

CONTACT POINTS

CONTACT DERMATITIS 2009; 61: 236–247

JOHN WILEY & SONS A/S 2009

ALL RIGHTS RESERVED

CONTRIBUTIONS TO THIS SECTION WILL NOT UNDERGO PEER REVIEW, BUT WILL BE REVIEWED BY THE EDITOR

Photoallergic contact dermatitis due to diclofenac with cross-reaction to aceclofenac: two case reports

Contact Dermatitis 2009; 61: 236–237

B. Fernández-Jorge¹, J. J. Goday-Buján¹, M. Murga², F. Piñeyro Molina¹, L. Pérez-Varela¹ and E. Fonseca¹

¹Departments of Dermatology and ²Allergology, Complejo Hospitalario Universitario A Coruña, Spain

Key words: aceclofenac; cross-reaction; diclofenac; patch test; photoallergic contact dermatitis.

Diclofenac and aceclofenac are both non-steroidal anti-inflammatory drugs (NSAIDs) widely used in topical form for acute soft trauma and inflammatory or degenerative musculoskeletal disorders. Diclofenac is also used as eye drops in allergic conjunctivitis. Some cases of allergic contact dermatitis from diclofenac have been described (1–8), whereas photosensitivity has only been reported by three authors (9–11). Cutaneous side effects secondary to topical aceclofenac are scarce and include a single case of photoallergy (12) and allergic contact dermatitis (13). Herein, we report two new cases of photoallergy triggered by diclofenac which presented as a cross-reaction to aceclofenac.

Case Reports

Case 1

A 63-year-old man, with a previous history of penicillin allergy and psoriasis, developed a subacute eczema on his hands, neck, and face. Two days before, he had been prescribed Voltaren emulgelTM (containing diclofenac) for joint pains of the hands. The day before the start of the eruption, he had

sun exposure in his garden. Topical diclofenac was discontinued and the eczema controlled by topical corticosteroids. Some weeks later, patch and photopatch tests were performed.

Case 2

A 61-year-old woman presented with an eczematous rash on her legs which subsequently spread to face and neck. For several days, she had been applying Voltaren emulgelTM on her knee because of osteoarthritic pain. The skin reaction appeared several hours after a sun exposure. Topical application was stopped, sun exposure avoided, and the eczema controlled by topical corticosteroids. A year later, a similar eczematous eruption developed on her right knee after the application of Airtal DifucremTM (which contained aceclofenac) followed by sun exposure. Two months later, patch and photopatch tests were performed.

Material and Methods

Patch test was performed with the GEIDC (Spanish Contact Group) base-line series (available at www.aedv.es/red.asp) and NSAIDs series (ketoprofen 1%, piktetoprofen 2%, indomethacin 1%, 5%, and 10%, paracetamol 1%, 5%, and 10%, salicylic acid 1% and 5%, benzydamine hydrochloride 3% and 5%, bufenamac 5%, naproxen 5%, ibuprofen 5%, phenilbutazone 1%, fepradinol 1%, thiosalicylic acid 0.1%, diclofenac 1%, 5%, and 10%, and piroxicam 1%, all in pet.) (Ifidesa-Arestegui[®] Laboratory, Bilbao, Spain) using Leukotest[®] and Mefix[®] as support. In both cases, aceclofenac at 1%, 5%, and 10% pet. (Almirall[®] Laboratory, Barcelona, Spain) was added to the series. Readings were performed on D2 and D4, according to ICDRG criteria. Photopatch testing was also performed by applying the NSAIDs series both on the left and the right half of the back. After 1D, one series was uncovered and irradiated with Waldmann UV/PUVA 800 (H. Waldmann GmbH&Co, Willingen-Schwenningen, Germany) with UVA light as a source at a dose of 5 J/cm² [Waldmann

UV-Meter (H. Waldmann GmbH&Co, Willingen-Schwenningen, Germany)]. The first reading was performed 1D after UVA exposure and the second 2D later, comparing with the unirradiated half of the back. The same tests, including diclofenac and aceclofenac, were performed in 20 healthy controls to rule out irritant or phototoxic reactions with negative results.

Results

A non-relevant positive patch test to nickel and *p*-phenylenediamine was found in Case 1. Photopatch tests were positive to diclofenac 1%, 5%, and 10% pet. and to aceclofenac 10% pet. in the first case, and to diclofenac 5% and 10% pet. and to aceclofenac 10% pet. in the second case. Results are shown in Table 1.

Discussion

Diclofenac and aceclofenac are both NSAIDs of the phenylacetic group and share the same aromatic ring. Furthermore, aceclofenac is hydrolysed to diclofenac after its absorption and its active metabolite (14). Cutaneous undesirable effects caused by topical diclofenac include pruritus, dry skin, oedema, and scaling.

We present the third and fourth cases of photoallergic contact dermatitis from topical application of diclofenac, with positive photopatch tests. We wish to emphasize two peculiarities: (i) the clinical distribution of the lesions was on light exposed areas possibly because of contamination from the hands or absorption of the drug and (ii) cross-reactivity to aceclofenac, confirmed by photopatch test in the first case and by clinical history and positive photopatch test in the second case. On reviewing the medical literature, we could only find three cases of photosensitivity to diclofenac. Two cases showed the cutaneous lesions confined only to the area of topical cream application (9, 11). The other case presented a skin eruption on light exposed areas (granuloma annulare-like) after oral intake of diclofenac, but with a negative photopatch test (10).

Table 1. Results of patch and photopatch tests

	Allergens	% & Vehicle	Patch test		Photopatch	
			D2	D4	D1	D3
Case 1	Nickel sulphate	5% pet.	+++	+++	NT	NT
	p-phenylenediamine	1% pet.	+	+	NT	NT
	Diclofenac	1% pet.	-	-	++	++
	Diclofenac	5% pet.	-	-	++	++
	Diclofenac	10% pet.	-	-	++	++
	Aceclofenac	1% pet.	-	-	-	-
	Aceclofenac	5% pet.	-	-	-	-
Case 2	Aceclofenac	10% pet.	-	-	+	++
	Diclofenac	1% pet.	-	-	-	-
	Diclofenac	5% pet.	-	-	+	++
	Diclofenac	10% pet.	-	-	+	++
	Aceclofenac	1% pet.	-	-	-	-
	Aceclofenac	5% pet.	-	-	-	-
	Aceclofenac	10% pet.	-	-	+	++

Consequently, cross-reactivity was previously reported by Pitarch Bort et al. (13) in a case of allergic contact dermatitis due to aceclofenac. There was no demonstration of cross-reactivity in a patient with photoallergy due to aceclofenac in a previous report (12). Despite this, in light of our findings, we recommend photopatch test with aceclofenac in all patients with photoallergy due to diclofenac in order to rule-out possible cross-reactivity. Aceclofenac 10% pet. and diclofenac 5% and 10% pet. are the appropriate concentrations for photopatch testing.

References

- Schiavino D, Papa G, Nucera E, Schinco G, Fais G, Pirrotta L R, Patriarca G. Delayed allergy to diclofenac. *Contact Dermatitis* 1992; 26: 357-358.
- Romano A, Pietrantonio F, Di Fonso M, Garcovich A, Chiarelli C, Venuti A, Barone C. Positivity of patch tests in cutaneous reaction to diclofenac. Two case reports. *Allergy* 1994; 49: 57-59.
- Gebhardt M, Reuter A, Knopf B. Allergic contact dermatitis from topical diclofenac. *Contact Dermatitis* 1994; 30: 183-184.
- Valsecchi R, Pansera B, Leghissa P, Reseghetti A. Allergic contact dermatitis of the eyelids and conjunctivitis from diclofenac. *Contact Dermatitis* 1996; 34: 150-151.
- Ueda K, Higashi N, Kume A, Ikushima-Fujimoto M, Ogiwara S. Allergic contact dermatitis due to diclofenac and indomethacin. *Contact Dermatitis* 1998; 39: 323.
- Gómez A, Florido J F, Quirarte J, Martín A E, Sáenz de San Pedro B. Allergic contact dermatitis due to indomethacin and diclofenac. *Contact Dermatitis* 2000; 43: 59.
- Kerr O A, Kavanagh G, Horn H. Allergic contact dermatitis from topical diclofenac in Solaraze gel. *Contact Dermatitis* 2002; 47: 175.
- Kleyn C E, Bharati A, King C M. Contact dermatitis from 3 different allergens in Solaraze gel. *Contact Dermatitis* 2004; 51: 215-216.
- Montoro J, Rodríguez M, Díaz M, Bertomeu F. Photoallergic contact dermatitis due to diclofenac. *Contact Dermatitis* 2003; 48: 115.
- Le Corre Y, Léonard F, Fertin C, Kalis B. Granuloma-annulare type photosensitivity disorder caused by diclofenac. *Ann Dermatol Venereol* 1992; 119: 932-933.
- Kowalzik L, Ziegler H. Photoallergic contact dermatitis from topical diclofenac in Solaraze gel. *Contact Dermatitis* 2006; 54: 348-349.
- Goday Buján J J, García Alvarez-Eire G M, Martinez W, del Pozo J, Fonseca E. Photoallergic contact dermatitis from aceclofenac. *Contact Dermatitis* 2001; 45: 170.
- Pitarch Bort G, de la Cuadra Oyanguren J, Torrijos Aguilar A, García-Melgares Linares M L. Allergic contact dermatitis due to aceclofenac. *Contact Dermatitis* 2006; 55: 365-366.
- Grau M, Montero J L, Guasch J, Felipe A, Carrasco E, Juliá S. The pharmacological profile of aceclofenac, a new nonsteroidal antiinflammatory and analgesic drug. *Agents Actions Suppl* 1991; 32: 125-129.

Address:

Dra. Beatriz Fernández-Jorge
 Department of Dermatology
 Hospital Abente y Lago
 Av. Sir John Moore, s/n
 15001 A Coruña
 Spain
 Tel: +34699425320
 Fax: +34981205375
 e-mail: beafjorge@hotmail.com,
 bferjor@canalejo.org