



CASE REPORT

Terra Firma-Forme Dermatosis

Stephanie F. Ryan, MD¹; Mori Stern, MD¹; Maria Kelly, MD²

¹Assistant Professor, Department of Pediatrics, University of Florida College of Medicine, Gainesville

²Professor, Department of Pediatrics, University of Florida College of Medicine, Gainesville

CASE:

A 9-year-old girl presents for a well child visit. Her only concern on the day of the visit is a “dirty-looking rash” on her neck. The patient’s mother first noted the rash several weeks before and thought it was dirt. When the brown area persisted after the patient bathed, mom herself tried to wash it off with warm water, soap and a wash cloth but it remained. The patient states that the rash “feels funny when it’s touched” but otherwise it does not bother her at all. The rash is located in the anterior neck and crosses the midline. The patient and her mother deny significant changes in the lesion since they first noted it. Her past medical history is significant only for eczema which is well controlled with emollients. Her family history is negative for diabetes, acanthosis nigricans and other skin conditions.

On physical exam, the patient is a thin, well-appearing girl with good hygiene. Her growth curves and BMI are normal. Her exam is normal with the exception of the skin exam in her neck area. Her skin exam reveals brown, slightly raised, rough “dirt like” plaques on her anterior neck at midline and extending laterally along the anterior border of the sternocleidomastoid muscle where it gradually fades (Figure 1).



Figure 1: The skin lesion extending across the anterior neck area.

At the time of the visit, the diagnosis was uncertain. The patient was sent home with instructions to observe and seek further care if the rash persisted. At the end of the clinic day, the provider conducted a literature search to attempt to identify the skin findings. Upon discovery of the likely diagnosis, the mother was contacted and instructed to attempt to gently wipe off the rash with an alcohol swab. The mother called the office the next day to report that the intervention had worked and that the child's skin lesions were completely removed (Figure 2). The patient tolerated the wiping with alcohol without any major discomfort. The resolution of this skin lesion with an alcohol swab is consistent with the diagnosis of Terra Firma-Forme Dermatitis. Two months following the intervention, the neck remained clear and the lesion had not returned.



Figure 2: The area of the neck showing resolution of the lesion after rubbing with alcohol.

TERRA FIRMA-FORMA DERMATOSIS

Terra Firma-Forme Dermatitis (TFFD) is also referred to as Duncan's Dirty Dermatitis after Duncan who first described the condition in 1987.¹ It is named for the Latin term "Terra Firma" which means "solid earth" as the lesions often resemble dirt or earth on the skin. A literature search for TFFD reveals 61 entries in PubMed, most of which describe the condition as rare. However due to its benign nature, it is likely significantly under reported. The majority of cases are described in children and adolescents (88.6% with a mean age of 10.4 years) and involve the trunk (27.8%) and extremities (26.6%).²

Case reports also describe involvement of the face and neck, but to a lesser degree. The classic presentation is that of asymptomatic dirt-like plaques with a slightly papillomatous surface that cannot be removed with ordinary soap and water cleansing. Interestingly, the lesions completely disappear upon swabbing with 70% ethyl or isopropyl alcohol.³ The wiping with alcohol is both therapeutic and diagnostic. While most cases of TFFD can be diagnosed clinically and with the alcohol test, there are several reports of histological studies from skin biopsies. When done, biopsies show lamellar hyperkeratosis, focal orthokeratosis in whorls and increased melanin in the hyperkeratotic areas and basal layer.^{1,5} It has been postulated that the condition arises due to delayed or incomplete keratinization with retention of melanin of unknown etiology.^{1,6}

The differential diagnosis for Terra Firma-Forme Dermatitis includes acanthosis nigricans, confluent and reticulated papillomatosis of Gougerot and Carteaud, pityriasis versicolor, some forms of ichthyosis, linear epidermal nevus, dermatosis neglecta and seborrheic keratosis (Table 1).³ It may be difficult to differentiate between some of these diagnosis clinically, thus the alcohol swab test should be done prior to obtaining laboratory studies or biopsies. TFFD and confluent reticulated papillomatosis may be clinically indistinguishable and histologically very similar. However the latter classically does not wipe off with an alcohol swab and is generally treated with systemic retinoid or antibiotic therapy. Acanthosis nigricans is characterized by hyperpigmented velvety plaques usually in the neck and body folds and is associated with obesity and insulin resistance. Acanthosis nigricans is generally managed by treating the underlying cause with physical activity and diet modification. Pityriasis versicolor is a very common superficial fungal infection characterized by hyperpigmented, hypopigmented or erythematous scaly macules, usually on the trunk. Dermatitis neglecta is very similar to TFFD and does wipe off with alcohol. Some have suggested that they are part of a continuum or that they are the same entity and thus use the terms synonymously.³ Individuals with dermatosis neglecta fail to adequately clean the skin often due to hyperesthesia or prior trauma. This leads to a build-up of hyperpigmented adherent scales.⁵

DIFFERENTIAL DIAGNOSIS OF TERRE FIRMA-FORME DERMATOSIS
Acanthosis Nigricans
Confluent and Reticulated Papillomatosis of Gougerot and Carteaud
Pityriasis Versicolor
Ichthyosis
Linear Epidermal Nevus
Dermatitis Neglecta
Seborrheic Keratosis

Table 1

CONCLUSION

Terra Firma-Forme Dermatitis is a benign skin condition that is best diagnosed clinically and is easily resolved by cleaning the affected areas with 70% ethyl or isopropyl alcohol. Lack of awareness of this condition may lead to a more invasive and expensive work up, including a laboratory work up and dermatology referrals. The diagnosis of Terra Firma-Forme Dermatitis should be considered in all unusual causes of hyperpigmentation and the alcohol swab test should be attempted prior to initiation of any other testing.

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