

Terra Firma-Forme Dermatitis and Dermatoscopic Findings: Case Report

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Abstract

Observation: Terra firma-forme dermatosis (TFFD) is an acquired dermatosis with an unknown etiology characterized by dirt-like brownish-gray reticular, verrucose or papillomatous patchy or plaque lesions. This lesion is also called Duncan's dirty dermatosis and it most commonly occurs on neck and trunk. Abnormal or delayed keratinization has been implicated in the pathogenesis. The most prominent feature of this dermatosis is that the lesions cannot be removed with routine soap and water washing but subside on rubbing with isopropyl alcohol or ethyl alcohol. The treatment of this lesion occurs at the time of diagnosis, and when the diagnosis is kept in mind, unnecessary biopsies and tests would be avoided. To date, dermatoscopic findings have not been reported in case reports published in the literature. In current report, a 15-year-old girl with TFFD on the abdomen and associated dermatoscopic findings are presented.

Introduction

Terra firma-forme dermatosis (TFFD) is an acquired dermatosis with an unknown etiology characterized by hyperpigmented patchy or plaque lesions. This lesion only poses cosmetic problems. The most prominent feature of this dermatosis is that the lesion cannot be removed with routine soap and water washing but subsides on rubbing with isopropyl alcohol or ethyl alcohol [1,2,3,4,5,6]. However, this sign is not specific for TFFD and it has also been described in other disorders of retention hyperkeratosis disorders such as confluent reticulated papillomatosis, acanthosis nigricans, as well as selenium-sulphide shampoo-associated discoloration [7]. Herein, a case of 15-year-old girl with TFFD together with dermatoscopic findings is presented,

and we propose using dermatoscopy, an easy technique, in order to make clinical differential diagnosis.

Case Report

A 15-year-old girl was admitted to our outpatient clinics with the complain of brownish discoloration with dirt-like appearance on the abdomen for the last 4 months. Dermatologic examination showed brownish reticular lesions having a patchy appearance with the neighboring normal skin sites on the right and left sides of the abdomen (Figure 1). The patient's past medical history and family history was not significant. The patient was having bath regularly twice a week during which she rubbed her skin with a coarse bath-gloves and her family physician had also advised her to apply "mometasone furoate" cream on the lesions. However, her complaints did not resolve and the lesi-



Figure 1. Irregularly shaped brownish reticular patch

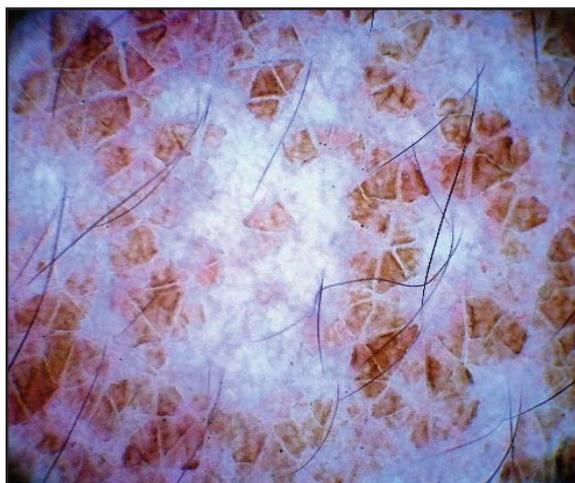


Figure 2. Triangular-shaped brownish areas interrupted by skin lines with preserved follicular areas



Figure 3. The lesion on the left abdomen was removed with swabbing with ethyl alcohol



Figure 4. All lesions were removed with swabbing with ethyl alcohol

ons further extended to the mid- section of the abdomen for which the patient and the family felt anxious and had embarrassment. Dermatoscopic examination showed triangular-shaped brownish areas interrupted by skin lines with preserved follicular areas (**Figure 2**). After physical and dermatoscopic examination, the lesions were rubbed with ethyl alcohol swabs considering TFFD as a possible diagnosis. All lesions showed resolution (**Figure 3, 4**). Depending on clinical and dematoscopic findings, biopsy was not deemed necessary for the diagnosis and concurrent treatment of the lesion.

Discussion

TFFD is an acquired dermatosis with an unknown etiology characterized by dirt-like brownish-gray reticular, verrucose or papillomatous patchy or plaque lesions. The disease was described for the first time by *Duncan et al.* in 1987 for which it is also called “Dun-

can’s dirty dermatosis”. It occurs at all age group (3 months-72 years) and in both genders; however, it mostly occurs in childhood period. Neck and trunk are the most common sites of involvement but the lesions can also appear on the scalp, axilla, chest, back, umbilical area, pubis, and lower extremities with atypical presentations which may mimic other dermatoses [**1,2,3,4,5,6**].

Its pathogenesis is unknown, but abnormal or delayed keratinization has been implicated. Some publications have reported that the lesions are triggered by exposure to sunlight [**1, 5**].

Histopathological examination shows prominent lamellar hyperkeratosis, compact orthokeratosis creating focal areas of whorls, papillomatous, and mild acanthosis. In addition, melanin accumulation in compact hyperkeratotic areas and basal layer with

Masson-Fontana, keratin globules in stratum corneum with Toluidin blue and patchy areas of yeast cells consistent with pitosporum with Periodic Acid-Schiff can be observed. There is no evidence of parakeratosis or dermal infiltration by inflammatory cells [1,2,3,4,5]. The review of the literature shows that no dermatoscopic finding has been reported to data. Dermatoscopic examination in the present case showed triangular brownish areas interrupted by skin lines. We consider that this dermatoscopic finding is consistent with lamellar hyperkeratosis.

Although, TFFD is not a harmful disease, misdiagnosis may lead to unnecessary and expensive examinations such as detailed endocrinological blood tests, biopsy and histopathological examination.

Disorders such as dermatosis neglecta (DN), acanthosis nigricans, confluent and reticular papillomatosis, pityriasis versicolor, ichthyosis, and epidermal nevus must be taken into consideration in differential diagnosis. Different from TFFD, DN occurs in patients with poor hygiene, and the lesions can be removed both with water-soap washing and on rubbing with alcohol. In addition, histopathological finding of orthokeratosis creating an appearance of whorls is not observed in DN [1,4,5] The other disorders such as acanthosis nigricans, confluent and reticular papillomatosis may also be removed by rubbing with ethyl alcohol swabs [7].

Conclusion

The present patient had TFFD which subsided on rubbing with ethyl alcohol. Dermatoscopic examination showed triangular-shaped brownish areas interrupted by skin lines with

preserved follicular areas. We consider that these constitute typical dermatoscopic features of TFFD. If these features are kept in mind, unnecessary biopsy examinations and additional laboratory tests can be avoided. We suggest that dermatoscopic examination is a simple tool and should be used in diagnosis and/or in differential diagnosis from other dermatoses. The review of the literature shows that no dermatoscopic finding of TFFD has been reported till now. As conclusion, we think this present case guides for the importance of dermatoscopic examination in TFFD.

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