a coating of unionized Montelukast to prevent any interaction of stomach acids with Levocetirizine. This drug has decreased the recurrence of rhinitis in children.

Dr. V Sivaraman
MD (Skin and STI), Pondicherry

Levocetirizine is a reliable and easy-to-use treatment for urticaria and other dermatological allergies. It works better than other antihistamines. However, I would say that Levocetirizine, Fexofenadine and Bilastine equally provide 24-h-long-lasting relief. The use of 2nd generation H1-antihistamines is strongly advised for all patients with urticaria, and frequent use is advised for those with chronic urticaria, according to the most recent guidelines. Second-line treatment is advised to be initiated with a 4-fold up dosing of second-generation H1-antihistamines before considering any other options. Multiple antihistamines taken at once are discouraged by current guideline recommendations. Levocetirizine has acceptable safety and tolerability with minimal sedation. Overall, it is a useful molecule for the first-line management of chronic and spontaneous urticaria.

Dr. S Satheeshkumar
M.B.B.S., DCH, Tirupur, Tamil Nadu

AR somewhat impacts the QoL and sleep in children. Levocetirizine can be administered in children aged between 12 and 24 months without risk, according to the EPAAC trial. The adverse effects of levocetirizine on developmental milestones and other clinical indicators were non-existent. Levocetirizine, in my opinion, is a better option for managing symptoms than Fexofenadine. According to me, effective pharmaceutical treatment must include unionized Montelukast as a coating to avoid any possible interactions between stomach acids and levocetirizine. The coating of Montelukast and Levocetirizine should not interact in any way. To prevent the drug's bioavailability from getting affected, the coating must not precipitate in the stomach's acidic environment. Overall, the use of Levocetirizine shows excellent clinical outcomes in the management of acute and perennial AR.

Dr. Abdul Vahid Maniyar
M.B.B.S., DCH, Hubli, Karnataka

My experience has shown that AR in children has a moderate effect on their QoL and sleep. Levocetirizine can be given to children between the ages of 12 and 24 months for 18 months without any negative side effects, according to the EPAAC experiment. Levocetirizine had no detrimental effects on clinical signs or developmental milestones. I believe Levocetirizine is more useful in treating symptoms than Fexofenadine. In a pharmacological treatment, I would prefer coated and unionized montelukast to prevent Levocetirizine and stomach acid interaction. There should not be any interaction between Levocetirizine and montelukast. The coating must not precipitate in the stomach's acidic environment as it affects the drug's bioavailability. Levocetirizine is more effective than any other antihistamine.

Dr. J K Shashi Rekha
M.B.B.S., DO, Hyderabad, Telangana

I would grade Levocetirizine as a very effective and safe treatment option for urticaria and other dermatological allergies and conditions. Compared to other antihistamines it causes less drowsiness and adjustments of the dose are also possible. I think Fexofenadine is not as effective in treating symptoms as Levocetirizine and Bilastine. Before pursuing any other options, second-line treatment is advised to begin with a 4-fold up dosing of second-generation H1-antihistamines. Levocetirizine is a well-tolerated and safe treatment option. The overall clinical experience has been good with Levocetirizine.

Dr. Chowda Reddy
M.B.B.S., MD (Pediatrics), Bengaluru, Karnataka

AR has a noticeable impact on the QoL and sleep of children. According to the EPAAC trial, children between the age of 12 and 24 months can safely receive levocetirizine treatment for 18 months. Levocetirizine, in my opinion, is a superior option to Fexofenadine for symptom management. According to me, a proper pharmaceutical regimen must include unionised Montelukast as a coating to avoid any potential stomach acid–Levocetirizine interactions. The coating of Montelukast and Levocetirizine should not interact in any way. The coating must not precipitate in the stomach's acidic environment as it reduces the drug's bioavailability. Levocetirizine is a good, safe and cost-effective drug that can be used in long-term treatment.

Dr. Neeraj Tripathi
M.B.B.S., DCH, New Delhi

Children with AR experience the worst sleep and QoL effects. The EPAAC trial found that giving Levocetirizine to children between the age group of 12 and 24 months is safe for 18-month treatment. Clinical indicators or developmental milestones were not adversely affected by Levocetirizine. I think levocetirizine shows better symptom control effectiveness than Fexofenadine. In my opinion, a proper medication regimen must contain unionized Montelukast as a coating to prevent any possible interactions between stomach acid and Levocetirizine. In my clinical practice, levocetirizine has given excellent results in the treatment of acute and perennial AR in children.

Dr. Kailash Chandra Khatri
M.D., Rajasthan

Levocetirizine gives excellent results in urticaria, eczema and other dermatological allergic conditions. It has good efficacy as compared to other antihistamines. All three drugs, i.e. Levocetirizine, Fexofenadine, and Bilastine had similar rates of 24-h long-lasting relief. As per the latest guidelines, 2nd generation H1-antihistamines are strongly recommended for all patients with urticaria, regular use of these is suggested for chronic urticaria. Levocetirizine can be given to children between the ages of 12 and 24 months for 18 months without any negative side effects. Levocetirizine had no detrimental effects on clinical signs or developmental milestones. I have treated many patients with Levocetirizine as it has a good safety profile over other antihistamines.

Dr. Manju Aishwarya
MD, DVL, Salem, Tamil Nadu

As per my experience, levocetirizine is highly efficacious in the treatment of urticaria and other dermatological allergies when compared to other antihistamines. Levocetirizine has the highest rate of 24-h-long-lasting relief, whereas, bilastine has moderate and Fexofenadine shows the worst relief. According to the most recent recommendations, 2nd generation H1-antihistamines are strongly advised for all individuals with urticaria, and frequent use is advised for chronic urticaria. Second-line treatment is advised to start with a 4-fold up-dosing of second-generation H1-antihistamines before considering any other options. Multiple antihistamines taken at once are discouraged by current recommendations. As per my experience, the safety profile of this drug is good as none of the patients reported any side effects apart from mild sedation. Tolerability was also good. Lastly, the overall clinical experience was very good when compared with other antihistamines.

Dr. I Shrikanth Rao
M.B.B.S., DCH, Puttur, Karnataka

Children who suffer from AR experience a moderately high reduction in sleep and QoL. According to the EPAAC research, Levocetirizine can be administered safely for 18 months of therapy in children who were in the age range of 18–24 months. The adverse effects of levocetirizine on developmental milestones and other clinical indicators were not significant. Levocetirizine, in my opinion, is a superior option to Fexofenadine for symptom management. According to me, a proper pharmaceutical regimen must include unionized Montelukast as a coating to avoid any potential stomach acid–Levocetirizine interactions. The coating of Montelukast and Levocetirizine should not interact in any way. Levocetirizine is a well-tolerated and safe drug with superior efficacy to other antihistamines in the management of acute and perennial AR conditions.

Dr. D Yuvaraj Kumar
M.B.B.S., DVD, Tamil Nadu

My overall experience with Levocetirizine has been that this is an effective, sustainable and faster-acting drug for the treatment of urticaria and other dermatological allergic issues. The rate of 24-h-long-lasting relief is the most after

using levocetirizine which declines with fexofenadine and bilastine. According to the most recent recommendations, 2nd generation H1-antihistamines are strongly advised for all patients with urticaria, and consistent use of these is advised for chronic urticaria. Before considering any other options, second-line treatment is advised to begin with a 4-fold up-dosing of second-generation H1-antihistamines. The use of many antihistamines at once is discouraged by current recommendations. In my opinion, it is the safest and most well-tolerated molecule which provides higher convenience over other antihistamines in terms of dosage adjustments.

Dr. K Vishnu Bhat
M.B.B.S., DVD, Kasaragod, Kerala

In patients with urticaria and other dermatological allergic conditions, levocetirizine has good treatment efficacy and is superior to other antihistamines. Fexofenadine, bilastine, and levocetirizine provide equal 24-h-long-lasting relief. As per the latest guidelines, 2nd generation H1-antihistamines are strongly recommended for all patients with urticaria, regular use of these is suggested for chronic urticaria. Overall, it is a safe drug and I have had an excellent clinical experience while treating patients with it.

Dr. T R Dayananda
M.B.B.S., FRUGHS, DHA, Mysore, Karnataka

In my opinion, Levocetirizine has become an over-the-counter medication in patients with urticaria and other dermatological allergic conditions, due to its good efficacy. It has an effective action mechanism and provides relief from itching; it also causes drowsiness. Levocetirizine has the highest for 24-h-long-lasting relief compared to Fexofenadine and Bilastine. As per the latest guidelines, 2nd generation H1-antihistamines as first-line treatment is strongly recommended for all patients with urticaria. Levocetirizine has good safety and tolerability profile, and patient compliance is also fairly good.

Dr. Shivakumar K Patil
M.B.B.S., MD, Belgaum, Karnataka

As per my experience, levocetirizine has excellent efficacy and is more effective than other histamines in the treatment of urticaria and dermatological allergic conditions. I would rank Levocetirizine the highest for providing 24-h-long-lasting relief, whereas fexofenadine and bilastine cannot be rated equally. According to the most recent recommendations, all patients with urticaria should be prescribed 2nd generation H1-antihistamines as the first-line treatment, and those with chronic urticaria should use them frequently. Before pursuing any other options, second-line treatment is advised to begin with a 4-fold up dosing of second-generation H1-antihistamines. Current recommendations discourage taking multiple antihistamines at once. In my opinion, Levocetirizine is a safe drug and I have had a satisfactory clinical experience with this drug.

Dr. Ajay Krishnan
M.B.B.S., M.D., Kottayam, Kerala

Levocetirizine has better efficacy in treating patients with urticaria and other dermatological allergic conditions when compared with other antihistamines. Fexofenadine and Bilastine provide equal 24-h-long-lasting relief but Levocetirizine is superior to both. Second-line treatment is advised to start with a 4-fold up-dosing of second-generation H1-antihistamines before considering any other options. This drug is well tolerated and I have good overall clinical experience with this drug.

Dr. T P Thankappan
M.B.B.S., MD, Thiruvalla, Kerala

Levocetirizine is effective in the treatment of urticaria and other dermatological allergies. It is also superior to other antihistamines. Fexofenadine and Bilastine provided equal 24-h-long-lasting relief but levocetirizine is slightly better than both. The most recent guidelines state that 2nd generation H1-antihistamines should be used by all urticaria patients, especially those with chronic urticaria. Second-line treatment is advised to start with a 4-fold up dosing of second-generation H1-antihistamines before other options are considered. The practice of taking several antihistamines at once is currently discouraged. Levocetirizine is a safe drug with an overall good clinical experience.

Dr. Ananth Reddy
MD, Pediatric, Vemulawada, Telangana

Children with AR experience moderate effects on their sleep and QoL. According to the EPAAC trial, children between the ages of 12 and 24 months can safely receive levocetirizine treatment for 18 months. There were no significant adverse effects of levocetirizine on developmental milestones and other clinical indicators. Levocetirizine, in my opinion, is superior to Fexofenadine in symptom management. According to me, a proper pharmaceutical regimen must include coated and unionized Montelukast to avoid any potential stomach acid–Levocetirizine interactions. The coating of Montelukast and Levocetirizine should not interact in any way. The coating must not precipitate in the acidic environment of the stomach as it will cut down the bioavailability of the drug. Levocetirizine is the best antihistamine for treating AR in patients aged below 12 years. Moreover, it relieves all symptoms such as sneezing, itchy nose, rhinorrhea, and itchy and watery eyes.

Dr. Venkateshwar Gande
MS, ENT, Jagtial, Telangana
Levocetirizine is a better treatment option with superior efficacy at 24 h. It is more efficacious than other antihistamines as it works for 24 h whereas other drugs work such as fexofenadine and Desloratadine work only for 12 and 6 h, respectively. Levocetirizine also provides better relief compared with Fexofenadine. It is a "B" category drug with high tolerability. It is a first-line treatment option for AR and its comorbidities. Levocetirizine starts acting within 1 h and its effects last for 24 h, it provides long-lasting relief and improves the QoL. Importantly, Levocetirizine does not have any drug-to-drug interactions.

Dr. Raghavendra Kumar
M.B.B.S. (Pediatrics), Mahabubnagar, Telangana
My experience has shown that in children, AR has a moderate effect on the QoL and sleep. Levocetirizine for 18 months is safe for children aged 12–24 months, according to the EPAAC trial. Levocetirizine had no negative effects on developmental milestones or other clinical markers. I believe that Levocetirizine is a better alternative for treating symptoms than Fexofenadine. In my opinion, a proper medication regimen must contain unionized montelukast as a coating to prevent any possible interactions between stomach acid and Levocetirizine. Levocetirizine and Montelukast should not interact in any way. To prevent affecting the bioavailability of the drug, Montelukast coating must not precipitate in the acidic environment of the stomach. Levocetirizine has a faster onset of action (1 h) and provides long-lasting relief (24 h).

Dr. Shrikant K Sutar
M.B.B.S., DCH, Kolhapur, Maharashtra
In my practice, I have observed that children with AR suffer greatly in terms of their QoL and sleep. The EPAAC trial found that for children between the age of 12 and 24 months, levocetirizine is safe for 18 months. Clinical indicators or developmental milestones were not adversely affected by levocetirizine. I think Fexofenadine is not as effective as Levocetirizine in treating symptoms. In my opinion, to prevent any potential interactions between stomach acid and levocetirizine, unionized Montelukast should be used as a coating in an appropriate drug regimen. Due to the opposite nature of drugs, levocetirizine, and montelukast should not interact in any way. The coating must not precipitate in the acidic environment of the stomach because it will reduce the drug's bioavailability. Levocetirizine provides good results and improves the QoL in children with acute and perennial AR.

Dr. Sanjay Fernandes
MD, DNB, DPV, Mumbai, Maharashtra
Levocetirizine is effective in the treatment of urticaria and other dermatological allergic conditions. It also has a quicker onset of action compared to other antihistamines. Fexofenadine and Bilastine provide equal 24-h long-lasting relief whereas levocetirizine is slightly better than both. Second-line treatment is advised to start with a 4-fold up-dosing of second-generation H1-antihistamines before considering any other options. Finally, it is a safe and well-tolerated drug and I have good clinical experience with it.

Dr. Karan Shah
MD, DVD, Kalyan, Maharashtra
In my advice, Levocetirizine is a good and effective treatment for urticaria and other dermatological allergic conditions. It is better than Fexofenadine and desloratadine. Levocetirizine performs better than both Fexofenadine and Bilastine in terms of 24-h-long-lasting relief. According to the most recent recommendations, all patients with urticaria should use 2nd generation H1-antihistamines, and those with chronic urticaria should use them routinely. Before weighing any other choices, it is indicated that second-line treatment begins with a 4-fold up-dosing of second-generation H1-antihistamines. Current recommendations discourage taking multiple antihistamines at once. Levocetirizine has a good safety and tolerability profile over other antihistamines. The overall clinical experience was very good with levocetirizine.

Dr. Sandeep U Buddhadeo
M. Derm, DVD, Bhiwandi, Maharashtra
Levocetirizine is a good and effective antihistamine that works well with urticaria and the majority of itchy skin disorders. I believe it has little sedative effects which help in relieving pruritis faster. In terms of 24-h-long-lasting alleviation, Levocetirizine performs marginally better than Fexofenadine and Bilastine. The most recent guidelines state that 2nd generation H1-antihistamines should be used by all urticaria patients, especially those with chronic urticaria. It is advised that second-line treatment starts with a 4-fold up dosing of second-generation H1-antihistamines before assessing any other options. The practice of taking several antihistamines at once is currently prohibited. It is a safe drug with mild sedation for a day or two in some patients. The overall clinical experience has been good.

Dr. Kompal Agarwal
M.B.B.S., MD, Rewa, Madhya Pradesh
As per my experience, Levocetirizine has an average treatment efficacy for treating urticaria and other dermatological allergies. It has better efficacy than Fexofenadine; less efficacy than Bilastine and Hydroxyzine. According to me, levocetirizine is more effective in providing 24-h-long-lasting relief when compared to fexofenadine. According to the most recent recommendations, all urticaria patients, especially those with chronic urticaria, should take 2nd generation H1-antihistamines. Before

considering any other options, it is indicated that second-line treatment begins with a 4-fold up dosing of second-generation H1-antihistamines. The current guidelines strongly suggest against the use of multiple antihistamines at once. Levocetirizine has a safe and tolerable profile and gives good clinical experience.

Dr. Sudhanshu Dixit
M.B.B.S., MS (ENT), Rewa, Madhya Pradesh

In my opinion, Levocetirizine is the most effective and safe option for AR treatment. It is more effective than all other antihistamines. Patients show more compliance with the dosing of Levocetirizine. I think Fexofenadine is less effective in treating symptoms than Levocetirizine. It is also safe to be used in children. It provides 24 h of efficacy with a single dose. It has a good impact on QoL. Levocetirizine is a good and safe molecule for the management of AR.

Dr. Rajeev Kaura
MD, DCH, Durg, Chhattisgarh

I have observed that AR in children has a moderate effect on the QoL and sleep. According to the EPAAC trial, children between the age group of 12 and 24 months can safely receive Levocetirizine treatment for 18 months. The adverse effects of levocetirizine on developmental milestones and other clinical indicators were nonexistent. Levocetirizine is a superior option to Fexofenadine for symptom management. According to me, a proper pharmaceutical regimen must include unionized Montelukast as a coating to prevent any potential stomach acid–Levocetirizine interactions. The coating of Montelukast and Levocetirizine should not interact in any way. The coating must not precipitate in the acidic environment of the stomach as it will downgrade the bioavailability of the drug. It is a drug of choice in the treatment of acute and perennial AR among children.

Dr. Aparna Gaikwad
M.B.B.S., DNB, MNAMS (Dermatology), Nashik, Maharashtra

Levocetirizine has very good efficacy in the management of urticaria and other dermatological allergic conditions. This drug is more efficacious than other antihistamines with very less sedation. Levocetirizine is more effective in providing 24-h-long-lasting relief when compared to other molecules such as Bilastine and Fexofenadine. According to the most recent recommendations, all patients with urticaria should use 2nd generation H1-antihistamines, and those with chronic urticaria should use them frequently. Before weighing any other choices, it is indicated that second-line treatment begins with a 4-fold up dosing of second-generation H1-antihistamines. Current recommendations restrict taking multiple antihistamines at once. Levocetirizine has a good safety profile and is well-tolerable. It provides excellent clinical experience.

Dr. Rasika Shivarkar
M.B.B.S., DDV, Pune, Maharashtra

Levocetirizine has good efficacy in the treatment of urticaria and other dermatological allergies. It is also superior to other antihistamines. I think Bilastine is less effective in providing 24-h long-lasting relief as compared to Fexofenadine and Levocetirizine. As per my understanding, the latest guidelines suggest that 2nd generation H1-antihistamines are strongly recommended for all patients with urticaria. Essentially, Levocetirizine has a good safety and tolerability profile with good overall clinical experience.

Dr. Pradeep Tandon
M.B.B.S., DCH, MRSH, New Delhi

Children with AR experience the worst effects on their sleep and QoL. According to the EPAAC trial, children between the ages of 12 and 24 months can safely receive levocetirizine treatment for 18 months. The adverse effects of levocetirizine on developmental milestones and other clinical indicators were non-significant. Levocetirizine, in my opinion, is a superior option to Fexofenadine for symptom management. According to me, a proper pharmaceutical regimen must include coated and unionized Montelukast to prevent any potential stomach acid–Levocetirizine interactions. The coating of Montelukast and Levocetirizine should not interact in any way. The coating must not precipitate in the stomach's acidic environment because this will decrease the drug's bioavailability. Levocetirizine, in my opinion, shows a good and satisfactory response in the treatment of both acute and perennial AR in children.

Dr. Deepak Gandhi
DNB (pediatrics), Mumbai, Maharashtra

Children with AR experience the worst sleep and QoL effects. The EPAAC trial found that for children aged 12–24 months, levocetirizine is safe for 18 months. Clinical indicators or developmental milestones were not adversely affected by levocetirizine. I think Fexofenadine is inferior in treating symptoms as compared to Levocetirizine. I believe that unionized Montelukast should be used as a coating as part of a proper medication regimen to prevent any possible interactions between stomach acid and levocetirizine. There should not be any interaction between Levocetirizine and Montelukast. Since it will reduce the drug's bioavailability, the coating must not precipitate in the acidic environment of the stomach. Levocetirizine offers faster and more consistent relief from allergic symptoms. It is also safe for long-term treatment.

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