

Terra firma-forme dermatosis in a child

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S U M M A R Y

We present a case of reticulate hyperpigmented patches symmetrically distributed on the arms of a 13-year-old boy that appeared after a summer seaside vacation. The lesions were easily wiped off with isopropyl alcohol, confirming the diagnosis of terra firma-forme dermatosis. Dermatologists should be aware of this relatively common skin condition.

Introduction

Terra firma-forme dermatosis (Duncan's dirty dermatosis) is a recently described entity of unknown etiology that seems more common than might be expected when browsing through the medical literature (1–5). It affects both children and adults and, though of only cosmetic significance, if unrecognized, may cause anxiety and lead to unnecessary investigations.

Case report

A 13-year-old boy was brought by his mother for asymptomatic reticulate brownish patches symmetrically distributed over his upper and lower arms (Figure 1). The lesions had appeared soon after his seaside holiday, 3 months before his presentation. The boy was otherwise healthy and well-groomed. A firm rubbing of a lesion with a gauze pad saturated with 70% isopropyl alcohol completely removed the pigmentation (Figure 2). The mother was given more alcohol preps and instructed to remove all the lesions at home.

Discussion

This bizarre cutaneous disorder is easily curable and rewarding for the physician aware of its existence. Terra firma-forme dermatosis was designated by Duncan et al. (1). The condition is seen in children and adults with normal washing habits, which excludes inadequate cleansing as the cause of the lesions, such as those seen in dermatosis neglecta (6–8). The salient feature of the condition is the “dirty” brownish and macular discoloration situated most commonly on the neck and trunk, but also reported on other sites (3, 5). In contrast to dermatosis neglecta, normal washing with soap and water cannot remove the pigmentation but swabbing with isopropyl alcohol is very effective in wiping it off. Histopathologic examination of terra firma-forme dermatosis displays prominent lamellar hyperkeratosis with focal areas of compact orthokeratosis in whorls (1, 5). Fontana-Masson-stained sections show increased melanin in the compact hyperkeratotic areas and the basal layer, whereas toluidine blue staining reveals numerous keratin globules throughout the thickened stratum corneum (1). Clinical differential diagnosis includes

K E Y W O R D S

terra
firma-forme
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children,
hyper-
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isopropyl
alcohol



Figure 1. Reticulate oval hyperpigmented patch on the lower arm of a 13-year-old boy.



Figure 2. The absence of discoloration after rubbing with isopropyl alcohol pads.

acanthosis nigricans and reticulate and confluent papillomatosis of Gougerot and Carteaud, and occasionally dermatosis neglecta (1–5, 8). The rapid removal of pigmentation with an alcohol pad is a straightforward way to exclude the former two. Lesions in the latter are usually composed of brownish scales and can be wiped off with soap and water. Histopathology may show epidermal atrophy with diminution of rete pegs, thick basketweave hyperkeratosis, and an underlying sparse focally lichenoid inflammatory infiltrate (8). Numerous yeast forms representing *Malassezia* organisms may be present throughout the stratum corneum (8). The cause

is not known. In our patient, patches appeared after a summertime vacation at the seaside. A patient described by Poskitt et al. (6) had a similar but hyperkeratotic lesion on his arm after a sunburn, and that case was labeled by the authors as “dermatitis neglecta.”

After removal of pigmentation with isopropyl alcohol, discoloration usually does not recur (5). However, if it does, one may simply apply alcohol once a week to keep the skin clear. Awareness of the condition is required in order to reassure patients and to avoid unnecessary diagnostic work-up for possible acanthosis nigricans or pigmentation disorders.

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