SKIN

BRIEF ARTICLE

Palmoplantar Psoriasis Treatment with Topical Roflumilast 0.3%

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ABSTRACT

Palmoplantar psoriasis is a manifestation of psoriasis that includes pustules, scales, and erythematous hyperkeratotic plaques on the palms of the hands and the soles of the feet. Despite being limited to these regions, palmoplantar psoriasis is difficult to treat and imposes a greater level of quality-of-life burden compared to plaque psoriasis. We describe a case of palmoplantar psoriasis refractory topical corticosteroid and dupilumab that was successfully treated with topical roflumilast 0.3% once daily.

INTRODUCTION

Palmoplantar psoriasis is a difficult to treat, localized form of psoriasis that occurs on the palms of the hands and the soles of the feet.[1] This disease can have various manifestations including pustules, scales, and erythematous hyperkeratotic plaques.[1] Palmoplantar psoriasis makes up between 3-4% of psoriasis cases.[1] While limited to the hands and feet, patients with palmoplantar psoriasis may report even greater health-related quality of life (QoL) impairment than those with moderate to severe plaque psoriasis.[2] Palmoplantar psoriasis is influenced by a mix of genetic and environmental factors. The human leukocyte antigen (HLA) Cw6 is a key genetic factor linked to the condition. Environmental triggers that can exacerbate or lead to relapses include smoking, exposure to certain detergents, seasonal changes, as well as friction and repetitive trauma to the palms and soles.[3,4] Treatments for palmoplantar psoriasis include topical corticosteroids, retinoids, calcineurin inhibitors and biologics.[5] Roflumilast cream 0.3% is a highly selective and potent topical phosphodiesterase4 (PDE4) inhibitor approved in 2022 by the FDA for the treatment of psoriasis, including intertriginous areas. In this case, we report a 62-year-old male patient suffering from palmoplantar psoriasis with significant thick scaly eruptions on the hands, feet and trunk that were painful, pruritic, and refractory to dupilumab and steroid treatment. Topical roflumilast 0.3% once daily was initiated while waiting for a guselkumab prior authorization to be approved and greatly improved the symptom burden ultimately leading to no therapeutic escalation.

CASE REPORT

A 62-year-old male with a past medical history of hypertension, hyperlipidemia and type 2 diabetes mellitus presented to clinic for a several year history of thick scaly plaques on the hands, feet and trunk that were painful and itchy. While the psoriasis on the trunk was adequately treated with topical

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corticosteroids, the lesions on the hands and feet hindered the patient's ability to work, rest and perform his hobbies (**Figure 1**).

The patient was treated with numerous topical steroids including betamethasone, augmented .05% and clobetasol .05% ointment for over two years with sub-optimal efficacy. The patient was then treated with dupilumab for presumed atopic dermatitis for three months which lead to a modest improvement of itch but not the overall rash. A biopsy of the palm was performed and revealed psoriasiform dermatitis. This biopsy results, along with the sub-optimal response to dupilumab, lead to a diagnosis of palmoplantar psoriasis. While waiting for the prior authorization for guselkumab, roflumilast cream 0.3% once daily was started to serve as a bridge to therapy. While in this waiting phase and at the patients 6 week follow up, the patient had markedly diminished pain, itching, scaling and erythema (**Figure 2**) and elected to decline biologic treatment. The patient had a clinically meaningful reduction in itch and was therefore able to return to full time work, sleep soundly and enjoy hobbies including working on vintage automobiles.

DISCUSSION

This case report of a 62-year-old male treated with roflumilast cream 0.3% for palmoplantar psoriasis resulted in a greater improvement of pruritic and pain burden compared to topical corticosteroids and dupilumab therapy. Roflumilast cream 0.3% applied once daily exemplified a different treatment regimen in comparison to other case studies, one of which included TCA chemical peel followed by gentian violet, requiring office time.[6] This case also illustrates a cost savings opportunity to avoid biologic use. The patient was awaiting prior authorization for guselkumab but elected to forgo treatment because of his improvement on topical roflumilast 0.3%. Overall, this case serves as evidence that roflumilast cream 0.3% may be a safe and novel treatment for those who suffer from palmoplantar psoriasis.

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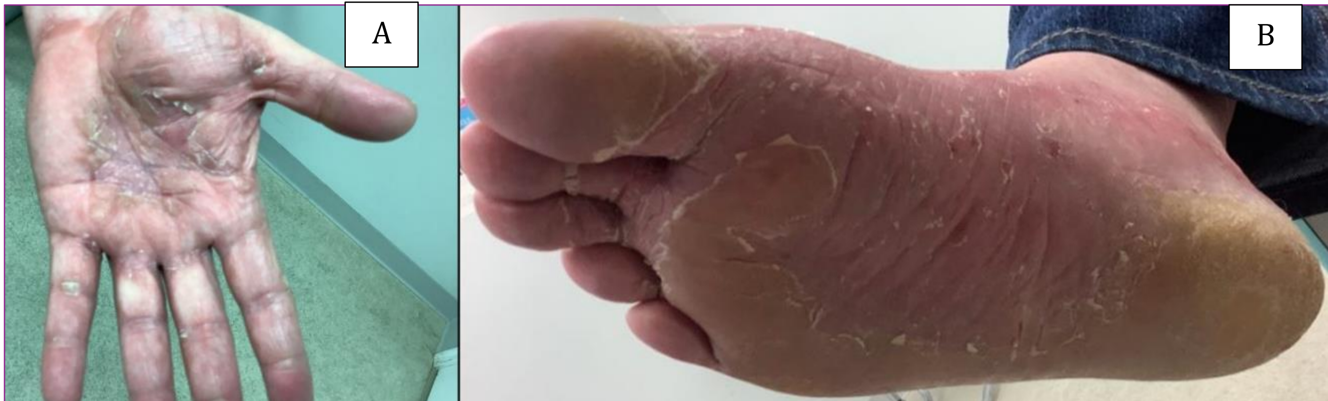

Figure 1. (A) Palms and (B) soles of a patient with palmoplantar psoriasis prior to treatment with roflumilast cream 0.3%.

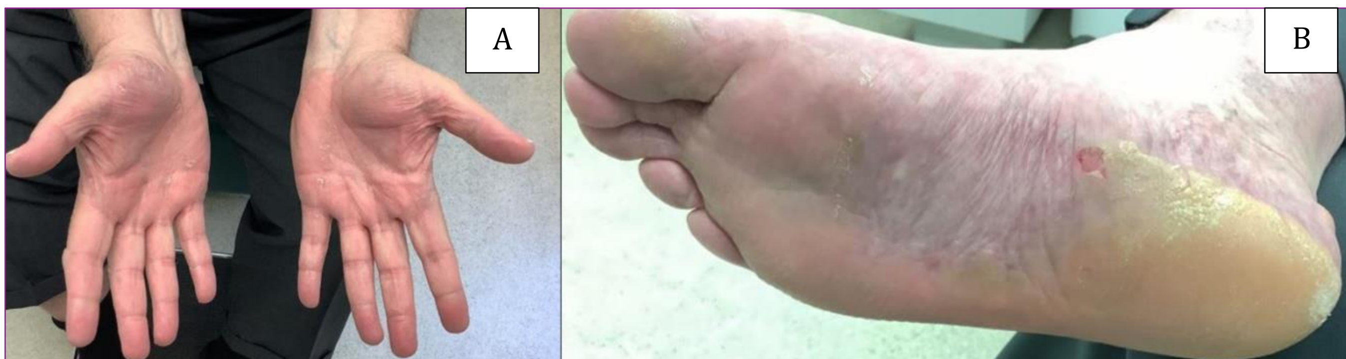

Figure 2. (A) Palms and (B) soles of a patient with palmoplantar psoriasis following six weeks of treatment with roflumilast cream 0.3% once daily.

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