

Occupational depigmentation from dinoterbe

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Occupational leukodermas can result from exposure to various phenolic compounds, used as antioxidants or plasticizers in rubber products (1), germicides, photographic developers (2), disinfectants in detergents and chemical synthesis agents. Chemically-induced depigmentation is thought to involve competitive inhibition of tyrosinase during synthesis of melanine from tyrosine (3).

Case Report

A 63-year-old miller, with no past history of vitiligo, complained of white patches on his skin which had appeared 1 year before. There were several areas of depigmentation on the dorsum of 3 fingers of the left hand, the dorsum of the right hand, the right cheek and the forehead. No other areas (particularly not body folds or external genitalia) were involved. 4 months prior to the onset of achromia, the patient had had repeated skin contact without gloves with a number of pesticides, including Herbogil[®], a weedkiller containing 250 g/l dinoterbe in propylene glycol. He reported no thorough washing after handling pesticides and frequent hand-to-forehead contacts. He started wearing gloves on medical advice, and there was subsequently a moderate improvement in his skin lesions.

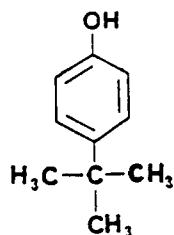
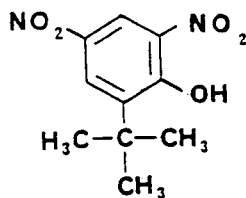
Discussion

Hydroquinone and its derivatives, monomethyl ether of hydroquinone (MMEH) and monobenzyl ether of

hydroquinone (MBH), are depigmenting agents in skin-lightening creams (3, 4). Many cases of occupational leukoderma have been reported in workers handling rubber products containing MBH as an antioxidant (5). Several alkylphenols and alkylcatechols can induce occupational achromia, with *p*-*t*-butylphenol (PTBP) the most frequent, and others being *p*-*t*-butylcatechol, *p*-*t*-amylphenol and *p*-phenylphenol (1, 6, 7). Dinoterbe or 2-*t*-butyl-4,6-dinitrophenol is structurally related to PTBP (Fig. 1). To our knowledge, this is the first report of it causing leukoderma. Occupational achromia usually affects the hands and forearms, common sites of contact with chemicals, but unexposed areas may also be extensively involved (1, 5, 8), suggesting a systemic effect (6). Achromia may also be a rare sequel of allergic contact dermatitis (9).

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*p*-*t*-butylphenol

dinoterbe

Fig. 1. Chemical structures of *p*-*t*-butylphenol and dinoterbe.

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