Successful treatment of chronic persistant vesicular hand dermatitis with topical pimecrolimus

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ABSTRACT

Hand dermatitis is a common chronic skin condition that has many clinical forms including contact, hyperkeratotic, frictional, nummular, atopic, pompholyx and chronic vesicular hand dermatitis. Topical steroids are the first line agents used. Here, we report the successful response to topical pimecrolimus 1% cream in a patient with steroid resistant chronic vesicular hand dermatitis.

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Hand dermatitis is a common relapsing skin condition. Its prevalence in the general population is approximately 2-8.9%.[1-5] Previous descriptions include several clinical variants: contact (allergic and irritant), hyperkeratotic (psoriasiform or tylotic), frictional, nummular, atopic, pompholyx and chronic vesicular hand dermatitis. Specifically, when hand dermatitis is chronic, pruritic, vesicular, and mostly palmar we call it chronic vesicular hand eczema, and we must differentiate it from pompholyx by the more chronic course and the presence of vesicles with an erythematous base in the former. The eruption often stops at the wrist, and either spares the dorsal hands or involves the fingertips only. It may also involve the soles of the feet. The condition may be extremely difficult to treat.[6] In one series, Li and Wang[7] found patch testing to be positive in 55% of patients with this pattern of hand dermatitis. Generally, treatment of chronic hand dermatitis is by life-modifying factors, aggressive use of emollients to help restore normal skin-barrier, topical or systemic steroids, phototherapy, immunosuppressives, immunomodulators and retinoids.[6] In this report, we reveal the effectiveness of topical pimecrolimus in the treatment of steroid resistant vesicular hand dermatitis.

Case Report. A 45-year-old Saudi female presented to the dermatology clinic with chronic relapsing pruritic bilateral vesicular palmar eruption of 7 years duration. Since that time, the patient was treated intermittently with moderate potency steroids and emollients, which did not completely clear the condition. She admits using self prescribed high potency steroid for a week or more whenever the condition becomes worse. When she presented to us, she was 3 weeks off topical steroid treatment due to its ineffectiveness. The patient is not atopic, and she works as a social worker with no specific hand related hobbies. Examination of both hands revealed the presence of erythematous-based vesicles affecting the palms and palmar aspects of most fingers. There was scaling and dryness of some areas (**Figure 1**). Signs of atrophy due to chronic use of topical steroids were obvious on the palms. The dorsa of both hands were not affected.

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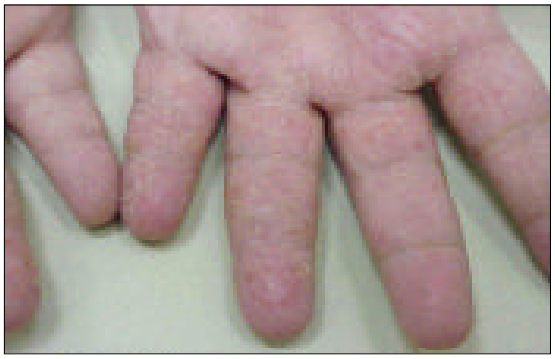

Figure 1 - Erythematous based vesicular dermatitis with scaling.

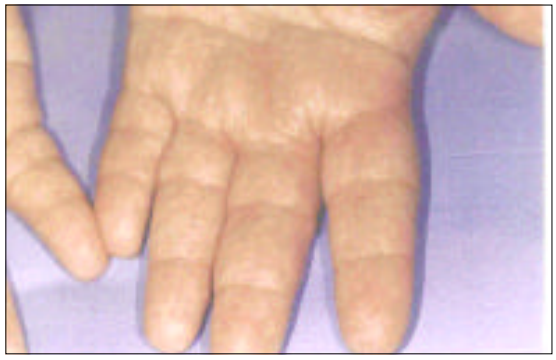

Figure 2 - Complete resolution of the eruption after 4 weeks of topical pimecrolimus treatment.

Serum IgE level was normal and scraping of the scales was negative for the presence of hyphae. Accordingly, the patient was diagnosed as a case of chronic relapsing vesicular hand dermatitis. Patch test was carried out and showed negative results. As the patient reported chronic use of topical steroids, we decided to start her on pimecrolimus 1% cream twice a day for 2 weeks with no occlusion at night plus emollients. Upon follow up, her condition improved almost 90%, with few vesicles seen only on the fingers. She remained on the same treatment for another 2 weeks, after which the patient was very satisfied with the completely resolved hand dermatitis with no side effects (**Figure 2**). She now uses emollients with no reported relapse after 5 months of pimecrolimus discontinuation. There was also an obvious improvement of the palmar skin atrophy.

Discussion. Vesicular hand dermatitis is a chronic, pruritic, vesicular, eruption that affects the palms and we can differentiate it from pompholyx by its chronic course, and the presence of vesicles on an erythematous base. We can treat it with topical steroids, whose prolonged use is limited by systemic and local side effects such as skin atrophy, striae, and telangiectasia,[6,8] topical immunomodulators (Pimecrolimus and Tacrolimus),[9,10] Psoralen and UVA irradiation,[11-14] UVA1,[15] Prednisone,[6] Cyclosporine,[16,17] and Mycophenolate mofetil.[18,19] Nonsteroidal topical immunomodulating agents such as tacrolimus (FK 506) and pimecrolimus (SDZ ASM 981) inhibit the release of inflammatory cytokines from T-lymphocytes and mast cells and have been studied in treating chronic eczematous skin diseases.[20-22] Their most commonly reported adverse side effect was transient skin burning or a sensation of warmth occurring in approximately 50% of patients treated with topical tacrolimus and 10% with pimecrolimus.[6,21,22] Belsito[9] and colleagues reported the efficacy of pimecrolimus 1% cream under occlusion in patients with mild to moderate chronic hand dermatitis with no specification of the subtypes that were most responsive to the treatment.[9] While Thaci et al[23] used pimecrolimus 1% cream in 12 patients with moderate to severe chronic hand dermatitis (both irritant and allergic contact dermatitis) and reported 49% improvement.[23] Our patient is a case of chronic steroid resistant relapsing vesicular hand dermatitis who responded dramatically to pimecrolimus 1% cream. This indicates that we should consider topical pimecrolimus in line with conventional treatment of chronic hand dermatitis, and specifically in chronic vesicular hand dermatitis, or even as a rotational treatment with topical steroids to minimize their side effects.

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