

Short Communication

Bullous erythema multiforme following topical diphenylcyclopropenone application

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Case Report

A 40-year-old woman presented with alopecia areata on the occiput, which had been present for 1 week. She was sensitized with 0.1 ml diphenylcyclopropenone (DCCP) 0.2% acet. on the inner right upper arm. After 1 week, itchy erythematous patches developed at the sensitized site (Fig. 1). Then, target lesions of bullous erythema multiforme (EM) appeared on the extensor aspect of her right arm and spread to her ipsilateral dorsal hand (Fig. 2) and earlobe. Histopathologically, the lesions on her right forearm revealed hydropic degeneration of the basal cell layer, spongiosis, mild dyskeratosis and dense dermal lymphocytic perivascular infiltrations. 3 weeks after corticosteroid treatment, these lesions cleared with post-inflammatory pigmentation.

4 weeks after clearance, patch testing was done with the Korean standard series (Chemotechnique Diagnostics, Sweden), serial dilution of DPCP from 0.01 ppm acet. to 1000 ppm acet., and acetone. DPCP was +++ at 1000 ppm (0.1%), ++ at 100 ppm, and + at 10 ppm and 5 ppm. No EM followed patch testing.

Comment

Unwanted effects of immunotherapy with DPCP (1–4) include contact urticaria, pigmentary abnormalities, generalized eczema, and erythema multiforme (5, 6), the last being very rare (2, 4, 7–9) (Table 1).

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Fig. 1. Erythematous patch at sensitized site following 1st application of DPCP.



Fig. 2. Multiple target lesions on the extensor right arm.

Table 1. Reported cases of EM due to topical DPCP immunotherapy

Ref.	Sex/Age (years)	Sensitizations conc. (DPCP)	Application no. ^{a)}	Duration ^{b)}	Distribution
(7)	F/27	2%	1	1 week	neck, face, dorsum of the hands, lower extremities
	F/50	?	?	6 months	both mammae
	F/27	?	1	2 weeks	hands, fingers
(8)	F/27	2%	4	10 days	face, trunk, upper limb
(9)	M/34	0.2%	3	4 weeks	rt. arm
this case	F/40	0.2%	1	1 week	rt. arm, dorsum of rt. hand, rt. earlobe

^{a)} No. DPCP applications before EM developed.

^{b)} Duration after 1st application of DPCP before EM developed.

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