Volume 22 Number 6
June 2016

Letter

Non-invasive methods to establish the diagnosis of terra firma-forme dermatosis: The SMART (Skin Modified by Alcohol Rubbing Test) evaluation and dermoscopy

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Dermatology Online Journal 22 (6): 19

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Abstract

Terra firma-forme dermatosis may mimic a variety of hyper pigmented dermatoses. The diagnosis can be characterized using dermoscopy and confirmed with the SMART (Skin Modified by Alcohol Rubbing Test) evaluation. When terra firma-forme dermatosis (Duncan's dirty dermatosis) is clinically suspected, clearance of the dermatosis follows rubbing the affected skin with 70% isopropyl alcohol.

Key words: Duncan dirty dermatosis, isopropyl alcohol, SMART evaluation, terra firma, terra firma-forme

Letter to the editor

We read with interest the recent letter from Abdel-Razek and Fathy describing six cases of terra firma-forme dermatosis [1]. In this excellent publication, the authors use dermoscopy to further characterize the appearance of terra firma-forme dermatosis. This non-invasive diagnostic modality may be useful when differentiating terra firma-forme dermatosis from other conditions.

We recently described a case series of ten patients with terra firma-forme dermatosis [2]. Our patients were primarily men with a mean age of 70 years, and with several comorbidities. This is in contrast to the cases presented by Abdel-Razek and Fathy, which were predominantly women with a mean age of 17 years, and with no comorbid conditions. All of the patients in both series displayed clearance of the dermatosis following a SMART (Skin Modified by Alcohol Rubbing Test) evaluation.

The differential diagnosis of terra firma-forme dermatosis can be broad (Table 1) [2,3].

Table 1. Differential diagnosis of terra firma-forme dermatosis

Acanthosis nigricans
Confluent and reticulated papillomatosis
Dermatosis neglecta
Dirty neck syndrome of atopic dermatitis
Epidermal nevus
Epidermolytic hyperkeratosis

Erythema ab igne
Erythrasma
Granular parakeratosis
Hyperkeratosis of the nipple and areola
Iatrogenic eruptions
Ichthyosis
Idiopathic deciduous skin
Intertrigo
Omphalolith
Post-inflammatory hyperpigmentation
Prurigo pigmentosa
Pseudoacanthosis nigricans
Seborrheic keratosis
Stasis dermatitis
Tinea cruris
Tinea versicolor

Since terra firma-forme dermatosis can present in a wide range of locations, clinicians may narrow their list of differential diagnoses according to the location of their patient's dermatosis [4]. For example, terra firma-forme dermatosis had a predilection for concave areas in our case series of ten patients. Many of the areas involved included the inguinal folds, which can mimic other groin dermatoses and modify one's differential diagnoses accordingly [3].

In addition, we present two patients with similar appearing brown lesions on the dorsal feet. The first patient was a 51-year-old man who presented with hyperpigmented, dirty-appearing plaques on the dorsal first, second, and third toes bilaterally (Figure 1). The lesions were asymptomatic and had been present for at least several months.

Figure 1. Brown plaques are present on the dorsal first, second, and third toes on a 51-year-old man with terra firma-forme dermatosis (upper left). Resolution of a portion of the brown plaques after rubbing with several 70% isopropyl alcohol pads (upper right). The isopropyl alcohol pads after use, showing evidence of the brown pigmentation that was removed (lower left and right).

The second patient was a 71-year-old man who presented with hyperpigmented brown areas on the dorsal feet (Figure 2).

Figure 2. Stasis dermatitis, presenting as hyperpigmented brown areas on the dorsal left foot of a 71-year-old man, did not resolve after rubbing with 70% isopropyl alcohol.

SMART evaluation was performed on both individuals with clearing of the dermatosis only occurring in the younger patient (Figures 1). Further evaluation of the older patient's distal legs revealed brown discoloration and petechiae consistent with stasis dermatitis (Figure 3).

Figure 3. The 71-year-old man also had other clinical features of chronic stasis dermatitis, including brown discoloration and petechiae of the distal leg.

Therefore, although the older patient's lesions on the dorsal feet clinically mimicked terra firma-forme dermatosis, the SMART evaluation provided a rapid, non-invasive method to exclude this diagnosis.

In conclusion, the SMART evaluation and dermoscopy are simple procedures that can be performed when terra firma-forme dermatosis is in the clinical differential diagnosis.

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