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Terra firma-forme dermatosis
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Abstract
Terra firma-forme dermatosis (TFFD) is a recently described cutaneous pigmentation disorder. It is a bizarre, acquired and idiopathic dermatosis and is characterized by brown, dirt-like discoloration that cannot be removed by bathing with water or rubbed off with routine detergent soap, but can be removed by isopropyl alcohol. A 20-year-old male came for treatment of chickenpox. Incidentally we observed multiple hyperpigmented plaques on the trunk and back, which disappeared on rubbing with isopropyl alcohol. He had normal washing habits and lesions disappeared after scrub bath. We propose scrub bath as one of the treatment modality.

Key words
Terra firma-forme dermatosis, dermatosis neglecta, scrub bath

Introduction
Terra firma-forme dermatosis (TFFD) is a recently described cutaneous pigmentation disorder. It is a bizarre, acquired and idiopathic dermatosis.\(^1\) It is more common than might be expected and often misdiagnosed. One should be aware of this condition to avoid unnecessary investigations and manage effectively.

Here we are reporting a case of TFFD in a young adult male, which resolved after scrub bath.

Case Report
A 20-year-old male presented to the department with multiple vesicles and crusts on the body for 3 days. Cutaneous examination suggested a diagnosis of chickenpox. Incidentally multiple, hyperpigmented plaques arranged in irregular pattern were revealed on the trunk and back (Figure 1). The patient gave history of regular washing habit with soap and water and he has not noticed these lesions as they were asymptomatic. The lesion on the lateral side of abdomen was swabbed with isopropyl alcohol. It cleared to reveal underneath normal skin (Figure 2 and 3). Patient was given oral antivirals and advised for the follow-up.

Patient came back after 5 days and cutaneous examination revealed complete clearance of the lesions (Figure 4). Patient took vigorous scrub bath which had cured his lesions. The diagnosis of Terra firma-forme dermatosis was considered.

Discussion
Terra firma-forme dermatosis (TFFD) also known as Duncan’s dirty dermatosis was initially reported by Duncan in 1987.\(^2\) It derives its name from the Latin phrase *terra-firma* meaning dry land (dirt), thus implying dirt-like dermatosis. It is characterized by brown, dirt-like discoloration that cannot be removed by bathing with water or rubbed off with routine
detergent soap. It has most often been seen in children, but it has also been described in adults.\(^3\) It usually involves the neck and trunk, but also described in scalp and pubic area.\(^3\)

The diagnosis of TFFD is confirmed by forceful rubbing with a gauze pad immersed into 70% isopropyl alcohol or ethyl alcohol. After wiping, normal pink skin is exposed. This diagnostic test prevents unnecessary laboratory work-up or biopsy.\(^1\)
The cause of terra firma-forme dermatosis is not yet fully understood. It is believed that the lesions arise as a consequence of a delay in the maturation of keratinocytes, with melanin retention, and a sustained accumulation of sebum, sweat, corneocytes, and microorganisms in regions in which hygiene measures are less rigorous (e.g. neck, trunk, navel, and flanks), leading to insufficient exfoliation and the formation of a highly adhesive, compact dirt crust. So TFFD is retention, rather than a proliferative hyperkeratosis.\(^1\)\(^,\)\(^4\)

Clinical differential diagnosis includes acanthosis nigricans, confluent and reticulated papillomatosis, dirty neck syndrome of atopic dermatitis and dermatosis neglecta (DN).\(^1\) Most of these disorders can be excluded by the rapid removal of pigmentation with an alcohol pad. Dermatosis neglecta is due to poor hygiene or inadequate skin cleansing, whereas TFFD is seen in clean individuals. Lesions in the DN are usually composed of brownish scales and can be wiped off with soap and water. Alcohol removes pigmentation in the both disorders.\(^1\)\(^,\)\(^5\) In the present case, patient was taking regular bath with the soap, but only on vigorous scrub bath, the lesions disappeared. Hence the TFFD was considered.

Histopathologic examination of terra firma-forme dermatosis displays epidermal atrophy with diminution of rete pegs, prominent lamellar hyperkeratosis with focal areas of compact orthokeratosis in whorls. Fontana-Masson-stained sections show increased melanin in the compact hyperkeratotic areas and the basal layer. Toluidine blue staining of plastic-embedded sections showed numerous keratin globules throughout the thick stratum corneum. Periodic acid-Schiff stains demonstrated occasional yeast cells thought to be *Pityrosporum*. Brown-Bren-stained tissue sections showed only normally distributed bacteria. Histologically, DN is similar to TFFD, except for the absence of whorled hyperkeratosis in DN.\(^1\)\(^,\)\(^2\)\(^,\)\(^3\)\(^,\)\(^5\)

Treatment for this condition includes reassurance regarding the benign nature of the disease and cleaning the lesions with isopropyl alcohol. Reappearance of the lesions is rare once it is adequately treated. Prophylactic weekly application of alcohol has been recommended for resistant or recurrent cases.\(^1\) In the present case scrub bath removed the lesions. We propose scrub bath with pumice stone as one of the treatment modality.

References