

Consort allergic contact dermatitis caused by ketoprofen in a tango dancer

Contact Dermatitis 2010: 63: 172–174

Rosella Gallo, Stefania Paolino, Guarrera Marcella and Aurora Parodi

Section of Dermatology – Di.S.E.M.,
University of Genoa, Genoa, Italy

Key words: connubial dermatitis; consort dermatitis; ketoprofen; photoallergic contact dermatitis; photopatch test.

Introduction

Consort contact dermatitis is an allergic or photoallergic dermatitis caused by contact with environmental sensitizers conveyed by a companion or partner (1, 2).

We describe a patient who developed severe photo-aggravated allergic contact dermatitis as a result of ketoprofen being transferred to her skin through the embrace of a tango partner.

Case Report

A 40-year-old ballroom dance teacher presented with a figurate, acute eczematous reaction involving her right hand (Fig. 1), back (Fig. 2), waist and left foot. She reported giving tango lessons until late in the evening, and suspected that the dermatitis was related to close body contact while dancing. She reported past skin reactions to perfumes and deodorants, and summer recurrences of dermatitis at the dorsum of her left foot, where, several years before, she had developed a vesico-bullous reaction after applying a ketoprofen-containing gel. On direct questioning, she admitted sun bed use 24 hr prior to the abrupt onset of her present symptoms. One of her tango students, in turn, admitted using ketoprofen topical medications.

The patient's dermatitis resolved with a short course of oral prednisolone, and she was told to avoid ultraviolet exposure, as well as any contact with ketoprofen. She later underwent patch



Fig. 1. The patient simulating tango with a resident. An intense vesico-bullous eruption is evident at the dorsum of her right hand in correspondence with the volar aspect of her partner's fingers.



Fig. 2. Strikingly figured dermatitis on the patient's back.

and photopatch testing with the Società Italiana di Dermatologia Allergologica Professionale ed Ambientale baseline series.

The patient reacted strongly to ketoprofen (+++, photo-aggravated) and also showed multiple reactions to other (photo)allergens, namely: fragrance mix I (++), octocrylene (+, photoallergic), benzophenone 10 (+++, photoallergic), fentichlor (+, photoallergic). On the basis of a detailed re-evaluation of her history, only the reactions to ketoprofen and fragrance mix appeared to have present and/or past clinical relevance. Ketoprofen, in particular, was deemed to be responsible for past sensitization from

personal use and for the current photo-exacerbated allergic contact dermatitis triggered by consort contact.

Discussion

Ketoprofen, a non-steroidal anti-inflammatory drug (NSAID) that is widely used in Italy, both topically and systemically, is a well-known cause of photoallergic or photo-exacerbated contact dermatitis, sometimes followed by recurrent photosensitivity (3–5). Cases of connubial and consort photoallergic dermatitis caused by ketoprofen and related NSAIDs have been reported (6–8). In sensitized patients, photopatch testing often

shows concomitant positive reactions to both chemically related and chemically unrelated molecules. The former include, in particular, cinnamyl alcohol, responsible for cross-reactivity with fragrance mix I, tiaprofenic acid, fenofibrate and benzophenones. Chemically unrelated co-reactants include fentichlor, tetrachlorosalicylanilide, bithionol, triclosan and octocrylene (9, 10). These co-reactivity and cross-reactivity reactions often lack clinical relevance, and ketoprofen seems to be able to induce non-specific photoreactivity to molecules bearing a benzene ring with an oxygen group (11).

Our case shows all the main characteristics of ketoprofen (photo)contact allergy, highlighting the potent photosensitizing action of this molecule. It also represents a peculiar example of consort dermatitis, in which the allergen was transferred to the patient's skin by the hands of a tango partner, and skin penetration in areas covered by her dress was favoured by close contact, friction and perspiration while dancing.

Conflicts of interest: The authors have declared no conflicts.

References

1. Wilkinson D S. Connubial photodermatitis. *Contact Dermatitis* 1975; 1: 58.
2. Leroy D, Domp Martin A. Connubial photosensitivity to musk ambrette. *Photodermatology* 1989; 6: 137–139.
3. Devleeschouwer V, Roelands R, Garmyn M, Goossens A. Allergic and photoallergic contact dermatitis from ketoprofen: results of (photo) patch testing and follow-up of 42 patients. *Contact Dermatitis* 2008; 58: 159–166.
4. Cantisani C, Grieco T, Faina V, Mattozzi C, Bohnenberger H, Silvestri E, Calvieri S. Ketoprofen allergic reactions. *Recent Pat Inflamm Allergy Drug Discov* 2010; 4: 58–64.
5. Albès B, Marguery M C, Schwarze H P, Journé F, Loche F, Bazex J. Prolonged photosensitivity following contact photoallergy to ketoprofen. *Dermatology* 2000; 201: 171–174.
6. Mastrodonato M, Loconsole F, Rantuccio F. Conjugal allergic contact dermatitis from ketoprofen. *Contact Dermatitis* 1994; 30: 110.
7. Mirande-Romero A, González-López A, Esquivas J I, Bajo C, García-Muñoz M. Ketoprofen-induced connubial photodermatitis. *Contact Dermatitis* 1997; 37: 242.
8. Fernández-Jorge B, Goday Buján J J, Parada S, Mazaira M, Fonseca E. Consort photocontact dermatitis from

- piketoprofen. *Contact Dermatitis* 2008; 58: 113–115.
9. Pigatto P, Bigardi A, Legori A, Valsecchi R, Picardo M. Cross-reactions in patch testing and photopatch testing with ketoprofen, thiaprophenic acid, and cinnamic aldehyde. *Am J Contact Dermat* 1996; 7: 220–223.
 10. Foti C, Bonamonte D, Conserva A, Stingeni L, Lisi P, Lionetti N, Rigano L, Angelini G. Allergic and photoallergic contact dermatitis from ketoprofen: evaluation of cross-reactivities by a combination of photopatch testing and computerized conformational analysis. *Curr Pharm Des* 2008; 14: 2833–2839.
 11. Durbize E, Vigan M, Puzenat E et al. Spectrum of cross-photosensitization in 18 consecutive patients with contact photoallergy to ketoprofen: associated photoallergies to non-benzophenone-containing molecules. *Contact Dermatitis* 2003; 48: 144–149.

Address:

Dr Rosella Gallo
Section of Dermatology – Di.S.E.M
University of Genoa
Viale Benedetto XV 7
16132 Genoa
Italy
Tel: +390103538433
Fax: +390103538401
e-mail: rs.gallo@unige.it