BRIEF ARTICLES

Terra Firma-Forme Dermatosis, Keratotic Form

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ABSTRACT

Terra firma-forme dermatosis (TFFD) is a condition that presents as hyperpigmented patches or plaques that have a dirt-like appearance. A keratotic form of TFFD that has not been previously reported is described in this case. The diagnosis and treatment for this condition, the alcohol swab test, did not lead to resolution of the patch in our patient. The keratotic papules had to be removed by using the edge of a microscope slide. This case report serves to provide awareness of this unique, keratotic variant that cannot be removed by wiping with isopropyl alcohol.

INTRODUCTION

Terra firma-forme dermatosis (TFFD) is a benign condition that presents as an asymptomatic, dirty-appearing, hyperpigmented plaque. Removal of the discoloration with an alcohol pad confirms the diagnosis while serving as an effective treatment for this condition. (1) We present a case of a 60-year-old man with a presentation not previously reported which represents a keratotic form of TFFD.

CASE REPORT

A 60-year-old African American man presented for evaluation of a keratotic patch on his right lateral foot just above the right lateral malleolus that had been present for several months. TFFD and stucco keratoses were considered on the clinical differential diagnosis. The patient was morbidly obese and suffered from type 2 diabetes mellitus, chronic kidney disease, and hypertension.

The patch was mildly pruritic, and scrubbing with a wash cloth, soap, and water led to no improvement. There was no history of footwear rubbing against this area. Physical examination revealed confluent, thick, hyperpigmented, “stuck-on”, brown papules clustered on his right lateral ankle (Figure 1). No other skin was involved. Swabbing the area with several alcohol pads led to no improvement. The keratotic papules had to be removed using the edge of a microscope slide. No bleeding occurred. The crusted debris was sent for histopathologic examination and demonstrated only laminated keratin without evidence of seborrheic/stucco keratosis, verruca vulgaris, or acanthosis nigricans (Figure 2). These findings support the diagnosis of TFFD.

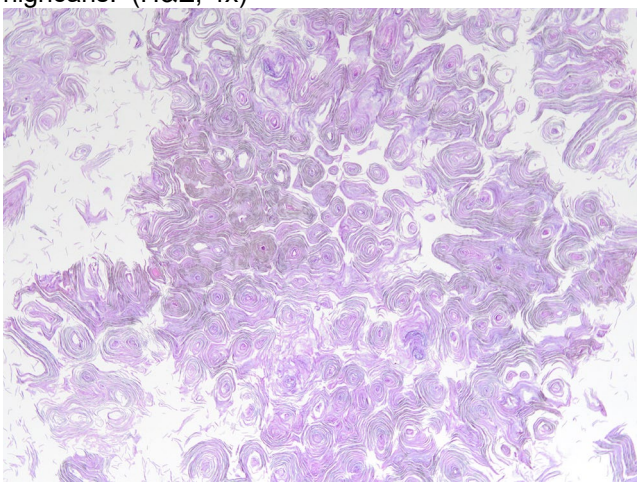
After all keratotic lesions were removed by scraping as noted above, the patient was treated with ammonium lactate 12% lotion twice daily. There has been no recurrence over 6 months.

Figure 1: Right ankle with a patch of keratotic TFFD. Scraping the right side of the patch cleared this part of the lesion. Keratotic debris is noted on the table top.

DISCUSSION

TFFD is a benign condition of acquired "dirt-like" plaques. There is a higher incidence in children, however it can affect people of all ages. Lesions may involve any area of the body but are typically located on the neck, face, trunk, and ankles. The distribution can be localized, generalized, bilateral, or unilateral. (2). Multiple case reports demonstrate large polygonal plate-like brown scales arranged in a mosaic pattern on dermoscopic examination. (3)

Figure 2: Laminated keratin is noted without evidence of seborrheic keratosis, verrucae, or acanthosis nigricans. (H&E, 4x)



If a "stone pavement" pattern is observed on dermoscopic exam, this suggests the diagnosis of TFFD. (4) The pathophysiology behind this condition may be related to a delay in the maturation of keratinocytes with melanin retention, and an accumulation of sebum, sweat, corneocytes, and microorganisms in locations where hygienic measures are less rigorous. (5) In typical cases, histopathological examination is rarely performed. In this case, however, the failure to clear the lesion with alcohol swabs led to the serendipitous finding that the brown, confluent, keratotic papules could be flicked off with a fingernail under a glove or by rubbing the area with a glass slide. The thick concretions in our case would not respond to alcohol but did resolve with "scraping" with the edge of a glass slide.

CONCLUSION

The appearance of TFFD may be concerning to the patient even with the reassurance of its benign nature. Diagnosing TFFD is important to avoid a biopsy or other workup for localized hyperpigmentation. This case report serves to provide awareness of this unique

hyperkeratotic variant of TFFD that cannot be removed by wiping with isopropyl alcohol.

Conflict of Interest Disclosures: : Robert Brodell, M.D. include participation in multi-center clinical trials for Galderma Laboratories, L.P., Novartis, and Glaxo Smith Kline. He serves on the Advisory Board for IntraDerm Pharmaceuticals. He serves on the editorial boards of Journal of the American Academy of Dermatology, American Medical Student Research Journal, Practice Update Dermatology, Practical Dermatology, Journal of the Mississippi State Medical Society, and SKIN: The Journal of Cutaneous Medicine. Jennifer Abdalla, Allison Cruse, and Neelam Patel have no conflicts of interest.

Funding: None.

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