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Authors
Platsidaki, Eftychia
Kostopoulos, Nikolaos
Marnelakis, Ioannis
et al.

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Secukinumab shows significant efficacy in two patients with difficult-to-treat areas of psoriasis: a Greek experience

Eftychia Platsidaki, Nikolaos Kostopoulos, Ioannis Marnelakis, Pantelis Panagakis

Affiliations: Department of Dermatology and Venereology, Andreas Sygros Hospital, Athens, Greece

Corresponding Author: Platsidaki Eftychia, 5 Ionos Dragoumi str, Athens, Greece, Post Code: 16121, Tel: 30 210 7265000, Email: platsidakieft@yahoo.com

Abstract

Psoriasis is one of the most frequently occurring chronic inflammatory skin diseases. There are some specialized regions of the body that are considered difficult to treat. Secukinumab is a human monoclonal immunoglobulin G antibody that blocks the interleukin 17A ligand and has been shown to be highly efficacious in treating moderate-to-severe psoriasis. We studied two Greek patients, one with scalp psoriasis and the other with palmoplantar psoriasis, both resistant to treatment. Patients were treated with secukinumab and efficacy and safety were recorded. The patient with severe, refractory palmoplantar psoriasis achieved complete clearance at the end of the 4-week treatment period with secukinumab. The patient with moderate to severe, chronic scalp psoriasis was successfully treated with secukinumab, obtaining complete clearance of symptoms and remission of disease after approximately 16 weeks. In both cases clinical response was maintained through week 52. Secukinumab has been shown to be highly efficacious in the treatment of psoriasis of specific anatomical sites with an acceptable safety profile.

Keywords: secukinumab, psoriasis, scalp, palmoplantar

Introduction

Psoriasis is one of the most frequently occurring chronic inflammatory skin diseases, affecting up to 3% of the global population [1]. Its management can be difficult. There are some body areas that are even more resistant to treatment or are too sensitive to be treated with strong topical drugs necessitating systemic drugs more frequently in these locations [2]. Interleukin (IL)-17A is a key molecule in the T helper (Th) 17 pathway and it plays a critical role in the pathogenesis of psoriasis. Secukinumab (Novartis Pharma AG, Basel, Switzerland), a recombinant high-affinity, human immunoglobulin G1 (kappa) monoclonal antibody, selectively binds to and neutralizes the inflammatory mediator IL 17A [3]. We present two cases in the Greek population that demonstrate the efficacy of secukinumab in the treatment of difficult-to-treat areas of psoriasis such as palms and scalp.

Case 1

A 28-year-old man presented with red, thickened plaques with silver-white scale affecting the entire scalp extending onto the forehead (**Figure 1**). This

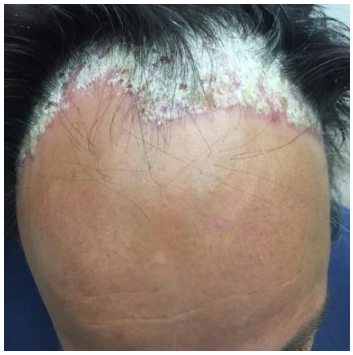

Figure 1. *Patient presented with red, thickened plaques with silver-white scale affecting the entire scalp extending onto the forehead.*

otherwise healthy man was diagnosed with plaque psoriasis, a year before his visit to our clinic. His previous regimen included topical treatments with keratolytic agents, corticosteroids, and calcipotriol with no improvement. Scalp lesions were causing great physical and social distress. He reported that the condition interfered with his daily life and had a profound impact on his quality of life. The patient had chronic scalp psoriasis (≥ 6 months) that affected ≥ 30% of the scalp surface area. Psoriasis Scalp Severity Index (PSSI) score was 20 and Investigator's Global Assessment (IGA) score was 4. Therefore, we opted to start the patient on secukinumab. He obtained complete clearance of symptoms and remission of disease (PSSI 7) after approximately 16 weeks (**Figure 2**). Importantly, no adverse effects occurred. At week 52, our patient maintained clearance of psoriasis and the Dermatology Life Quality Index (DLQI) had significantly improved (6 from 22 on presentation).

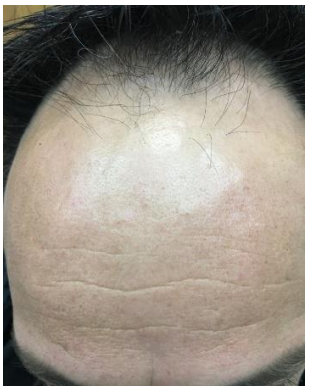

Figure 2. *Complete clearance of psoriasis lesions, 16 weeks of treatment with secukinumab.*

Case 2

A 46-year-old, man presented with severe palmoplantar psoriasis characterized by well-circumscribed, red, scaly, plaques (**Figure 3**). The patient had a long-standing history of refractory plaque psoriasis affecting almost exclusively his hands and to a far lesser degree the rest of his body (less than 10% of body surface area). Past treatment for his psoriasis included topical steroids and systemic treatment with retinoids, which showed no efficacy. Thereafter, the patient failed infliximab treatment. Although he initially achieved Psoriasis Area and Severity Index (PASI) 75 at week 14 of his

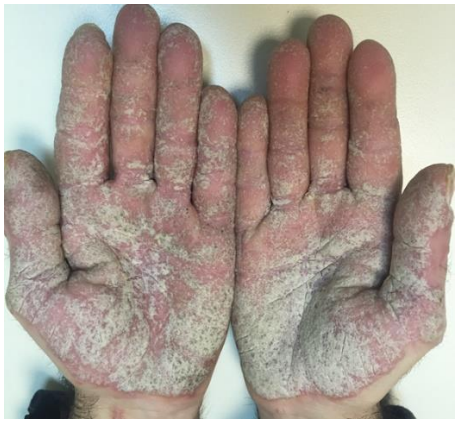

Figure 3. *Patient presented with well-circumscribed, red, scaly, plaques of the entire surface of palms.*

treatment, efficacy was lost at 104 weeks. The patient's DLQI was considerably affected owing to the negative impact of psoriasis on his work as a baker and we decided to initiate treatment with secukinumab. At the end of the 4-week trial complete clearance was achieved with PASI 100 (**Figure 4**). In the subsequent follow up visits, he did not mention any side effects or unfavorable conditions related to his treatment. At week 52, secukinumab continued to be highly effective; PASI 100 was maintained and quality of life (DLQI) improved by 90%.

Management of difficult-to-treat areas of psoriasis, such as scalp and palms has been challenging. Scalp psoriasis affects approximately 80 percent of psoriasis patients and is characterized by sharply demarcated erythematous, silvery scaly plaques [4, 5]. The PSSI is used to measure severity of the disease. Although disease is often adequately camouflaged by the hair, it may often be a source of

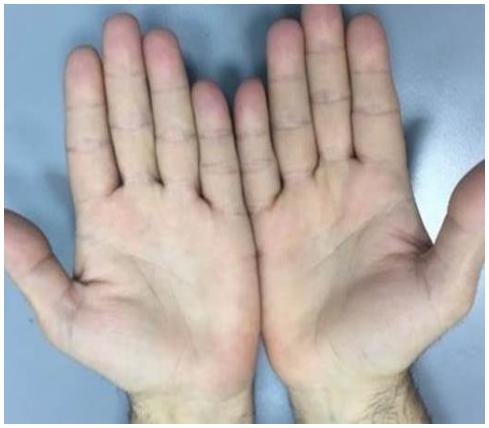

Figure 4. *Complete clearance of psoriasis lesions, 4 weeks of treatment with secukinumab.*

social embarrassment and psychosocial stress related to flaking of the scale and severe 'dandruff.' Consequently, it is associated with marked decrease in patients' quality of life [6, 7]. Treating scalp psoriasis can be difficult. It often fails to respond to topical treatments owing to difficulties in administration to the disease site, poor compliance, toxicity, and inadequate long-term efficacy [8]. Therefore, in patients with either isolated resistant scalp psoriasis or general psoriasis involving the scalp, systemic therapy can be considered. Large, randomized, controlled trials assessing the efficacy of traditional systemic drugs used in psoriasis are lacking [9]. Apremilast and biologics have shown good efficacy in clearing scalp psoriasis [10]. Secukinumab, is a monoclonal antibody against IL-17a, which was approved for treatment of plaque psoriasis in 2014. It has been proven efficacious and well-tolerated for patients with extensive moderate-to-severe scalp psoriasis (defined by PSSI score of 12 or greater, modified IGA of 3 or greater, and greater than 30 percent scalp surface involvement) in a multicenter, randomized, double-blind study [11]. Our patient who met the above-mentioned criteria demonstrated complete clearance at week 16 and has maintained this for one year.

Palmoplantar psoriasis is plaque psoriasis involving the hands and/or feet. It is characterized by well-defined red, scaly plaques or thickening/scaling without redness that may or may not include pustules [12]. Studies have shown that its prevalence among patients with psoriasis ranges widely, from 6% to 17% [13]. These patients report greater impairment of mobility, self-care activities, and usual activities, as well as greater dependency on topical medications compared with patients with plaque psoriasis located elsewhere on the body [14]. Consequently, their quality of life is significantly impaired. Treatment of this type of psoriasis is very challenging. Topical therapies and phototherapy are often ineffective and difficult to administer. Few trials have examined the effect of systemic therapies on palmoplantar psoriasis, showing that methotrexate or acitretin yield lower efficacy in palmoplantar psoriasis than in generalized psoriasis [15]. Published data with etanercept and ustekinumab in nonpustular palmoplantar psoriasis are limited to case reports and small, open-label investigator-initiated trials [16, 17]. Infliximab has been tried in a placebo-controlled randomized pilot trial among 24 patients. This pilot study did not reach its primary end point of m-PPPASI 75 at week 14, but improvement was higher than placebo [18]. A recent study suggested that apremilast may be a useful oral treatment option for patients with moderate to severe palmoplantar plaque psoriasis [19]. In GESTURE, the largest randomized controlled trial in palmoplantar psoriasis, secukinumab demonstrated the greatest efficacy to date for treating difficult-to-treat psoriasis [20]. At week 16, the percentage of subjects who achieved disease clearance with secukinumab was superior to the percentage achieved with placebo. Furthermore Palmoplantar Psoriasis Area and Severity Index (ppPASI) was significantly reduced while DLQI responses were significantly higher. Inclusion criteria included having chronic moderate-to-severe palmoplantar psoriasis with a ppIGA score of 3 or greater, one or more psoriasis plaques outside of the palms and soles, and psoriasis inadequately controlled by topical treatment, phototherapy, and/or systemic therapy. Our patient, fulfilling these criteria, was started on secukinumab and achieved complete clearance at week 4 confirming that secukinumab may offer an effective treatment option for palmoplantar disease.

In these two cases secukinumab has been shown to be highly efficacious in the treatment of psoriasis of specific anatomical sites with an acceptable safety profile.

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