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Nail Lichen Planus: Successful Treatment with Etanercept

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Key Words
Nail lichen planus · Treatment · Biologics · Etanercept

Abstract
Background: Etanercept is a fully human tumor necrosis factor α receptor fusion protein that binds tumor necrosis factor α with greater affinity than natural receptors. Biologics are widely used in the treatment of psoriasis and psoriasis arthritis and may represent a new therapeutic option for some patients with psoriatic nail disease.
Case Report: We report a case of lichen planus limited to the toe nails successfully treated with etanercept monotherapy.
Conclusion: The significant improvement of our case suggests that etanercept is an effective treatment modality for lichen planus limited particularly to the nails. Further controlled studies are needed to establish the effectiveness and therapeutic regimes.

Introduction

Lichen planus (LP) is an inflammatory skin disorder with great polymorphism of its clinical appearance. Nail involvement occurs in 10% of patients with disseminated disease and may also develop in the absence of cutaneous symptoms as a destructive inflammatory onychodystrophy [1]. Treatment of nail LP is difficult and disappointing. Biological therapies are now widely used for moderate to severe chronic plaque psoriasis and psoriasis arthritis. A number of recent reports have been published on the use of biologics such as tumor necrosis factor (TNF)-antagonists (e.g. etanercept [2], infliximab [3, 4]) as new therapeutic option for psoriatic nail disease.

Case Report

A 53-year-old Caucasian woman was referred to our department for evaluation of onychodystrophy involving multiple fingers and toe nails. The painful nail changes had progressively appeared over the past 5 years and were extremely disabling in daily living activities. Except for an atopic constitution with chronic eczema and seasonal allergic rhinoconjunctivitis, her past medical history was noncontributory and she was not on any regular systemic medication. Clinical examination of the affected nails showed

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onychodystrophy, discoloration, subungual hyperkeratosis as well as some longitudinal ridging, striation, splitting and thinning (fig. 1). The diagnosis of nail LP was made based on these clinical features. The patient had no other evidence of skin or mucosal involvement of LP or psoriasis. Since several topical treatments, including potent topical steroids, topical cyclosporine, tazarotene cream and systemic retinoids, had been ineffective, treatment with systemic cyclosporine 250 mg/day (3 mg/kg body weight) was initiated, which lead to significant improvement of most nails. However, since the patient developed arterial hypertension, treatment with cyclosporine was discontinued after 3 years. A relapse particularly of her toe nails occurred within a few weeks. Therapy with etanercept (25 mg s.c. twice weekly for the first 6 months and 50 mg s.c. once weekly thereafter) was then initiated, which again lead to a marked improvement of her toe nail lesions within 6–9 months (fig. 2). Therapy was well tolerated with no side-effects.

Discussion

LP is considered to be a T-cell mediated autoimmune skin disease, in which autoreactive CD8+ cytotoxic T lymphocytes are key effectors through the induction of keratinocyte lesions [5]. There is one report of a patient with refractory oral and cutaneous LP who experienced significant improvement after therapy with efalizumab [6]. Another report on the use of alefacept in two patients with LP showed a dramatic response of all skin lesions [7]. Etanercept is a fully human TNF-α receptor fusion protein that binds TNF-α with greater affinity than natural receptors. It is approved for the treatment of rheumatoid arthritis, juvenile rheumatoid arthritis, ankylosing spondylitis, psoriasis and psoriasis arthritis in the USA, Canada and Europe. One case of severe erosive LP was reported to be improved by etanercept [8]. On the other hand, a case of LP occurring during etanercept therapy for rheumatoid arthritis was described, indicating that anti-TNF-α therapy may also be associated with the paradoxical induction of inflammatory disease such as psoriasis eruptions [9].

The significant improvement of our case suggests that etanercept is an effective treatment option for LP limited to the nails. Further controlled studies are warranted to determine more accurately both the effectiveness and therapeutic regimes of etanercept in this indication.

Disclosure Statement

Dr. Yawalkar has served as a consultant to Pfizer.

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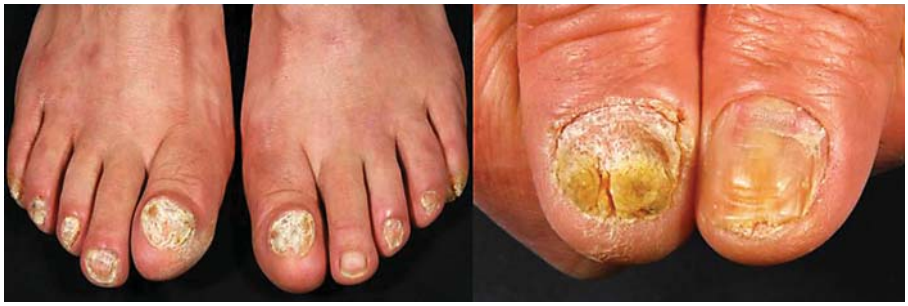

Fig. 1. Clinical features at presentation.

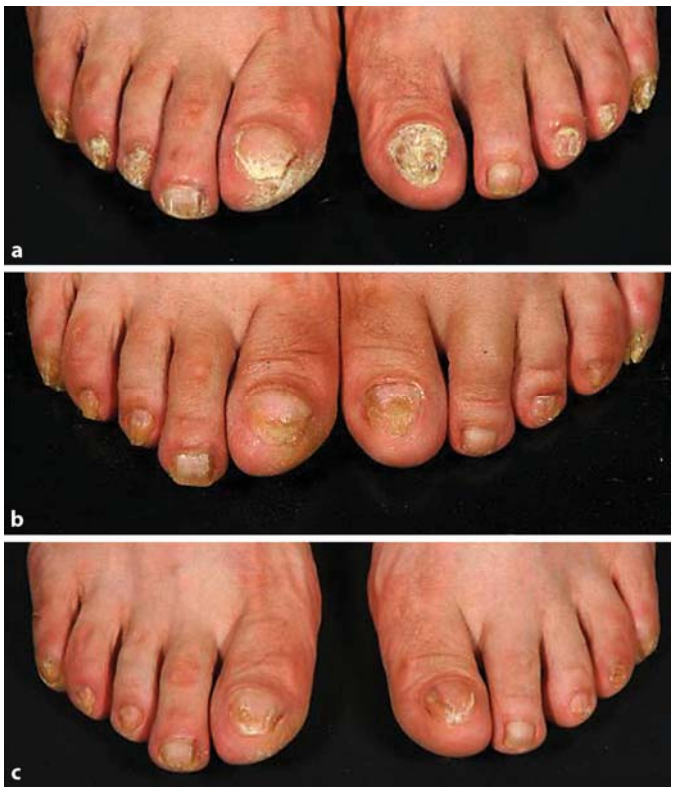

Fig. 2. Clinical findings of the patient before (**a**), 3 months (**b**) and 9 months (**c**) after etanercept monotherapy (25 mg s.c. twice weekly for the first 6 months and 50 mg s.c. once weekly thereafter).

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