

Topical ketoprofen-induced photoallergic vasculitis: An uncommon side effect

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Abstract

Drug-induced photosensitivity is a common problem that may be encountered with a variety of medications. Non-steroidal anti-inflammatory drugs (NSAIDs) such as naproxen and ketoprofen are notable examples. Herein we describe an uncommon manifestation of photosensitivity related to ketoprofen.

Topical ketoprofen-induced photoallergic vasculitis: An uncommon side effect

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Dear Editor;

Drug-induced photosensitivity is a common problem that may be encountered with a variety of medications. Non-steroidal anti-inflammatory drugs (NSAIDs) such as naproxen and ketoprofen are notable examples. Herein we describe an uncommon manifestation of photosensitivity related to ketoprofen.

An 85-year-old woman presented to our dermatology department with a pruritic skin rash of the upper and lower extremities. Her medical history revealed bilateral gonarthrosis, recently treated with topical ketoprofen gel. Physical examination revealed multiple small non blanchable erythematous necrotic and ulcerated papules only localized on the back of the hands and extensor surface of the legs (**Figure 1a, 1b**). Dermoscopic examination showed orange-brown globules on a patchy red background. Personal and family medical history was negative for photomediated diseases. Her laboratory parameters were within normal limits. As the skin eruption was limited to sun-exposed areas of the body where the ointment was applied, contact photosensitivity induced by ketoprofen was initially suspected and the drug was withdrawn. Fresh lesions were biopsied showing a leukocytoclastic vasculitis associated with fibrinoid necrosis and extravasation of red blood cells (**Figure 1c**). The diagnosis of contact photoinduced leukocytoclastic vasculitis imputed to the use of topical ketoprofen was made. The patient was treated with triamcinolone 0.1 per cent cream and instructed to avoid sun exposure and sunscreens containing octocrylene. Skin lesions gradually resolved within two weeks.

Ketoprofen, 3-(3-benzoylphenyl) propionic acid, is a NSAID that is known to cause photoallergic reactions, which is a cell-mediated immune process. It seems that benzophenone moiety included in ketoprofen plays a major role in this photosensitivity (**1**). Despite being used less than other NSAIDs, it remains one of the most frequent photoallergens. It can cause erythema, oedema, papulovesicles, bullous, itching lesions or erythema exsudativum multiforme-like eruption in sun-exposed areas. The onset may spread to involve other sites due to the systemic nature of the cell-mediated immune response, and can induce the so-called systemic contact dermatitis, which can present as generalized maculo-papular, papulo-vesicular, pustular or erythematous eruption as well as urticarial rash (**2,3**). Our patient, presents a leukocytoclastic vasculitis which was limited to the back of her hand and her legs, one week after applying ketoprofen gel, while the rest of the covered skin was clinically unaffected despite the use of this same ointment. (**4**). Topical ketoprofen is known to induce leukocytoclastic vasculitis (**4**). However, no context of photosensitivity was previously reported for this cutaneous side effect with any type of NSAID. Only Thiamazole was described once to induce leukocytoclastic vasculitis in photo-exposed areas mimicking photosensitivity in a Tunisian patient (**5**). Treatment of ketoprofen-induced photoallergic dermatitis includes discontinuation of ketoprofen, avoidance of sun exposure and agents known to exacerbate dermatitis, notably, octocrylene in sunscreens (1) and prescribing topical or systemic corticosteroids. Physicians should be aware of this side effect, and educate patients using NSAIDs. To our knowledge, our patient is the first case of Ketoprofen-induced photoallergic leukocytoclastic vasculitis. there are no cases reported in literature with NSAID. Further investigations are necessary to explain the pathophysiology this side effect.

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Figure:

Figure 1a, 1b: erythematous necrotic and ulcerated papules localized on the back of the hands and extensor surface of the legs

Figure 1c: HE*200: Perivascular infiltration of neutrophils and eosinophils and leukocytoclastic vasculitis without fibrinoid necrosis.

