



IMAGE

Terra Firma-Forme: Recognizing an Uncommon but Easily Treatable Dermatosis

Catarina Martins Raposo^{1,*}, Madalena Leiria Carvalho², Beatriz Bonança Pereira³ and Cristina Claro⁴



¹Pediatric Department, Pediatrics Department, Hospital de São Francisco Xavier, Unidade Local de Saúde Lisboa Ocidental, Lisbon, Portugal

²Pediatric Department, Hospital Professor Doutor Fernando Fonseca, Unidade Local de Saúde Amadora Sintra, Portugal

³Pediatrics Department, Hospital Dr. Nélcio Mendonça, Funchal, Portugal

⁴Dermatology Department, Hospital de São Francisco Xavier, Unidade Local de Saúde Lisboa Ocidental, Lisbon, Portugal

***Corresponding author:** Catarina Martins Raposo, Pediatrics Department, Hospital de São Francisco Xavier, Unidade Local de Saúde Lisboa Ocidental, Lisbon, Portugal Estrada da Fonte do Alto do Duque, 1449-005 Lisboa

Abstract

Terra firma-forme dermatosis (TFFD) is an uncommon keratinization disorder presenting as persistent hyperpigmented plaques that fail to clear with routine washing. We report a case of an adolescent girl with multiple lesions unresponsive to multiple topical therapies. The diagnosis was established clinically and confirmed by complete removal of the plaques with 70% isopropyl alcohol. This case highlights that, although treatment is simple and immediately effective, limited awareness of TFFD can result in repeated ineffective interventions and patient distress.

Abbreviations

TFFD: Terra firma-forme dermatosis

TFFD manifests as slightly elevated brown-to-black plaques or papules, which may appear as dirt to the untrained observer. The condition is frequently misdiagnosed due to its nonspecific appearance, which can lead to repeated ineffective treatments. Early recognition is important to avoid unnecessary interventions and to reassure patients [4].

Description

A healthy 17-year-old girl was referred to dermatology for evaluation of persistent hyperpigmented plaques that had gradually developed over several months. The lesions involved the abdomen, neck, antecubital fossae and lower back (Figure 1). She reported no pruritus, pain or other symptoms.

Her medical and family history were unremarkable. Before referral, she had undergone several empirical treatments in primary care - including topical ketoconazole 20 mg/mL and multiple emollients - without any improvement, prompting further specialist assessment.

The initial presentation of persistent, dark and adherent plaques prompted consideration of conditions that can produce a "dirty" appearance

Introduction

TFFD is a benign skin disorder first described in 1987 by Duncan et al., and is also known as "Duncan's dirty dermatosis" [1]. It affects individuals of any age and sex, most commonly children and adolescents [2]. Its true prevalence is unknown, since asymptomatic cases may remain undiagnosed [3].

The pathogenesis is thought to involve delayed keratinocyte maturation with abnormal retention of melanin and other epidermal components. Clinically,

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Figure 1: Hyperpigmented lesions of the arm, lower back pain, abdomen and cervical region.

of the skin. Dermatitis neglecta was first evaluated, given its close clinical overlap. However, the patient reported normal hygiene, and the lesions had remained unchanged despite vigorous washing at home, making this diagnosis unlikely. Acanthosis nigricans was also considered, however, the morphology, distribution and the patient's normal metabolic background did not support this possibility.

The diagnostic clarity emerged through the alcohol swab test. Complete and immediate removal of some of the plaques with 70% isopropyl alcohol effectively ruled out pigmentary disorders, other keratinisation abnormalities and proliferative lesions, none of which would resolve with simple wiping. This response was diagnostic and confirmed TFFD. The lesions resolved completely after alcohol rubbing. No adverse effects were observed, and no specific follow-up is required beyond reassurance and patient education on the benign nature of the condition.

Conclusion

This case illustrates the challenges in recognizing TFFD, particularly when lesions are widespread. Unlike typical presentations limited to the neck or trunk, our patient had involvement of the abdomen, antecubital fossae, and lower back, which may contribute to diagnostic delay.

The underlying mechanism is thought to involve delayed keratinocyte maturation and retention of melanin within the epidermis, producing slightly elevated, brown-to-black hyperkeratotic plaques³. Dermoscopy, when performed, can reveal brown, polygonal, plate-like scales in a mosaic pattern, while histopathology, rarely necessary, may show acanthosis, papillomatosis, and lamellar hyperkeratosis. These features help distinguish TFFD from other hyperpigmented dermatoses [5].

A review of recent case reports confirms that misdiagnosis is common, often resulting in repeated ineffective treatments and patient anxiety [3]. The key learning point from this case is the diagnostic and therapeutic value of 70% isopropyl alcohol, which rapidly resolves lesions and avoids unnecessary interventions [2]. This highlights the importance of clinician awareness and the utility of simple, non-invasive bedside tests. Dermoscopic images, when available, can further enhance understanding and educational impact.

Author declarations

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All authors contributed to the article conception and design, elaboration of the manuscript and revisions. All authors read and approved the final manuscript.

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