

Levocetirizine Induced Fixed Drug Eruption: A Rare Case Report

Gaurav Kataria¹,
Aditi Saxena²,
Saurabh Sharma³

¹Senior Resident, Department of ENT, Sri Guru Ram Das Institute of Medical Sciences and Research, Amritsar, Punjab, India, ²Post-graduate, Department of Pathology, Government Medical College, Amritsar, Punjab, India, ³Professor, Department of Dermatology, Sri Guru Ram Das Institute of Medical Sciences and Research, Amritsar, Punjab, India

Corresponding Author: Dr. Gaurav Kataria, 8-G-10, Jawahar Nagar, Sri Ganganagar, Rajasthan, India. Phone: +91-9463971250. E-mail: dr.gauravkats@gmail.com

Abstract

Antihistamines are routinely used for allergic rhinitis, urticaria, eczema and some other allergic disorders. Levocetirizine is piperazine derivative antihistamine with few cutaneous side effects. Fixed drug eruption (FDE) to piperazine derivatives is very rare. FDE to levocetirizine is very rare. Clinicians should have a high index of suspicion and should be aware of the possibility of reactions to antihistaminic drugs, which themselves are very frequently prescribed to manage drug reactions. Hence, before prescribing antihistaminics, it is very important for every clinician to take a proper history, clinical examination and history of any drug reactions. Here, we report a case of FDE to levocetirizine.

Keywords: Allergic rhinitis, Antihistamines, Cetirizine, Fixed drug eruption, Levocetirizine, Maculopapular

INTRODUCTION

Antihistamines are routinely used for allergic rhinitis, urticaria, eczema and some other allergic disorders. The newer antihistamines have a more specific action on histamine receptors and have very few side-effects and are very useful for both otorhinolaryngologists and dermatologists.¹ Cetirizine and levocetirizine are piperazine derivative antihistamines with few cutaneous side effects. Fixed drug eruption (FDE) to these piperazine derivatives is very rare.² Most adverse effects of antihistamines are caused by their own binding activities to H₁-receptors, muscarinic receptors, serotonin receptors and cardiac ion currents. These mechanisms may cause drowsiness, impairment of cognitive function, dry eyes, dry mouth and urinary retention.³ Hypersensitive cutaneous lesions due to levocetirizine are very rare and very few cases of FDE due to levocetirizine are documented.^{2,4-6} Here, we report a case of FDE due to levocetirizine that was given to the patient for allergic rhinitis.

CASE REPORT

A 41-year-old female presented to Department of ENT with chief complaints of sneezing, rhinorrhea, watering from eyes and nasal obstruction. On nasal examination, septum was centrally placed, and inferior turbinate hypertrophy

was seen. Patient was diagnosed as a case of allergic rhinitis. Patient also gave a history of similar attacks of rhinitis in past 2-3 years, and on taking levocetirizine patient got some relief. Patient was prescribed levocetirizine 5 mg twice a day along with fluticasone nasal spray. After 2 days patient arrived at ENT outdoor with multiple, itchy, erythematous, edematous maculopapular lesions on the back (Figure 1) and left arm and right forearm (Figure 2). Patient gave the history of appearance of these lesions 4-5 h after taking the medication. Patient also gave the history of similar lesions 3-4 times in the past, but no history of any specific medicine at that time was correlated as she took a lot of medicines for every complaint from a local doctor. Patient was referred to a dermatologist for further management. On examination, it was found that pre-existing patches are also present at these sites. A provisional diagnosis of FDE due to levocetirizine was made, and patient was advised to avoid levocetirizine and cetirizine. On the follow-up after healing of lesions, provocative test was done, and lesions showed the reactivation with itching and erythema. Patient was advised to avoid levocetirizine and cetirizine in future.

DISCUSSION

FDE is a common form of cutaneous adverse drug reactions whose exact etiology is unknown. They are supposed to be caused by epidermal CD8 T cells, which are

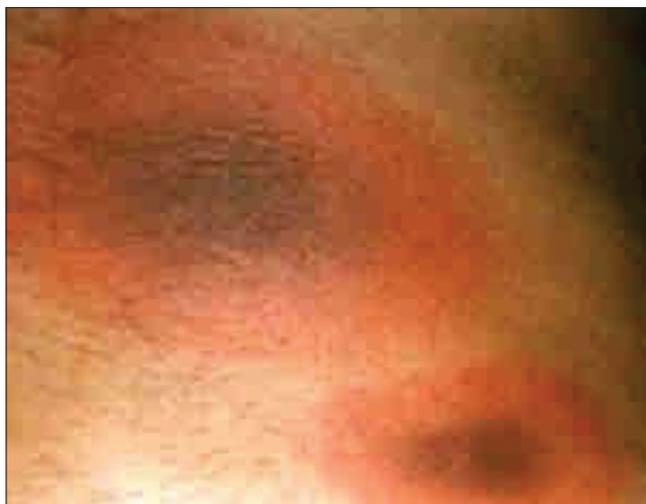


Figure 1: Erythematous, edematous and itchy lesion on the back of the patient

retained in the lesions forming an immunologic memory, which gets activated on re-challenge.⁷ FDE can occur with several drugs, common ones are sulfonamides, non-steroidal anti-inflammatory drugs, antimicrobials and oral contraceptives.⁸ However, FDE due to antihistaminics are very rare. FDE reported to H₁-antihistaminics are cyclizine, diphenhydramine, phenothiazines, hydroxyzine,⁶ loratidine⁹ and in few cases with cetirizine and levocetirizine.^{2,4,5,10} Cetirizine, levocetirizine and hydroxyzine have the piperazine structure with same pharmacological actions. When administered orally hydroxyzine is converted into cetirizine. Levocetirizine is the R-enantiomer of cetirizine.⁵

Most common adverse effects due to antihistaminics are loss of appetite, nausea, vomiting and epigastric distress. Drug allergies like drug fever and photosensitisation are seen mainly with topical application. Hematological side effects include leucopenia; while agranulocytosis and hemolytic anemia are rarer.¹

CONCLUSION

FDE to levocetirizine is very rare but documented in few cases. It is a rare side-effect of levocetirizine. It was concluded that any antihistamine can cause FDE. So, before prescribing antihistaminics, it is very important for every clinician to take a proper history, clinical examination and history of any drug reactions. Clinicians should have a high index of suspicion and should be aware of the possibility of reactions to antihistamine drugs, which themselves are very frequently prescribed to manage drug reactions.



Figure 2: Erythematous and itchy lesions over left arm and right forearm of the patient

REFERENCES

1. Greaves MW. Antihistamines. In: Wolverton SE, editor. *Comprehensive Dermatologic Drug Therapy*. 2nd Philadelphia: Saunders, Elsevier; 2007. p. 391-400.
2. Cravo M, Gonçalo M, Figueiredo A. Fixed drug eruption to cetirizine with positive lesional patch tests to the three piperazine derivatives. *Int J Dermatol* 2007;46:760-2.
3. Assouère MN, Mazereeuw-Hautier J, Bonafé JL. Cutaneous drug eruption with two antihistaminic drugs of a same chemical family: Cetirizine and hydroxyzine. *Ann Dermatol Venereol* 2002;129:1295-8.
4. Gupta SD, Prabhakar SM, Sacchidanand S. Fixed drug eruption due to levocetirizine. *Indian J Dermatol Venereol Leprol* 2005;71:361-2.
5. Mahajan VK, Sharma NL, Sharma VC. Fixed drug eruption: A novel side-effect of levocetirizine. *Int J Dermatol* 2005;44:796-8.
6. Cohen HA, Barzilai A, Matalon A, Harel L, Gross S. Fixed drug eruption of the penis due to hydroxyzine hydrochloride. *Ann Pharmacother* 1997;31:327-9.
7. Kauppinen K, Stubb S. Fixed eruptions: Causative drugs and challenge tests. *Br J Dermatol* 1985;112:575-8.
8. Pudukadan D, Thappa DM. Adverse cutaneous drug reactions: Clinical pattern and causative agents in a tertiary care center in South India. *Indian J Dermatol Venereol Leprol* 2004;70:20-4.
9. Pionetti CH, Kien MC, Alonso A. Fixed drug eruption due to loratadine. *Allergol Immunopathol (Madr)* 2003;31:291-3.
10. Kränke B, Kern T. Multilocalized fixed drug eruption to the antihistamine cetirizine. *J Allergy Clin Immunol* 2000;106:988.

How to cite this article: Kataria G, Saxena A, Sharma S. Levocetirizine Induced Fixed Drug Eruption: A Rare Case Report. *Int J Sci Stud* 2014;2(7):228-229.

Source of Support: Nil, **Conflict of Interest:** None declared.