

Photoallergic contact dermatitis from mancozeb, an agricultural fungicide

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Key words: photoallergic contact dermatitis; mancozeb; zimandithane[®]; agricultural fungicide; persistent light reactor; occupational. © Munksgaard, 1996.

Care Report

A 56-year-old man developed severe eczema predominantly on sun-exposed areas. Patch and photopatch tests were performed on his back, using Finn Chambers[®]. Reactions were read at 2 and 3 days according to the recommendations of the ICDRG. An agricultural fungicide Zimandithane[®], was the only positive reactor on both patch and photopatch tests. A photopatch test with the components of Zimandithane[®] revealed the causative agent to be mancozeb, an active ingredient of the fungicide (Table 1). 20 healthy controls were all negative to Zimandithane[®].

Comment

Mancozeb (Fig. 1) is an agricultural fungicide used for gardening and agriculture around the world, with the exception of Africa and China. About 50,000 tons per year are manufactured worldwide. Its absorption spectrum (Fig. 2) is in the UVA to UVB range. Although the patient avoided any further contact with mancozeb, photosensitivity was still observed 5 months later, after a 20-min exposure to sunlight. Thus, he was determined to be a persistent light reactor. Contact dermatitis from

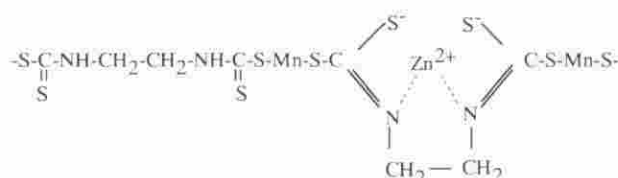


Fig. 1. Chemical formula of mancozeb.

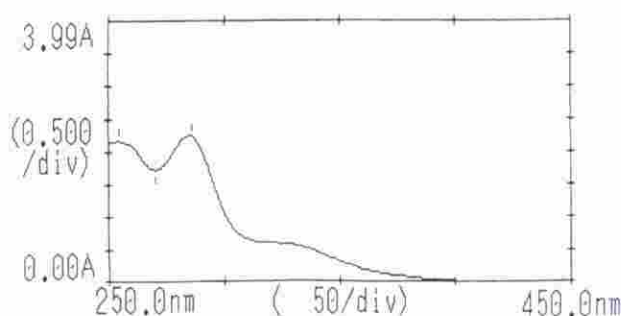


Fig. 2. Absorption spectrum of mancozeb.

mancozeb has been reported previously (1, 2), but this is the 1st report, as far as we are aware, of additional photoallergic contact dermatitis.

References

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Table 1. Results of patch and photopatch tests

	Patch test		Photopatch test	
	D2	D3	D2	D3
Zimandithane [®] (0.002% aq.)	+	+	++	++
mancozeb (0.002% aq.)	+	+	++	++
lignin sulfonic acid calcium (0.002% aq.) (vehicle)	—	—	—	—
control	—	—	—	—

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