

A Case of Complete Resolution of Severe Plantar Dyshidrotic Eczema With Dupilumab

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CASE

A 44-year-old woman with a history of asthma, hypercholesterolemia, and impaired glucose tolerance presented with severely painful and intensely pruritic plantar dermatitis for more than two years that impaired her ability to walk. Her hands were also affected but less severely than her feet. Bilaterally, her palms and soles displayed hyperkeratotic, eczematous, erythematous papules, and plaques (Figure 1A). Biopsy of the plantar surface was consistent with dyshidrotic eczema (DE). Patch testing did not reveal any contact allergens. Initial treatment consisted of clobetasol 0.05% ointment, tacrolimus 0.1% ointment, urea 40% cream, cetirizine, and hydroxyzine, which provided partial but non-sustained improvement. She also failed excimer laser therapy. Her last recurrence was severe and complicated by secondary impetiginization that required oral antibiotics and systemic corticosteroids.

Treatment with dupilumab was initiated with a loading dose of 600 mg subcutaneous (SC), followed by 300 mg SC every 14 days. Following the third injection, the patient could walk and exercise without pain, and her pruritus also improved significantly (Figure 1B). After 8 weeks of maintenance treatment, her skin was completely clear (Figure 1C). Adverse effects related to dupilumab were limited to injection site pain and ongoing pruritic conjunctivitis. She was referred to ophthalmology for further treatment. A recently published case series showed that both tacrolimus 0.03% eye ointment and fluorometholone 0.1% eye drops resulted in significant improvement in cases of dupilumab-associated ocular irritation.[1]

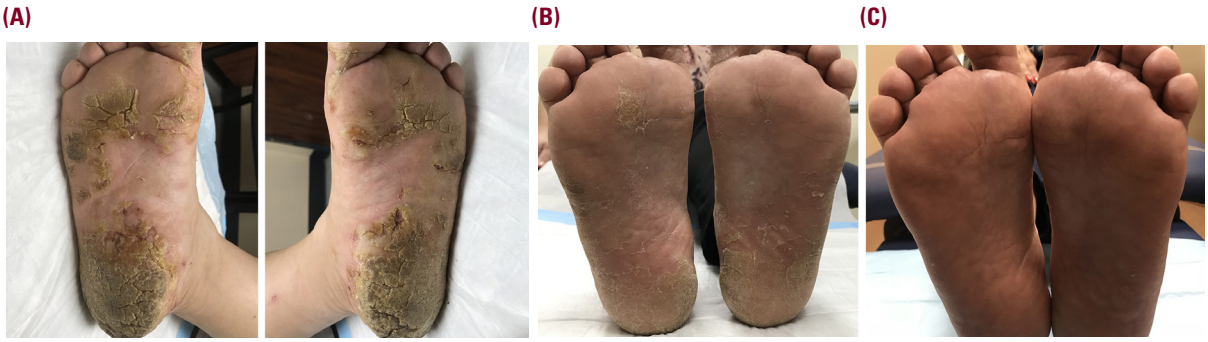
DISCUSSION

This case describes the successful use of dupilumab in severe DE with improvement noted after 3 doses. The patient's dermatitis and associated pain and pruritus resolved completely, which enhanced her quality of life.

Dyshidrotic Eczema can be difficult to treat and often results in significant morbidity and reduced quality of life.[2] Currently, there are no treatments for DE approved by the US Food and Drug Administration (FDA). Topical corticosteroids are the mainstay of treatment. In severe cases, patients may require the addition of topical calcineurin inhibitors, phototherapy, or systemic medications such as cyclosporine, methotrexate, mycophenolate mofetil, or apremilast.[3] However, response to these treatments is variable.

Dupilumab is the first FDA-approved biologic medication to treat moderate-to-severe atopic dermatitis (AD). This monoclonal antibody targets the IL4αR, inhibiting both IL-4 and IL-13. Inhibiting these mediators disrupts downstream signaling of the JAK/STAT pathway involved in the inflammatory process of AD.[4] Our case echoes the findings in two recent publications that demonstrate significant improvement in DE in 5 patients in total, suggesting that dupilumab may be a safe and effective therapy for severe DE.[5,6] Given the sometimes-recalcitrant nature of DE, the impact on quality of life, and the accumulating evidence in support of this therapy, it may be reasonable to consider dupilumab early for refractory cases.

FIGURE 1. Complete clearance of severe plantar dyshidrotic eczema with dupilumab. **(A)** Prior to treatment with dupilumab, **(B)** six weeks, and **(C)** 12 weeks after initiating therapy with dupilumab.



DISCLOSURE

The authors have no declared conflicts of interest.

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