Complete response of secukinumab in palmoplantar psoriasis

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Abstract

Palmoplantar psoriasis is plaque psoriasis involving the palms and soles. Palmoplantar psoriasis is a treatment challenge for dermatologists and it is difficult to treat with topical and systemic therapies. Owing to its location and manifestations, palmoplantar psoriasis is associated with greater pain, functional limitations, and significant impairment of health-related quality of life. Recently a new biologic agent, secukinumab, has been approved for treatment of moderate to severe plaque psoriasis. GESTURE trial is a study of the secukinumab clinical development that evaluates efficacy and safety in this subpopulation of patients. We present a patient with palmar psoriasis refractory to systemic treatments who showed a gradual and complete response to secukinumab sustained at week 30 and without adverse events. Our patient had a significant improvement in his quality of life and work activity.

Keywords: psoriasis, palmoplantar psoriasis, secukinumab, interleukin-17

Introduction

Palmoplantar psoriasis is plaque psoriasis involving the palms and soles. Studies have shown that up to 40 percent of patients with plaque psoriasis have some form of palmoplantar involvement, appearing previously or during their plaque psoriasis course [1]. Owing to its location and manifestations, palmoplantar psoriasis is associated with greater pain, functional limitations, and significant impairment of health-related quality of life.

Palmoplantar psoriasis is a treatment challenge for dermatologists and it is difficult to treat with topical and systemic therapies. Treatments that achieve a good response in other parts of the body may perform poorly in palmoplantar regions. However, some biologic agents have shown partial and total responses in this type of psoriasis. There are a few trials studying the effect of systemic therapies on palmoplantar psoriasis.

Recently a new biologic agent, secukinumab, has been approved for treatment of moderate to severe plaque psoriasis. Secukinumab is a fully human monoclonal immunoglobulin G1κ antibody targeting human interleukin-17A, an important cytokine in the pathogenesis of psoriasis [2].

In the Summary of Product Characteristics of the European Medicines Agency, the efficacy of secukinumab in palmoplantar psoriasis is noted [2]. GESTURE study is a double-blind, randomized, placebo-controlled, parallel-group multicenter phase 3b study that evaluated the efficacy of secukinumab in palmoplantar psoriasis. One-third of patients receiving secukinumab 300mg achieved clear or almost clear palms and soles at week 16 [2,4].

Case Synopsis

A 63-year-old man with a 15-year history of psoriasis vulgaris with palmar involvement presented in our dermatology clinic. He had no family history of psoriasis and did not have psoriatic arthritis. He weighed 90kg and had metabolic syndrome, managed with antihypertensive medication.

Palmar involvement had not responded adequately

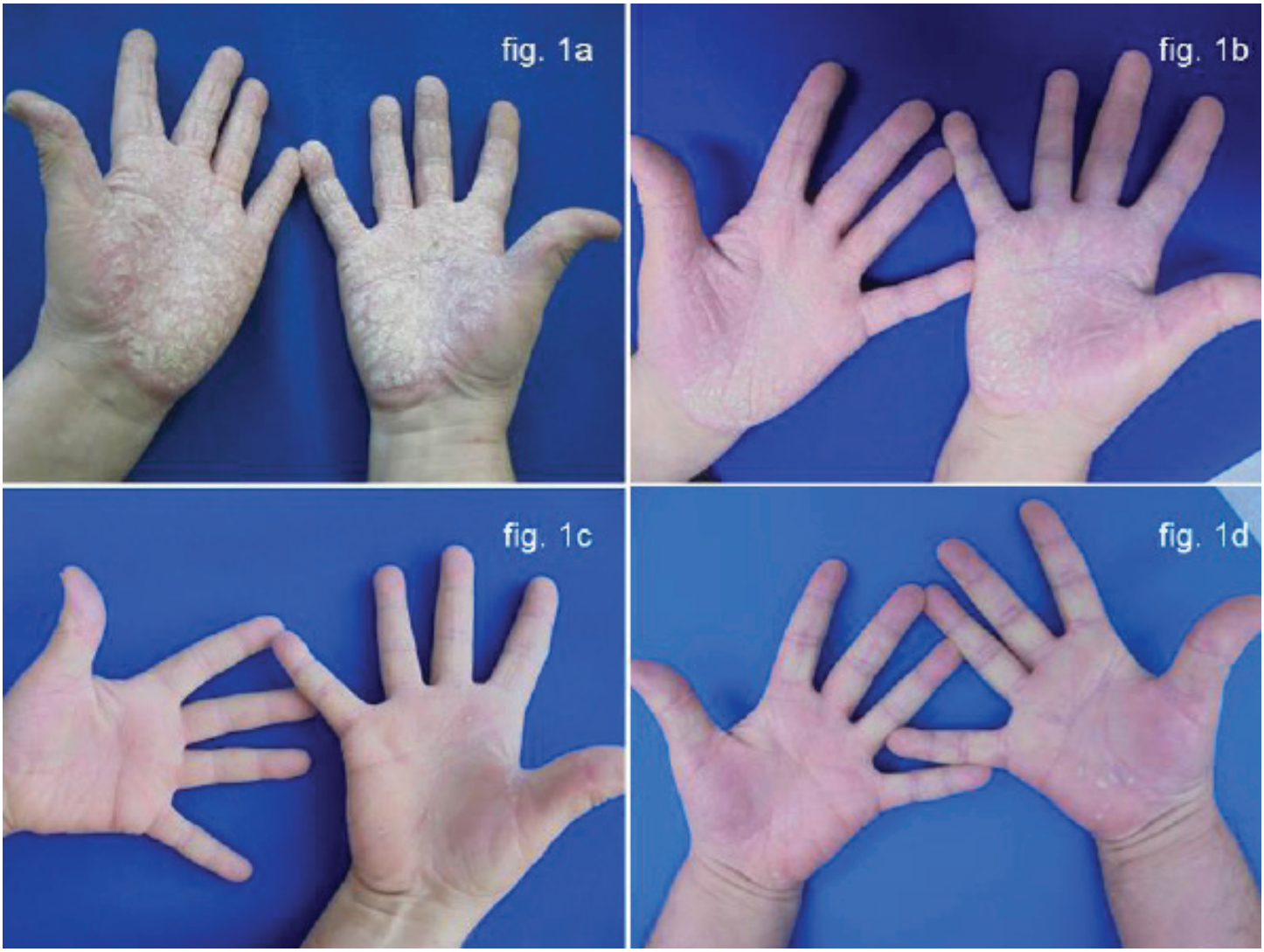

Figure 1. *A) Palms of the patient at baseline; B-D) and at weeks 4, 12 and 44 of treatment with secukinumab, respectively.*

to topical treatment, classic systemic therapies (methotrexate and acitretin), and ustekinumab 45mg for 30 months, even after the addition of acitretin for 6 months. After the last treatment combination, most lesions of plaque psoriasis showed significant resolution of trunk, gluteal folds, and groin psoriasis, achieving PGA 1 in these regions. However, the palms showed significant erythema, thickness, scaling, and fissures (ppPGA 5).

The patient was an artist (painter). His palmar involvement resulted in functional limitations. He was not able to work, which had a high negative impact on quality of life DLQI 7 (**Figure 1a**).

Treatment with secukinumab 300mg (monotherapy) was started in March, 2016. After one month, fifty percent of psoriatic plaque was cleared, resulting in ppPGA 3 (**Figure 1b**). Continued improvement was observed thereafter at week 12 (**Figure 1c**) and week 44 (**Figure 1d**), achieving a ppPGA 0/1. The patient has returned to work, without any limitation. No adverse events have been observed throughout the course of treatment.

Case Discussion

In an open-label trial of ustekinumab for palmoplantar psoriasis with 20 patients (50% of patients with pustules and ppPGA ≥ 3 at baseline), 35% of subjects achieved ppPGA 0/1 at week 16 with ustekinumab. Sixty-seven percent of those receiving ustekinumab 90mg achieved clinical clearance compared with nine percent receiving 45 mg [3]. However, our patient did not achieve an acceptable response with ustekinumab.

Our patient has had ongoing treatment with secukinumab for 30 weeks and is still clear. This

experience corroborates the GESTURE study results as well as the Phase II subanalysis of secukinumab. [4-6].

Palmoplantar psoriasis is a difficult-to-treat presentation. Therapies that achieve good responses in other parts of the body often do not have the same effectiveness in the palmoplantar regions. Furthermore, patients with palmoplantar psoriasis suffer discomfort and disability. According to the Spanish Evidence-Based Guidelines, systemic treatments should be used with this subpopulation of patients with functional impairment [7].

There is limited data exist regarding the genes involved in palmoplantar psoriasis compared to psoriasis vulgaris. Future genetic and clinical investigation will be essential to clarify if genetic basis may influence the response to therapy [8].

Secukinumab has shown promising results in the treatment of palmoplantar psoriasis. Interleukin-17 inhibition may play an important role in this localized form of psoriasis. Further knowledge of the pathophysiologic pathways is needed to better treat our patients and improve their quality of life.

Conclusion

We report the successful use of secukinumab in palmar psoriasis, a special location difficult to treat for dermatologists. The efficacy of this agent has been proved in a large controlled clinical trial but real world experience data is needed to corroborate it in clinical practice.

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