CASE REPORT

A Case of Terra Firma-Forme Dermatitis Treated with Salicylic Acid Alcohol Peeling

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Terra firma-forme dermatitis (TFFD) is a bizarre, acquired and idiopathic dermatitis that etiology has still not been fully defined. It is characterized by the presence of asymptomatic, brownish dirt-like lesion maybe due to disorder of keratinization. These lesions cannot be removed with ordinary cleansing. Therefore, TFFD can be differentiated from dermatitis neglecta. Patient was a 17-year-old man with brownish lesions on his face for 1 month. The patient had a history of regular washing habit with soap and water. The lesions were asymptomatic however due to cosmetic reasons, the patient wanted to treat his skin lesions. Punch biopsy revealed hyperkeratosis and fungal spore are in stratum corneum. Salicylic acid peeling with alcohol base was performed on the patient's face. The skin lesions disappeared completely on gentle swabbing with peeling. In this point, the diagnosis of TFFD could be considered. Since, this disease can be confused with dermatitis neglecta, we report this case with literature review. (*Ann Dermatol* 29(1) 83~85, 2017)

-Keywords-

Dermatitis, Dirt-like dermatitis, Terra firma-forme dermatitis

INTRODUCTION

Terra firma-forme dermatitis (TFFD) is characterized by yellowish or brownish dirt-like lesion due to disorder or delay of keratinization without a known etiology. TFFD's skin lesions are usually asymptomatic and TFFD patients have normal washing habit. The differential diagnostic difference between TFFD and dermatitis neglecta is that TFFD's skin lesion cannot be removed by routine bathing habit. However, they have similar clinical manifestation and can be misdiagnosed with each other^{1,2}. TFFD is a rare disease with few in literature, however this disease maybe more common than literature since it could be misdiagnosed and unreported².

CASE REPORT

A 17-year-old male patient visited our department with large brownish plaques on his face without pruritic sensation since one month ago. He had normal washing habit and good general condition and had no other past medical history except using clindamycin with benzoic peroxide topical agent for his acne. He could not remove them with soap and he wanted to cure his skin problem because of cosmetic reason. Skin lesion was focused especially on his lateral aspect of both cheeks and chin with rough surfaced brownish hyperkeratosis (Fig. 1A). Skin biopsy was performed on the cheek for exact diagnosis. On histological study, hyperkeratotic epidermis with mild superficial dermal cellular infiltration and clusters of spores in the horny layer were seen (Fig. 2). The diagnosis of TFFD was considered because he had normal washing habit with clinical and histologic findings. We tried salicylic acid alcohol peeling to remove the skin lesion regarding the keratolytic property. With 20% salicylic acid in the alcohol, we performed peeling with cotton rubbing

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Fig. 1. (A) Brownish dirt-like hyperkeratotic plaque on the face. (B) After treatment.

Fig. 2. (A) Hyperkeratotic stratum corneum and dilated pore (H&E, $\times 40$). (B) Clusters of budding spores in the horny layer (H&E, $\times 200$).

and the skin lesion was taken off without strong force and normal skin appeared. After 1 week, we were able to see normal skin and treatment was completed (Fig. 1B).

DISCUSSION

TFFD was first described in 1987 and started to be reported much more recently^{3,4}. Clinically, TFFD is characterized by brownish hyperkeratotic dirt-like lesion resistant to usual normal washing with soap and water. Because all lesions can be easily removed by rubbing with alcohol, we need to know this bizarre disease compared to dermatosis neglecta to avoid unnecessary invasive examination and treatment. On the basis of the reported cases, TFFD develops commonly on the anterior aspect of the trunk, shoulder, neck, navel, flank and external ear in older children and adolescents whereas dermatosis neglecta affects patients of any age with poor hygiene¹. To the best of our knowledge, there is no reported TFFD on the face con-

firmed with biopsy^{5,6}.

Dermatosis neglecta (unwashed dermatosis) was first described in 1995 and the skin lesion clinically can look like brownish hyperkeratotic lesion that resemble to the TFFD, and these lesion are the result of avoiding washing^{7,8}. All of the lesions can be rapidly resolved with normal washing with soap or alcohol swab as well, which dermatosis neglecta could be differentiated from TFFD. History of washing habit is the most important point but TFFD and dermatosis neglecta are considered to be synonymous by some authors. Therefore, it is important to know the difference between these two diseases and therefore, we propose a separation of the terms^{1,7}.

Hyperkeratosis head and neck malassezia dermatosis (HHNMD) is characterized by hyperkeratotic lesion associated with malassezia on the face and neck that was first described in 2006⁶. The authors proposed HHNMD as variant of pityriasis versicolor and distinctive clinical entity. Interestingly, this reported case is similar to our case.

Given that malassezia can be found on any hyperkeratotic skin lesion as a normal flora, and it is not always a pathogenic organism, malassezia seems not a cause of HHNMD. Furthermore, this name is not used broadly. Therefore HHNMD should belong to TFFD as a subclass or variant according to historical and terminological reason and this 17-year-old male case should be diagnosed with TFFD. We propose that TFFD should be taken into consideration when dirt-like hyperkeratotic lesion is seen. We should also consider dermatosis neglecta in patients with poor hygiene, HHNMD as a subclass of TFFD in patients who have their skin lesions on face and neck. Other differential diagnosis includes pityriasis versicolor, confluent and reticulated papillomatosis, acanthosis nigricans, ichthyosis, seborrheic dermatitis, seborrheic keratosis and epidermal nevus³.

Forceful rubbing with gauze immersed into 70% alcohol can remove the lesions and the diagnosis of TFFD can be confirmed. Moreover, this examination can be one of the therapeutic options if there were a few lesions. Other treatment modalities include systemic or topical antifungal agent, topical steroid, urea cream and scrub bathing with pumice. In our patient, we tried chemical peeling with salicylic acid alcohol for good cosmetic result because forceful rubbing can severely irritate the face. With this peeling, brownish hyperkeratotic lesions were easily removed and the patient felt comfort without irritation. It is maybe due to keratolytic feature of salicylic acid and alcohol base. Cosmetic result was satisfied with only this treatment (Fig. 1B). To minimize recurrence, we propose repeated superficial peeling if necessary. Other treatment can have side effect such as resistant and irritation.

We report a case of TFFD on the face that improved by

chemical peeling treated only once. In addition, we discussed other diseases and their difference that appear like dirt-like lesion such as dermatitis neglecta and HHNMD. We all can differentiated and diagnosis regarding these disease with careful history taking, visual exam and alcohol gauze rubbing. Awareness of these conditions is required in order to prevent unnecessary laboratory or biopsy work-up⁹. Additionally, we propose salicylic acid alcohol peeling as one of the therapeutic options for TFFD.

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