Journal of the Turkish Academy of Dermatology
eISSN 1307-394X

Case Report
DOI: 10.6003/jtad.1484c8

A Case of Generalized *Flegel* Disease Successful Treatment with Acitretin

Ayşe Serap Karadağ,[1] MD, Mukaddes Kavala,[1] MD, Ebru Zemheri,[2] MD, Şeyma Özkanlı,[2] Berkant Oman,[1] MD, Zafer Türkoğlu,[1] MD, İlkin Zindancı,[1] MD

Address: Istanbul Medeniyet University, School of Medicine, [1]Dermatology, [2]Pathology, Istanbul, Turkey
E-mail: karadagaserap@gmail.com

** Corresponding Author:* Ayse Serap Karadağ, MD, Associated Professor Istanbul Medeniyet University, Department of Dermatology Istanbul, Turkey

Published:
J Turk Acad Dermatol 2014; **8 (4)**: 1484c8
This article is available from: http://www.jtad.org/2014/4/jtad1484c8.pdf
Key Words: Acitretin, Flegel disease, keratinization disorder

Abstract

Observation: Hyperkeratosis lenticularis perstans (HLP) known as *Flegel*'s disease is a rare keratinization disorder characterized by asymptomatic, small, reddish-brown keratotic papules with horny scales. In unusual variant, the trunk involvement has been reported as well. Here we report 80-year old woman presenting with generalized hyperkeratotic horny papules on her body. The clinical and histopathological findings were consistent with HLP. We report a case presenting with widespread *Flegel*'s disease who responded to acitretin treatment.

Introduction

Hyperkeratosis lenticularis perstans (HLP) or *Flegel*'s disease is a rare keratinization disorder and typically characterized by hyperkeratotic, red to brown, papules on the limbs, especially on the dorsum of the feet, ranging from 1 to 5 mm in size. It was first described by *Flegel* [**1**]. Its related skin lesions usually localize symmetrically on the limbs, particularly on the lower legs and dorsal aspects of the feet. It rarely can localize on the pinnae [**1,2**]. The age of onset is usually in the fourth or fifth decade. *Flegel*'s disease is more commonly seen in women than men [**1,2**]. Several treatments options such as emollients alone, topical 5-fluorouracil or retinoids have been used but their effectiveness is controversial [**2**]. Here in, we report a case presenting with widespread, *Flegel*'s disease who responded to acitretin treatment.

Case Reports

A 80-year-old female, first seen in our department 6 months ago, presented with scaly, erythematous, hyperpigmented, hyperkeratotic central cone shaped papules capped with horny plugs on the legs that started on the dorsum of the feet and spread rapidly to the upper extremities, buttocks, trunk, and upper thighs (**Figures 1A and B**). Lifting of the scale over the papules revealed pinpoint bleeding. No hair, nails and oral mucosa involvement were detected. Her past medical history was unremarkable. She did not take any systemic medications. Rest of the physical examination was within normal limits. No other family

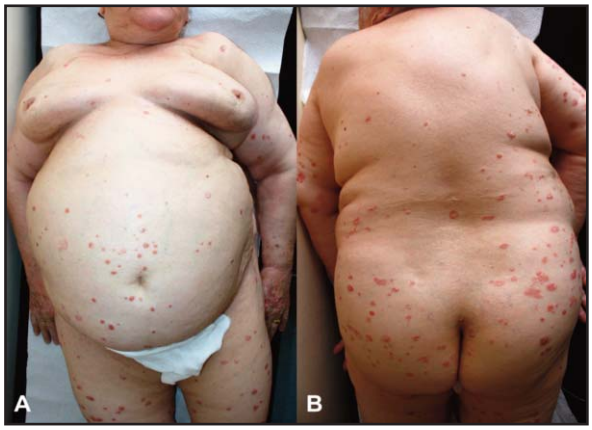

Figure 1. Scaly, erythematous, hyperkeratotic central cone shaped papules on the trunk (A) and buttocks (B).

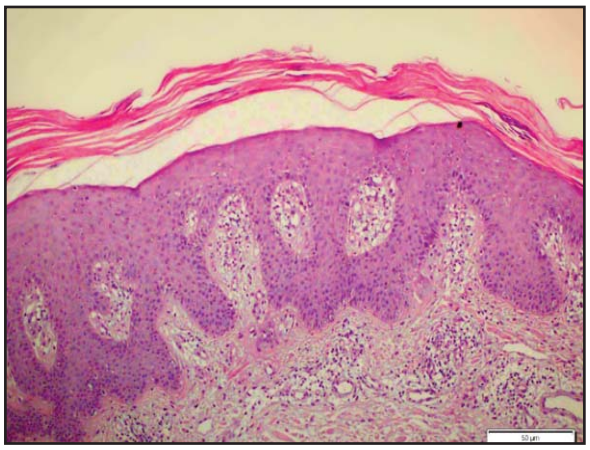

Figure 2. Histologically, there were seen hyperkeratosis, irregular acanthosis, flattening of the stratum malpighii, moderatelly perivascular lymphocytic infiltration.

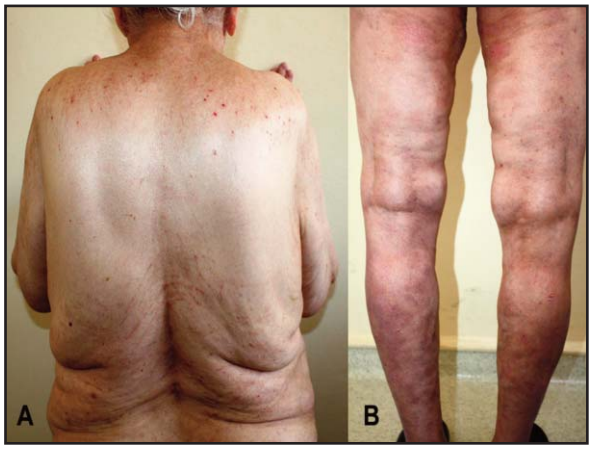

Figure 3. Posttreatment appearance of the patient's lesions on the back (A) and lower extremities (B).

member had a history of similar lesions. The skin lesions were pruritic. She applied various topical steroids, and moisturizers without significant improvement.

The skin biopsy assessment taken from arm and leg demonstrated hyperkeratosis, irregular acanthosis, flattening of the stratum malpighi, and moderately perivascular lymphocytic infiltration (**Figure 2**). The clinical and histopathological findings were consistent with HLP. The investigatory tests including complete blood count, blood sugar level, thyroid function tests, and X-ray chest were normal. She was initially treated with oral isotretinoin 30 mg/day (0,37 mg/kg/day) and topical steroid treatment, but they were not effective in the first three months. Then acitretin was started. The lesions were regressed with acitretin 30 mg/day in 3 months (**Figures 3A and B**).

Discussion

Flegel's disease or HLP is unusual dermatological disease. It usually affects the dorsum of the feet, but it can be seen thighs, upper arms and pinnae as well [**2**]. HLP related ear pinnae, arms, palms, soles, and oral mucosa has been reported, but the incidence is rare. In unusual variant, the trunk involvement has been reported as well [**3**]. In our case, the lesions spread to whole trunk. The previous reported cases were usually asymptomatic. Burning sensation was reported in a few cases [**2**]. However, our patient complained of itching.

The etiology of HLP is still unclear. Although a familial occurrence with an autosomal dominant inheritance cases have been described, most of the case are sporadic cases without any clear etiology [**1**]. There was not family history in our case. Male and female are usually affected equally. The age of onset is usually in the fourth or fifth decade [**4**]. In our case, the lesions appeared in the 7th decade.

The pathophysiology of HLP is not yet well understood. Immunohistochemical and electrophoretic studies are suggested keratinocyte proliferation may be underlying reason [**2**]. The other postulated mechanisms include ultraviolet light induction and cell-mediated cytotoxicity against epidermal cells [**5**].

The clinical and histopathological differential diagnosis of HLP are keratosis pilaris, Darier disease, follicular lichen planus, psoriasis, pityriasis lichenoides, skin lesions of scurvy, Kyrle's disease, porokeratosis, stucco keratosis, and lichen planus and other follicular keratotic lesions [**1,5**].

Treatment of this disease is challenging, several treatments have been tried with various responses. Thus, there is no standard treatment of *Flegel*'s disease. Simple moisturizers and topical 5-fluorouracil can be helpful. Topical retinoids and betamethasone-17- valerate cream are not effective. Systemic retinoids can be helpful but it is difficult to justify for benign and asymptomatic cases due to its side effects [**2**]. The other treatments including vitamin D3 derivatives, 5-fluorouracil, topical and systemic retinoids, and psoralen plus ultraviolet A (PUVA) can be used as well [**1,2,3,4,5**].

Our case had some rare features of rarely seen *Flegel*'s disease. The lesions were widespread and very itchy. Isotretinoin was unsuccessful in our patient, but acitretine was succesfull in the treatment. Retinoids are successful in treatment of keratinization disorders such as *Flegel* disease as a rare entity.

References

1. Sterneberg-Vos H, van Marion AM, Frank J, Poblete-Gutierrez P. Hyperkeratosis lenticularis perstans (Flegel's disease)- successful treatment with topical corticosteroids. Int J Dermatol 2008; 47: 38-41. PMID: 18986485
2. Cooper SM, George S. Flegel's disease treated with psoralen ultraviolet A. Br J Dermatol 2000; 142: 340-2. PMID: 10730771
3. Miljković J. An unusual generalized form of hyperkeratosis lenticularis perstans (Flegel's disease). Wien Klin Wochenschr 2004; 116: 78-80. PMID: 15506318
4. Ravat FE, Ratnavel RC. Case 3: widespread scaly papules affecting a patient's limbs and pinnae giving the skin a rough feeling. Diagnosis: Flegel's disease. Syn. hyperkeratosis lenticularis perstans. Clin Exp Dermatol 2003; 28: 339-40. PMID: 12780736
5. Patel KB. Hyperkeratosis lenticularis perstans: case report of a rare entity. Indian J Dermatol 2013; 58: 161. PMID: 23716839