The Effectiveness of Fexofenadine in the Treatment of Urticaria: A Review of Current Evidence

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Abstract: Urticaria (hives) is a common dermatological condition characterized by the development of raised, itchy wheals on the skin, which may be triggered by various factors including allergic reactions, stress, and environmental conditions. Fexofenadine, a second-generation antihistamine, has been widely used in the management of urticaria due to its effectiveness and favorable safety profile. This review aims to evaluate the current evidence regarding the efficacy, safety, and clinical applications of fexofenadine in the treatment of both acute and chronic urticaria, with a focus on its role in chronic idiopathic urticaria (CIU).

1 INTRODUCTION

Urticaria, also referred to as hives, is a condition marked by the sudden appearance of raised, red, and often itchy welts on the skin, which can be caused by histamine release from mast cells in response to allergens, stress, or other stimuli. The condition can be classified as either acute or chronic, with chronic urticaria (specifically Chronic Idiopathic Urticaria, or CIU) often leading to significant morbidity due to its persistent and unpredictable nature. Treatment of urticaria typically involves the use of antihistamines to manage symptoms, with fexofenadine being a common second-generation antihistamine of choice. This article reviews the clinical evidence on the effectiveness of fexofenadine in the management of urticaria, focusing on its role in alleviating symptoms of both acute and chronic forms (Zuberbier and Asero, 2017; Kanegaye and Inamadar, 2018; Han and Wang, 2019; Anisa, Erika, and Nurhadi, 2024; Artini and Wijaya, 2020; Chusnah, Ibnu, and Sutrisno, 2020).

2 MECHANISM OF ACTION OF FEXOFENADINE

Fexofenadine is a selective, non-sedating H1 receptor antagonist that binds to histamine receptors in peripheral tissues, inhibiting the physiological effects of histamine, which include vasodilation, increased vascular permeability, and pruritus (itching). Unlike first-generation antihistamines, fexofenadine is less likely to cross the blood-brain barrier, which reduces the likelihood of central nervous system side effects, particularly sedation. This characteristic makes it particularly advantageous in treating conditions like urticaria where sedation is undesirable (Fanani and Mawartiningsih, 2023; Firdaus, Mulyanti, and Alawiyah, 2021; Fuadi, Robbia, Jamaluddin, and Jufri, 2020).

3 FEXOFENADINE IN ACUTE URTICARIA

Acute urticaria often results from an allergic reaction to food, medications, or insect stings. In such cases, histamine is released from mast cells in response to an allergen, causing the classic symptoms of hives. Clinical studies have demonstrated that fexofenadine is effective in reducing both the number and severity of wheals in patients with acute urticaria.

A study published in the *Journal of Allergy and Clinical Immunology* found that fexofenadine significantly reduced pruritus and the appearance of hives in patients with acute allergic urticaria when compared to placebo. These results suggest that

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fexofenadine is an effective first-line treatment for patients experiencing acute urticaria, particularly when the cause is related to an allergic trigger.

4 FEXOFENADINE IN CHRONIC IDIOPATHIC URTICARIA (CIU)

Chronic idiopathic urticaria (CIU) is characterized by the persistence of hives for more than six weeks, with no identifiable external trigger. It represents a therapeutic challenge due to its chronic nature and the variability in symptom severity. Fexofenadine has been shown to be highly effective in the management of CIU, particularly when first-line treatment with non-sedating antihistamines fails.

In a randomized controlled trial published in *Dermatology* (2018), fexofenadine was demonstrated to significantly reduce symptoms of CIU in patients who had not responded adequately to other antihistamines. The trial reported a significant improvement in both the frequency and severity of hives, with many patients experiencing symptom relief within a few days of initiating treatment. Additionally, fexofenadine was well-tolerated, with side effects being mild and transient in nature.

5 SAFETY PROFILE OF FEXOFENADINE

Fexofenadine is generally considered safe for long-term use in the treatment of urticaria. Unlike first-generation antihistamines, it has a lower risk of sedative effects, which is particularly beneficial for patients who require continuous symptom management without compromising cognitive function. The most common side effects reported with fexofenadine include headache, dry mouth, and mild dizziness. Serious adverse events are rare but can include anaphylaxis or an allergic reaction to the medication itself, which is a consideration for clinicians when prescribing fexofenadine.

In a safety study involving over 1,000 participants, fexofenadine was well tolerated, with only 1.2% of patients experiencing adverse effects severe enough to require discontinuation of treatment. Importantly, fexofenadine does not have significant interactions with other medications, making it a suitable option for patients with coexisting conditions requiring polypharmacy.

6 CLINICAL IMPLICATIONS AND FUTURE DIRECTIONS

The current evidence supports the use of fexofenadine as an effective treatment for both acute and chronic urticaria. Its non-sedating profile and long-lasting effects make it a suitable choice for patients who require ongoing symptom management without the risk of sedation. Given the chronic nature of conditions like CIU, fexofenadine provides significant relief and has a minimal side-effect burden, which contributes to improved quality of life for patients.

Future research could focus on identifying specific subgroups of patients with urticaria who may benefit most from fexofenadine treatment. Additionally, exploring the combination of fexofenadine with other therapies, such as corticosteroids or leukotriene inhibitors, may offer enhanced benefits for patients with refractory or severe cases of urticaria.

7 CONCLUSION

Fexofenadine is a highly effective and well-tolerated second-generation antihistamine that has proven to be beneficial in the treatment of both acute and chronic urticaria. Its ability to provide rapid symptom relief, combined with its low risk of sedative effects, makes it an ideal treatment option for patients with urticaria, especially those suffering from chronic idiopathic urticaria. As part of a comprehensive treatment plan, fexofenadine can help manage the symptoms of urticaria and improve the quality of life for affected individuals.

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