

In conclusion, therefore, it is assumed that the complication of iodide sialadenitis is an individual response mechanism and not related to plasma iodide levels in general. In the two reports of this complication in which iodide levels are available it does appear that those individuals who develop this rare manifestation of iodide toxicity do so when the level exceeds 11,000 µg/100 ml.

The total plasma iodide estimations were kindly carried out by Dr. R. McG. Harden, of the Gardiner Institute, Western Infirmary, Glasgow.

Acute Onychia and Onycholysis due to an Enzyme Detergent

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It is recognized that nail damage may occur in irritant contact dermatitis. Recently some cases of contact dermatitis due to enzyme detergents have been reported (Ducksbury and Dave, 1970; Jensen, 1970). We report a case of acute nail damage which we attribute to enzyme detergent.

Case Report

The patient, a 26-year-old housewife, had no previous history of skin disease or atopy. She first used enzyme detergents intermittently from a few small packets during the summer of 1970. She then used an enzyme detergent for her daily laundering for a month without wearing gloves. Her hands were exposed to the detergent solution for about an hour each day. No other detergents, bleaches, or disinfectants were used at the time. After two weeks she noticed dryness and scaling on the backs of her hands, together with soreness of the nail-folds and flaking finger-tips. The nails then became softened, discoloured, and raised. Next, on some of the fingers the distal half of the nails were shed. After the nails had become deformed and painful she applied false nails with an adhesive for half a day, removing them only because the soreness increased.

When seen on 30 November the backs of her hands showed areas of rough dry scaling, and acute paronychia was present. There was partial onycholysis of all finger-nails, with thickening, a brownish yellow discoloration, and elevation of the remaining distal third of the nail plate. The distal half of the nail had been shed on the index and middle fingers of both hands (see Fig.). The toe-nails were normal. There was no tinea pedis.

Patch tests (using Altest strips under Transpore tape) with 1% and 2% aqueous solutions of the detergent and with the artificial nail adhesive were applied for 48 hours. These were negative. Within a month of stopping the use of the detergent the dermatitis on the back of the hands had healed, the paronychia had settled, and the nails had started to grow normally again. A steroid ointment was used topically.

Comment

An outbreak of contact dermatitis due to enzyme detergents was reported by Ducksbury and Dave (1970). They considered

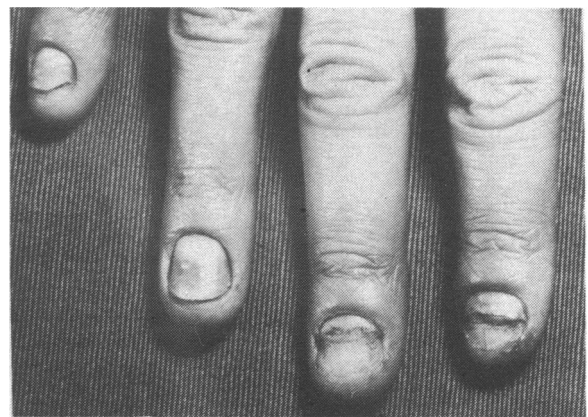
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this to be a primary irritant eruption. In all their 12 cases the reaction was severe, and in half of their cases the dermatitis developed within the first few days of exposure. Jensen (1970) also reported severe dermatitis with such detergents, but he found that patch tests to a 0.5% solution of detergent were positive in 4 out of 12 cases. Neither of these reports describe any associated abnormalities of the nails, but it would seem that the damaged skin is liable to digestion by proteolytic enzymes such as trypsin and chymotrypsin (Baden, 1970). In the present case the nail changes were severe in comparison with the relatively mild dermatitis on the hands.



Appearance of the finger-nails after use of an enzyme detergent.

While allergic contact dermatitis due to nail hardeners has been reported (March, 1966; Donsky, 1967) these were not used by our patient. Nail changes have also followed the use of artificial nails (Frumess *et al.*, 1952), but in the present case these were applied for only half a day after the onychia had developed. Nail damage caused by weed-killers (paraquat and diquat) has been described (Samman and Johnston, 1969; Clark and Hurst, 1970) but this patient had not handled such chemicals. Acute onycholysis and recovery is not a feature of an untreated fungal onychia or candidiasis. We therefore conclude that this patient's acute onychia and onycholysis resulted from her daily use of enzyme detergent.

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