Fixed drug eruption due to etoricoxibe – A case report

To the Editor,

Fixed drug eruption (FDE) is a commonly reported adverse drug reaction, characterized by single or multiple round oedematous erythemato-violaceous plaques with well defined borders and often central bullous detachments.[1,2] Lesions usually develop 48 h after drug intake and recur at the same sites upon reexposure to the offending drug.[3,4] Spontaneous resolution with residual hyperpigmented post-inflammatory patches is also characteristic.[3,4]

Non-steroidal anti inflammatory drugs (NSAIDs), in particular nimesulide and piroxicam, are the most frequent culprit agents, followed by antibiotics and anticonvulsants.[1,3,4]

Etoricoxib is a recently developed selective cyclo-oxygenase (COX) isoenzyme 2 inhibitor which has rarely been described as a cause of FDE.[5–8]

We report a case of fixed drug eruption due to etoricoxib. A 38-year-old man with allergic rhinitis and no history of drug allergy was referred to our outpatient clinic due to multiple sharp round erythematous pruriginous patches of diameter 1–4 cm on the upper and lower limbs, trunk and genitals. The patient mentioned several exacerbations along the previous year, approximately once a month. In most episodes no triggering factor could be determined but in two occasions he noticed that lesions relapsed 15–30 min after intake of etoricoxib, frequently taken by the patient for musculoskeletal pain. There was spontaneous improvement after 3–4 days after stopping NSAIDs intake, but multiple residual hyperpigmented lesions persisted for several months. The patient mentioned regular consumption of paracetamol and ibuprofen for headaches or musculoskeletal pain, apparently with no adverse reaction.

The patient underwent patch testing with paracetamol, ibuprofen, nimesulide and etoricoxib (30% in petrolatum), applied to the hyperpigmented lesion in the right forearm. Patch tests were performed several months after the resolution of the last adverse reaction. An erythematous papular reaction was observed with etoricoxib on the lesional skin 48 h and 96 h later (Fig. 1). A pruriginous flare in one single residual lesion of the trunk was also reported. The patch tests with the other three drugs were negative.

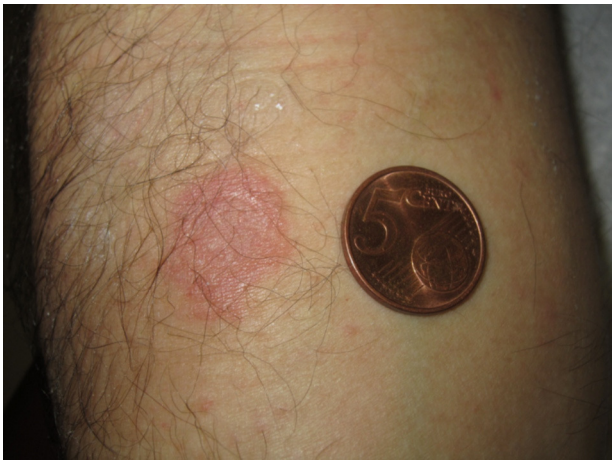

Figure 1 Patch test with etoricoxib (48 h reading).

No flares of FDE occurred after withdrawal of etoricoxib and reexposure to nimesulide, ibuprofen and paracetamol did not cause recurrence of the lesions (self initiative).

In our case, the culprit drug was promptly confirmed by patch testing on residual lesions, as described for several NSAIDs, including etoricoxib.[1–4]

Despite being a recent drug, etoricoxib is widely used in many countries. Because of its high level of COX2/COX1 selectivity, it combines high anti-inflammatory activity (equivalent or superior to that of conventional NSAIDs) with a lower incidence of side effects.[9] The most commonly reported cutaneous reactions due to etoricoxib are urticaria and angioedema followed by sporadic cases of erythema multiforme, Stevens–Johnson syndrome, acute generalized exanthematous pustulosis and rarely FDE.[5–10]

Patch testing has been widely recommended as the initial diagnostic tool in FDE patients.[1–4] This method is useful in the etiologic investigation of FDE and avoids the risks of systemic drug reexposure. Although pure allergens are commercially available for some drugs, others must be prepared by using the powder of commercial tablets in pet (recommended concentrations between 5% and 30%).[3] We adopted the maximum recommend concentration (i.e. 30% in petrolatum for commercial tablets) in order to avoid false-negative results.

The rationale for patch testing on lesional skin resides on the activation of intra-epidermal memory T cells by the re-exposure to the offending drug.[8] Non-lesional skin patch tests are useful only for control purposes and negative results are expected in the vast majority of patients.[1,4] For this reason, we only applied the drugs on lesional skin.

Drug eviction is the mainstay of treatment in non-IgE mediated drug allergy. In our case, as other NSAIDs were available and well tolerated by the patient, we recommended the eviction of all selective COX2 inhibitors. Until now no cross-reactivity has been described between these molecules possibly due to differences in the molecular structure of etoricoxib.[5,7,10] However, more data are still required before assuming the absence of cross-reactivity between different COX2 inhibitors.

In this case, as sustained by literature, patch testing was of unquestionable value in the identification of the culprit agent. More research is still required for standardization of this technique, particularly for drugs exclusively available as commercial tablets. Patch testing was also useful in the search for safe alternative drugs. Although a drug challenge is required for definite confirmation, the patient had used several other NSAIDs with no reaction, obviating the need for further procedures. Finally, even though etoricoxib is a safe drug, a high suspicion index is required in patients with FDE.

Ethical disclosures

Protection of human subjects and animals in research. The authors declare that no experiments were performed on humans or animals for this investigation.

Patient's data protection. The authors declare that no patient data appear in this article.

Right to privacy and informed consent. The authors declare that no patient data appear in this article.

References

1. Brahimi N, Routier E, Raison-Peyron, Tronquoy AF, Pouget-Jasson, Amarger S, et al. A three-year-analysis of fixed drug eruptions in hospital settings in France. Eur J Dermatol. 2010;20:461–4.
2. Lee AY. Fixed drug eruptions. Incidence, recognition, and avoidance. Am J Clin Dermatol. 2000;1:277–85.
3. Shiohara T. Fixed drug eruption: pathogenesis and diagnostic tests. Curr Opin Allergy Clin Immunol. 2009;9:316–21.
4. Andrade P, Brinca A, Gonçalo M. Patch testing in fixed drug eruptions – a 20-year review. Contact Dermatitis. 2011;65:195–201.
5. Andrade P, Gonçalo M. Fixed drug eruption caused by etoricoxib – 2 cases confirmed by patch testing. Contact Dermatitis. 2011;64:110–20.
6. Calistru AM, Cunha AP, Nogueira A, Azevedo F. Etoricoxib-induced fixed drug eruption with positive lesional patch test. Cutan Ocul Toxicol. 2011;30:154–6.
7. Augustine M, Sharma P, Stephen J, Jayaseelan E. Fixed drug eruption and generalised erythema following etoricoxib. Indian J Dermatol Venereol Leprol. 2006;72:307–9.
8. Duarte AF, Correia O, Azevedo R, PalmaresM D, Delgado L. Bullous fixed drug eruption to etoricoxib – further evidence of intraepidermal CD8+ T cell involvement. Eur J Dermatol. 2010;20:236–8.
9. Marina SD, Vesta KS, Ripley TL. Etoricoxib: a highly selective COX-2 inhibitor. Ann Pharmacother. 2005;39:854–62.
10. Ponce V, Muñoz-Bellido F, Moreno E, Laffond E, González A, Dávila I. Fixed drug eruption caused by etoricoxib with tolerance to celecoxib and parecoxib. Contact Dermatitis. 2012;66:107–8.

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Unexpected cross-reactivity in a cat-allergy patient. An allergic reaction at the circus

To the Editor,

Sensitisation to cats is one of the most frequent aeroallergens in atopic children, causing respiratory and anaphylactic reactions. The current guidelines addressing allergic symptoms in patients with a cat allergy discuss all aspects of environmental allergen prevention techniques including the major cat allergen, Fel d1 avoidance.[1] We would like to draw attention to the fact that people allergic to domestic cats may also express adverse reactions to big cats, such as when visiting wild parks or zoos.

We present a unique case of a cross-reaction in a cat-allergic patient in response to contact with another species, particularly big cats (felidae). An 8-year-old boy presented to our paediatric Emergency Department with a generalised urticarial rash, conjunctivitis and rhinorrhoea. He came along with his parents, directly from a circus show.

According to his parents, he was in good health prior to the start of the performance and had not had any meal within the previous two hours. About 30–45 min after the beginning of show, he started complaining of itching skin and a burning sensation in his eyes, followed by rhinorrhoea. The symptoms occurred a few minutes after the first animals appeared on stage.

At the time of evaluation, his vital signs were normal and he appeared to be in no apparent distress. He presented with increased nasal discharge, conjunctivitis, and generalised urticarial eczema. The remainder of his examination was unremarkable. His past medical history was positive for allergic conjunctivitis to cat dander.

Suspecting an allergic reaction in response to an unknown factor no specific laboratory examinations were ordered. Skin testing was also not performed because of the temporal relation to the episode and the subsequent use of medications.

After the administration of a second generation antihistamine preparation – cetirizine® (10 mg orally) his condition improved over the next 20 min and he was discharged after short observation. The parents were instructed to schedule a follow-up visit to our clinic for a detailed evaluation.

The patient returned a few weeks later for the follow-up, and his history was analysed further to look for possible triggers for his urticaria. It was then revealed that our patient was at first symptom-free and truly relishing in the many performances, until the symptoms suddenly arose when the lion-taming begun. This unusual circumstance prompted a detailed evaluation, and subsequently, a set of skin-prick tests. The panel included both food- and inhalant-allergenic extracts (peanut, strawberry, apple, tomato, egg yolk and white, wheat and rye flour, cocoa, hazelnut, meat, cow's milk, grass and tree pollens, *D. farinae*, *D. pteronyssinus*, danders: hamster, dog, cat, guinea pig, moulds: Alternaria, Cladosporium, Aspergillus, Penicillinum; all from Allergopharma®, Reinbeck, Germany). The results of the SPT revealed a sole sensitisation to cat dander, which was then confirmed through measuring specific IgE (80 kU/L, class V CAP for Fel d1).

Airborne allergens such as aerosolised food particles, pollen, or animal dander can trigger skin allergic symptoms; this likely involves systemic absorption of the allergen through the airways and/or skin.[2]