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Cetirizine Induced Hyper Pigmentation: A Case Report

Vageeshwari Devuni

Pharm.D, CMR College of Pharmacy, Kandlakoya, medchal road, Hyderabad-501401, India.

Abstract: ***The H1-antihistamine cetirizine, a second generation piperazine derivative widely Used in daily dermatology practice, is rarely the cause of cutaneous drug reaction Cetirizine, being an anti-allergic medication is rarely suspected of causing Hypersensitivity reactions and FDE. FDE is characterized by a sudden onset of annular, edematous, dusky-red macules, or plaques on the skin and/or mucous membranes, along with burning sensation or itching. Characteristic residual hyperpigmentation will be seen after lesions subside. Reactions to one preparation are likely to show similar reactions with other members of the same class.***

Keywords: *Cetirizine, drug reaction, itching, hyperpigmentation, Hypersensitivity, lesions.*

Introduction:

Cetirizine, a piperazine-derivative second generation antihistaminic, is used for a wide variety of disorders such as Urticaria, eczema, and allergies. Adverse reactions due to this drug are usually rare, especially fixed drug eruption [FDE], a delayed cell-mediated Hypersensitivity reaction, is scarce [1]. Cetirizine, a second generation Non-Reactive antihistaminic, has minimal anticholinergic effect with few cutaneous side effects. It has negligible penetration into the brain with relatively higher incidence of drowsiness compared to other second generation antihistamines[2]. This FDE usually appears as one or more annular, pruritic, well-circumscribed, oval, itchy, erythematous plaques, and sometimes vesicular or bullous. It occurs precisely at the same site and resolves spontaneously by stopping the causative drug with residual hyperpigmentation. The lesions usually occur on the hip, lower back, proximal extremities, lips, face and genitals[3]. FDE has four stages including resting, drug intake, acute evolving, and resolution phases[4]. Histopathologically, FDE is characterized as marked, basal cell, hydronic degeneration with pigmentary incontinence. Epidermis and dermis show scattered keratinocyte necrosis with eosinophilic cytoplasm and pyknotic nucleus, lymphocytes, histiocytosis, and neutrophils[5].

Case:

Here we see a case of cetirizine induced hyperpigmentation. A 39 years old male patient came with chief complaints of reddish hyperpigmentation rash all over the trunk and oral erosion since 7days, with history of itching since 3 days, cold and fever from 3days for which patient took cetirizine. On general examination patient was found to be conscious and coherent, PR-86/min, BP-120/80mmhg, Heart/Lungs-NAD, on cutaneous examination hyperpigmentation was noticed on chest, hands and trunk. Lips erosion was present. Based on Subjective and Objective data it is confirmed as Hyperpigmentation due to Cetirizine.

Discussion:

Moreover, Levocetirizine, a piperazine-derivative induced FDE reactions, was also reported by Kim et al[7]. In this case the patient had oral erosion. Very few cases had been reported with cetirizine induced FDE by Orange and Kern, and Inamadar et al., Which was confirmed by patch test, oral challenge test etc[8][9]. Before taking same medication patient must say about the causative drug reactions to the consultant physician. Repeated or continued exposure to the suspected drug might cause the development of new lesions along with enhancement of the older hyperpigmentation lesions[10]. Levocetirizine is the R-isomer of cetirizine dihydrocodeine and has two times more affinity for the histamines H1-receptor than Cetirizine[11]. FDEs usually appear as erythematous, pruritic macules, which may occur due to systemic exposure to a causative drug. These lesions typically resolve spontaneously after discontinuation of causative drug but reoccur on re-administration of the causative agent. FDEs are CD8+ T cells mediated classical delayed type Hypersensitivity reactions[12]. The H1-antihistaminics

implicated in FDE are diphenhydramine, cyclizine, phenothiazines, Lorraine, hydroxyzine, and in few cases with cetirizine and Levocetirizine[13].

Conclusion:

The patient was treated with conservative management including topical emollients, corticosteroids and oral histamines and discontinuing the offending drug. The patient was advised to avoid Cetirizine and structurally similar compounds such as Levocetirizine and also hydroxyzine due to the possibility of cross-reactions among them. Further, it is recommended that a patient with history of Hypersensitivity to a certain antihistamine should be expected to cross react with other antihistamines of the same chemical class. Antihistamines with least structural resemblance to the offending agent should be used in such a patient.

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