

Terra Firma-Forme Dermatososis

Bengü Çevirgen Cemil,* MD, Filiz Canpolat, MD, Hatice Ataş, MD, Rüstem Şaşmaz, MD

Address: Department of Dermatology, Ministry of Health Diskapi Yildirim Beyazit Education and Research Hospital, Ankara, Turkey

E-mail: dbcemil@yahoo.com

* Corresponding Author: Bengü Çevirgen Cemil MD Department of Dermatology, Ministry of Health Diskapi Yildirim Beyazit Education and Research Hospital, Ankara, Turkey

Published:

J Turk Acad Dermatol 2014; 8 (4): 1484c3

This article is available from: <http://www.jtad.org/2014/4/jtad1484c3.pdf>

Key Words: Isopropyl alcohol, Terra firma-forme dermatosis

Abstract

Terra firma-forme dermatosis (TFFD) is quite unknown condition characterized by dirt-like lesions that are resistant to simple washing. The lesions disappear completely on swabbing with 70% isopropyl or ethyl alcohol, confirming the diagnosis of terra firma-forme dermatosis. The pathogenesis has been attributed to abnormal and delayed keratinization. Most reports have described adolescents or young adults with a history of normal hygiene and intense but unsuccessful attempts at cleansing the affected areas. Herein we described a 7-month-old girl with TFFD.

Introduction

Terra firma-forme dermatosis (TFFD) is an idiopathic condition characterized by asymptomatic, dirtlike, thinly papillomatous, hyperpigmented plaques that cannot be removed by washing with water and/or soaps. The lesions were easily wiped off with isopropyl or ethyl alcohol, confirming the diagnosis of terra firma-forme dermatosis [1]. TFFD affects a wide range of ages (3 months to 72 years), with an equal incidence in both gender [2]. We present a 7-month-old girl with TFFD whose symptoms were existing 1 month after birth.

Case Report

A 7-month-old girl brought by her mother to our unit for assessment of a persistent asymptomatic, brown skin rash on the knees that had appeared six months earlier. The girl was otherwise healthy and well groomed. Despite good hygiene, including showers and washing with soap at least 3 times

per week, the patient showed no improvement of the condition. On dermatological examination, she had brown hyperpigmented plaques that were slightly papillomatous to the touch in some areas. The lesions were distributed symmetrically on the knees (Figure 1). Given the distribution and appearance of the lesions, swabbing with a cotton ball soaked in 70% isopropyl alcohol was performed.



Figure 1. Brown hyperpigmented plaques were distributed on the right knee.



Figure 2. Clearance of the lesions after swabbing with isopropyl alcohol.

med as a diagnostic test that doubles as treatment. This procedure completely removed the lesions, revealing skin of a normal appearance in the treated area (**Figure 2**). Complete removal of these patches by isopropyl alcohol rubbing confirmed the clinical suspicion of TFFD. At 2-month follow-up, there was no recurrence found on her physical examination and her skin was appeared normal.

Discussion

Terra firma-forme dermatosis was first described in 1987 by *Duncan et al.* Some authors use the term “Duncan’s dirty dermatosis” as an alternative name. TFFD is an uncommon disorder of keratinization with an unknown etiology whose name derives from the Latin “terra firma,” meaning “dirty land” [2]. 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 [3]. Patients present with asymptomatic, dirtlike, papillomatous, hyperpigmented plaques which cannot be removed with routine cleansing. Therefore, when this condition is suspected, firm, persistent pressure should be applied while rubbing the skin with isopropyl or ethyl alcohol. Involvement of

the face, neck, trunk or ankles is usual, although unusual sites such as scalp, lips, chest, axilla, back, umbilical area, pubis, arms and legs have been reported [4].

Histopathologic examination of terra firma-forme dermatosis demonstrates 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 reveals numerous keratin globules throughout the thickened stratum corneum [5].

Differential diagnosis includes acanthosis nigricans, *Gougerot* and *Carteaud* confluent and reticulated papillomatosis, pityriasis versicolor, epidermal nevi, dirty neck syndrome of atopic dermatitis and dermatosis neglecta [4, 5]. The condition can be treated with the diagnostic method itself (swabbing with alcohol). After removal of pigmentation with isopropyl alcohol, discoloration usually does not recur. However, if it recurs, one may simply apply alcohol once a week to keep the skin clear [5].

TFFD should be investigated on the infants who have brown hyperpigmented plaques in the differential diagnosis. It is critical for both clinicians and dermatopathologists to be aware of this condition in order to avoid misdiagnosis, unnecessary evaluation and treatment.

References

1. Berk DR, Bruckner AL. Terra firma-forme dermatosis in a 4-month-old girl. *Pediatr Dermatol* 2011; 28: 79-81. PMID: 20738796
2. Erkek E, Sahin S, Çetin ED, Sezer E. Terra firma-forme dermatosis. *Indian J Dermatol Venereol Leprol* 2012; 78: 358-360. PMID: 22565438
3. Martín-Gorgojo A, Alonso-Usero V, Gavrilova M, Jordá-Cuevas E. Dermatitis neglecta or terra firma-forme dermatosis. *Actas Dermosifiliogr* 2012; 103: 932-934. PMID: 23154250
4. Guarneri C, Guarneri F, Cannavò SP. Terra firma-forme dermatosis. *Int J Dermatol* 2008; 47: 482-484. PMID: 18412867
5. Oztürk F, Kocabaş E, Ertan P, Ermertcan AT. Terra firma-forme dermatosis. *Cutan Ocul Toxicol* 2010; 29: 303-305. PMID: 20684734