Dermatol Ther (2011) 1(1):20-24.
DOI 10.1007/s13555-011-0005-z

CASE REPORT

Erosive Lichen Planus of the Soles: Effective Response to Prednisone

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Received: July 19, 2011 / Published online: August 22, 2011

ABSTRACT

Background: Erosive lichen planus (LP) of the soles is a rare variant of LP, characterized by chronic, painful, and disabling plantar ulcerations. Herein, we report a case with complete healing following treatment with systemic steroids. ***Case report:*** A 38-year-old woman was referred with painful and disabling erosive bilateral plantar LP, which she had experienced for 6 weeks. A 1 mg/kg/day, oral prednisone therapy led to rapid improvement and complete healing within 3 weeks, with a sustained result under a low dose maintenance therapy. ***Discussion:*** Ulcerative plantar LP is significantly known to be unresponsive to several topical and systemic therapies. Surgical excision and grafting is the treatment of choice. Systemic steroids are reported to have inefficient or partial results; both on cutaneous healing and on maintenance of the result. Our patient achieved complete cicatrisation with a sustained result of 3 months under a low dose of prednisone (5 mg/day).

Keywords: erosive lichen planus; lichen planus; prednisone; soles; systemic steroids

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INTRODUCTION

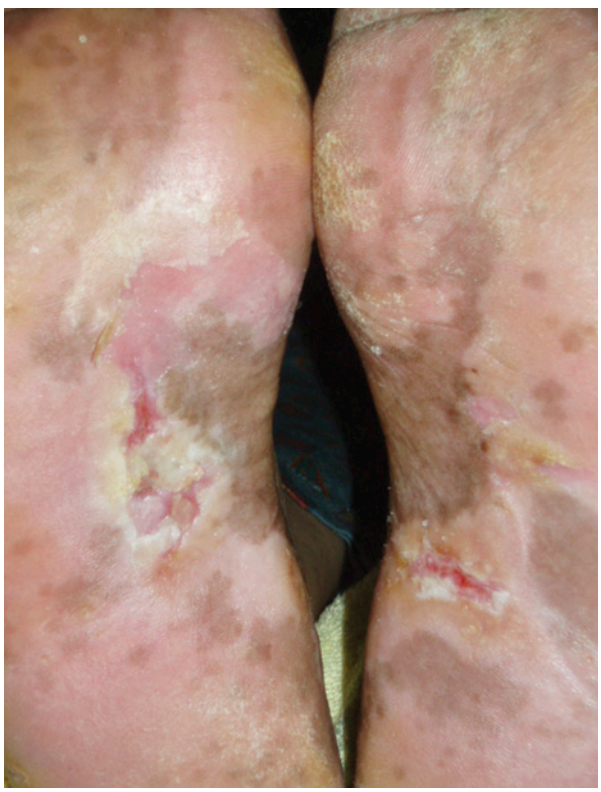
Erosive, or ulcerative, lichen planus (LP) is a rare variant of LP; mainly affecting the oral cavity and genitalia. Plantar location is less common, with only a few reported cases in the literature.[1,2] Erosive LP of the soles is characterized by painful erosions leading to limited mobility and disability. Due to its rarity, its treatment remains nonstandardized and difficult.[3] This study presents a female patient with erosive LP

of the soles whose condition rapidly improved with systemic steroids treatment.

CASE REPORT

A healthy 38-year-old woman was referred with painful and disabling erosive bilateral plantar LP, which she had experienced for 6 weeks. The patient reported that she had a 5-year history of recurrent episodes of pruritic bilateral plantar keratoderma that had preceded the plantar ulcerations with progressive toenail pigmentation. There was no malady in her background and family history, and there was no history of drug intake before the lesions had appeared. Upon referral, the patient was in extreme pain, could not walk without crutches, and spent much of each day in bed. Before this study, she had previously received several treatments (topical steroids under occlusion, topical salicylic acid, and systemic methotrexate) without success.

Figure 1. Bilateral erosions on internal plantar archs.



On clinical examination, there was bilateral, cracked plantar keratoderma. On the internal plantar archs, there were bilateral ill-defined, exsudative, red erosions of 6 cm by 4 cm on the right foot, and of 3 cm by 2 cm on the left foot (Figure 1). The surrounded skin appeared slightly erythematous and pigmented. There was bilateral palmar keratoderma and longitudinal melanonychia of all toenails (Figure 2). No more anomalies of neither the fingernails nor the toenails were observed. Cutaneous examination was otherwise normal; including oral and genital mucosa, and the scalp. Routine laboratory parameters were normal and markers for hepatitis B and C were negative. Histopathological findings on a cutaneous biopsy were consistent with the diagnosis of LP, showing epidermal hyperplasia with elongated rete redges, apoptotic keratinocytes (Civatte bodies), and band-like lymphocytic infiltration in the superficial dermal area, with exocytosis toward the basal layer (Figure 3). The patient was given 1 mg/kg/day (90 mg/day) of prednisone.

This treatment produced a rapid clinical improvement, with a significant reduction of pain at the end of the first week, and complete healing within 3 weeks (Figure 4). At 4 weeks of therapy, prednisone was gradually reduced by 10 mg a week. The patient was examined

Figure 2. Longitudinal melanonychia of toenails.

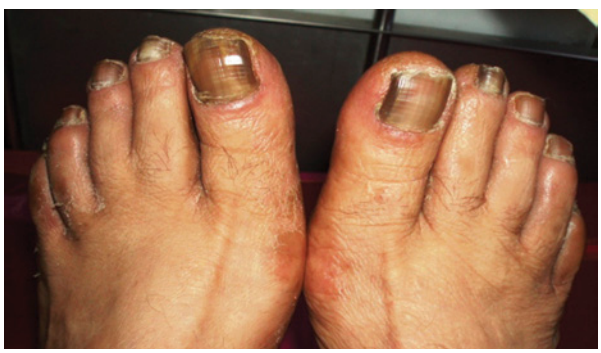


Figure 3. Epidermal hyperplasia, elongated rete ridges, and bandlike lymphocytic infiltration in the superficial dermal area.

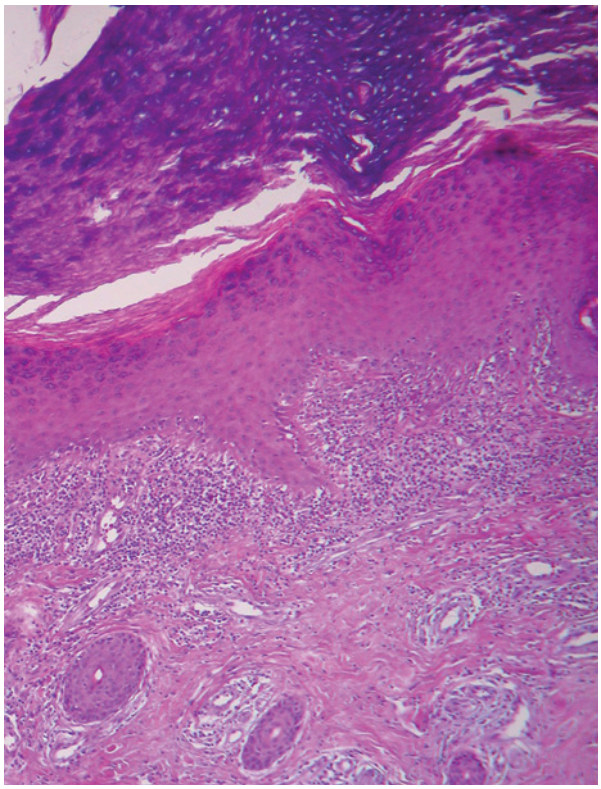
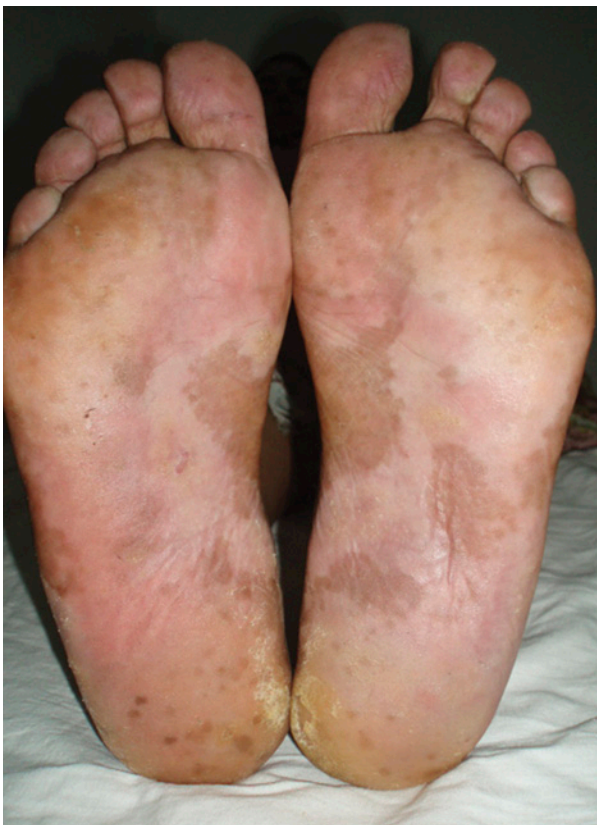


Figure 4. Complete healing of the erosions within 3 weeks under systemic steroids.



at 3 months of therapy, and was fully mobile with no signs of recurrence. Unfortunately, the patient was lost to follow-up during treatment with 5 mg/day of prednisone.

DISCUSSION

Erosive plantar LP is an unusual and aggressive variant of LP.[4] Few cases have been reported in the literature since the first description by Friedman in 1921.[5] It is an adult-onset disease and women are more affected than men.[6] It is characterized by chronic, painful, disabling, large and superficial ulcers which show irregular form, inflammation, and an exsudative base. It can be difficult to diagnose ulcerative LP of the soles when it appears as an isolated finding. However, it is usually associated with typical cutaneous lesions of LP, cicatricial alopecia, erosive LP of the oral mucosa or genitalia, and nail abnormalities; especially atrophy of the nail bed, anonychia, pterygium formation, and toenail loss.[4,5,7] This patient had only palmar keratoderma and longitudinal melanonychia of the toenails, which has not been reported previously in plantar erosive lichen. Atypical locations have been reported in a few cases, such as the pretibial zone and flexural areas.[1,8]

Several authors have drawn attention to the association of ulcerative LP and autoimmune diseases, such as autoimmune thyroiditis, associated with primary biliary cirrhosis and Sjögren's syndrome.[9,10] However, this study did not investigate autoimmune diseases for the referred patient. Ulcerative plantar lichen should be differentiated from severe eczema,

localized bullous pemphigoid on the soles, and plantar erythrodysesthesia; a relatively common side effect of some types of chemotherapy, such as gefitinib.[11] Ulcerative LP of soles is significantly known to be unresponsive to several therapies: topical and systemic steroids, etretinate, chloroquine, dapsone, cyclosporine A, and thalidomide, which give only partial and temporary benefits with frequent recurrences.[12]

Since the first reported treatment, surgical excision followed by skin grafting seems to be the only treatment that has proven its efficacy, and the reported grafted cases were completely successful, with no recurrence during a follow-up period of 18 months to 26 years.[7] The combination of systemic cyclosporine and surgical excision, followed by skin grafting, is also recommended, since cyclosporine is excellent for the management of inflammation; allowing the successful outcome of the skin graft.[4] Topical tacrolimus has also been reported to have produced rapid clinical improvement in a few studies. In one study, 95% healing was reported after 4 weeks,[2] whilst in another, complete healing was reported within a few weeks; however, the latter study had complete remission during a follow-up period of more than 2 years.[3] The use of systemic corticosteroids in the treatment of LP have been reported in rare cases. Eisman and Orteu prescribed a combination of prednisolone (30 mg/day) and acitretin (20 mg/day) for 4 months without significant benefit,[8] whilst in another case, authors reported poor results with systemic corticosteroids.[2] In this current patient, oral prednisone was immediately favorable, leading to complete healing of ulcerations after 3 weeks. Quality of life and mobility were also significantly enhanced. This study obtained a sustained result of 3 months under a low dose of prednisone (5 mg/day). However, this study is unable to evaluate long-term efficacy of oral steroids in the absence of long-term patient follow-up.

CONCLUSION

Despite many treatment modalities used to treat ulcerative LP, it is still considered a resistant disease. We obtained an effective response with oral prednisone; however, further studies are required to assess this result and to evaluate its long term benefit.

ACKNOWLEDGMENTS

Dr. Goucha declares that there is no funding or sponsorship received in relation to this paper. Dr. Goucha is the guarantor for this article, and takes responsibility for the integrity of the work as a whole. There are no other person(s) who contributed to the manuscript other than the authors named.

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