

Fixed drug eruption due to loratadine

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ABSTRACT

We present the clinical case of a 8-years-old boy suffering a fixed drug reaction attributed to the oral intake of loratadine. He is an atopic child with perennial rhinitis and asthma and marked hypersensitivity to the house-dust mite *Dermatophagoides pteronyssinus* who is receiving inhaled corticosteroids and β 2-agonists ad libitum plus specific immunotherapy with the mite. When the boy received loratadine to alleviate his nasal symptoms he suffered a well-defined erythematous and oedematous plaque in his right elbow that disappeared without treatment in one week.

Several methods such as the patch-tests, the UBCT or ultra-brief-challenge test (our version of the peroral provocation one) and the skin biopsy were applied.

The UBCT and the skin histopathology were the most important techniques to assure the suspected diagnosis.

Other antihistamines such as ebastine and cetirizine as well as some excipients used as controls were all negative. Conventional prick or intradermal skin tests with the drug were not performed because we considered that they were useless in this case.

Key words: Loratadine. Fixed eruption. Drug allergy. Lymphocytic infiltrate.

RESUMEN

Se exponen los hallazgos en un niño atópico de 8 años de edad con rinitis perenne y asma bronquial que desarrolló una erupción fija en la piel del codo derecho ante la ingestión reiterada del antihistamínico loratadina.

Además de una minuciosa historia clínica se le practicaron los parches cutáneos de lectura a las 48 hs con loratadina y sus excipientes, la prueba desencadenante ultra-abreviada por la vía oral con loratadina, ebastina y cetirizina y sus respectivos excipientes en 4 sesiones separadas al igual que la biopsia cutánea de la lesión del codo derecho. Mientras que los parches cutáneos clásicos fueron totalmente negativos, la prueba desencadenante oral con loratadina fue positiva pues a partir de las 8 h comenzó a formarse nuevamente la erupción fija en la piel del codo que duró una semana en desaparecer sin tratamiento sintomático.

La histopatología mostró la degeneración hidrópica de las células basales, un notable infiltrado linfomonocitario perivascular y diseminado en el conectivo así como una total ausencia de células metacromáticas cuando se tiñó con azul de toluidina al 1 %. No se realizaron las pruebas cutáneas convencionales (*prick* o intradermorreacciones) con el fármaco pues se consideró que ante el desconocimiento de la inmunogenicidad de los metabolitos de la loratadina sus resultados e interpretación podrían ser dudosos.

Se presume que este podría ser el segundo aporte sobre la génesis de la erupción fija por loratadina cuyo mecanismo íntimo necesita mayor investigación.

Palabras clave: Loratadina. Erupción fija. Alergia medicamentosa. Infiltrado linfocitario.

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Figure 1.—Macroscopic appearance of the fixed eruption in the skin of the right elbow.

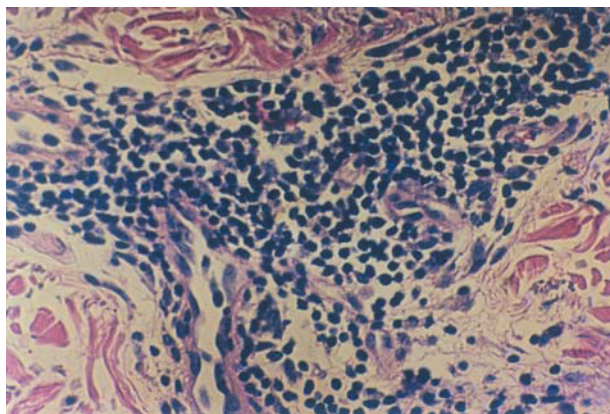


Figure 2.—Histopathologic appearance of the skin of the elbow showing a large lymphomonocytic infiltrate in the superficial dermis (24 h after loratidin intake) (HE, X100).

INTRODUCTION

Fixed drug eruptions are characterized by solitary or multiple red macules or plaques that are often tender and occur in the same place each time that a particular medication is administered. The erythematous and oedematous well-defined plaques may be one to many centimeters in size. Recurrence in the same location is the key to diagnosis. The face, the gland penis, the neck and the sacral region are commonly affected but any location is possible. Often, but not always, leaves an area of hyperpigmentation in the affected place during spontaneous resolution. Very rarely blisters centrally.

The drugs that are common causes of fixed drug eruptions are: ampicillin, aspirin, barbiturates, metronidazole, nonsteroidal antiinflammatory drugs, oral contraceptives, phenolphthalein, sulfonamides and tetracyclines. Although antihistamines like cetirizine, dimenhydrinate, hydroxyzine and astemizole exceptionally provoke cutaneous side effects there is only one previous report about loratadine inducing the same fixed drug reaction as we are presenting now¹⁻⁵.

CASE REPORT

A 8-years-old boy suffering perennial allergic rhinitis and bronchial asthma with familiar atopic background and a serum IgE level ≥ 1000 KU/L was receiving pharmacological support with β_2 -agonists and inhaled corticosteroids as well as specific immunotherapy with the house-dust mite *Dermatophagoides pteronyssinus* in increasing doses during the last year. In occasion of a exacerbation of his atopic condition the boy received one tablet of loratadine 10 mg to relief his nasal symptoms.

When he came the next week for the shot-session his mother referred that in the right elbow the boy suffered a well-defined erythematous and oedematous plaque that was attributed to a exogenous noxa (trauma or pressure). As this skin lesion vanished without treatment the episode remained undiagnosed. One month later the boy received again a single dose of loratadine 10 mg and 48 hs later he repeated the same pruriginous patch of size 5 × 5 cms at the same location as before (fig. 1).

With the suspicion of a fixed drug eruption these methods were applied to clarify the condition: 1) patch-tests with loratadine, lactose and magnesium stearate 10% each; 2) the UBCT (Ultra-Brief-Challenge-Test) which is our modification of the classical peroral provocation test published elsewhere with loratadine (10 mg), cetirizine (10 mg), ebastine (10 mg) and excipients suitably distributed in 4 sessions and 3) a skin biopsy from the plaque performed as routinely histopathological studies stained with hematoxylin-eosin⁶.

Results with these methods revealed that patch-tests were consistently negative with all the antihistamines after 48 and 96 hs; the UBCT demonstrated that only the ingestion of loratadine was able to reproduce in the right elbow the erythematous and oedematous skin lesion after 8 hs. On the other hand, the skin biopsy showed a hydropic degeneration of the basal cell layer, a important perivascular and disseminated lymphomonocytic infiltrates without the presence of metachromatic cells when it was stained with toluidin blue 1%. As we know very little about the immunoreactivity of the metabolites of loratadine and that these low-molecular-weight molecules may not be the allergen itself we decided not to perform the conventional prick or intradermal skin tests with the drug.

CONCLUSIONS

We presume that this is the second report about the relation between the oral ingestion of loratadine and the production of a typical fixed drug eruption.

Our findings reinforce the idea that this skin pathology has no limits in its appearance independently of age, gender and drug.

Also, the methods to assure the final diagnosis sustained that this fixed eruption were closely related to a skillful clinical record to detect the suspected drug and to the peroral provocation test to reproduce the lesion.

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