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Case Report

Fixed drug eruption to levocetirizine

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ABSTRACT

Fixed Drug Eruption (FDE) is the development of one or more annular or oval erythematous patches as a result of exposure to a drug. These reactions normally resolve with hyperpigmentation and may recur at the same site with re-exposure to the drug. Antihistaminic and steroid group of drugs are used for the initial management of FDE. But here we report a case of FDE caused by levocetirizine, an antihistaminic in a 45 year old male patient who was treated for polymorphous light eruptions (PLE).

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1. Introduction

Hypersensitive cutaneous lesions due to levocetirizine are very rare, rather it is used for such indications.¹ Only two cases of fixed drug eruptions (FDE) due to levocetirizine have been reported.^{2,3} We report a case of fixed drug eruption occurring due to levocetirizine.

2. Report of case

A 45 year old male presented with history of eruptions over both the forearms to the dermatologist. On examination, multiple skin-colored papules and plaques over sun-exposed areas excluding face were present and it was diagnosed as

polymorphous light eruptions (PLE). He was prescribed tablet levocetirizine 5 mg orally once daily and topical steroids for two weeks. The patient had consumed levocetirizine for two days following which he developed new skin lesions over the anterior aspect of both wrist joints which worsened on third day. He had consulted a local doctor, who stopped levocetirizine and treated him symptomatically. The lesions subsided over a period of 10–15 days. After a period of one month, the patient presented again with PLE. On the day of second visit he was again prescribed levocetirizine 5 mg orally once daily. Patient returned the next day with skin lesions at same sites on wrist joint. On examination, the lesions were annular, with central bluish black discoloration and erythematous margins (Fig. 1). The patient gave history of similar lesions after consuming levocetirizine after his first visit to the dermatologist a month ago.

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Fig. 1 – Skin lesions after levocetirizine ingestion.

These lesions were diagnosed as fixed drug eruptions (FDE) to levocetirizine. Therapeutic rechallenge as observed by the dermatologist and patient giving history of similar lesions after consuming levocetirizine one month before were considered as the methods to confirm FDE. Oral provocation test or patch test is used to confirm FDE; however, there are risks involved in these approaches and the patient was unwilling to undergo the above procedures. The causality assessment was done according to Naranjo's algorithm and the score was 6, so the reaction was probably due to levocetirizine.

3. Discussion

FDE can occur with several drugs, common ones are sulphonamides, non-steroidal anti-inflammatory drugs, antimicrobials, oral contraceptives, phenolphthalein.⁴ But FDEs due to antihistaminics are very rare. FDE reported to H1-antihistaminics are cyclizine lactate, diphenhydramine hydrochloride, phenothiazines, hydroxyzine,³ and loratadine.^{5,6} FDE to cetirizine has been reported in three patients,^{7–9} cetirizine and hydroxyzine,¹ and cetirizine and levocetirizine one each.³ These three drugs have the piperazine structure with same pharmacological actions. When administered orally hydroxyzine is converted into cetirizine. Levocetirizine is the R- enantiomer of cetirizine.³

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

The pathogenesis of FDE is not completely understood, but epidermal CD8 T cells retained in lesional skin are believed to contribute to immunologic memory which is being reactivated on re-challenge.^{10,11} FDE is confirmed by oral provocation test, patch test, prick test and intradermal skin test. But provocation tests are not done because of risks involved in this approach, namely anaphylactic reactions or intense

lesional reactivation with a significant increase in the number of lesions.⁵ In our patient there was a dechallenge followed by therapeutic rechallenge which is suggestive of FDE.

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Conflict of interest

All authors have none to declare.

Key Points

- Antihistaminics are used for the initial management of fixed drug eruptions.
- A case developing fixed drug eruptions with levocetirizine, an antihistaminic agent, has been reported.

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