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Real-Life Effectiveness of Tildrakizumab in Chronic Palmo-Plantar Psoriasis: A Case Series of 7 Patients with 28 weeks of Follow-Up

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Letter to Editor
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Abstract

Palmo-plantar psoriasis (PPP) is highly debilitating and difficult to treat impairing quality of life of patients. Tildrakizumab is an anti-IL23p19 subunit monoclonal antibody approved for the treatment of moderate-severe chronic plaque psoriasis in adult candidates for systemic therapy. Objective of this study is to investigate the safety and efficacy of tildrakizumab in the management of palmo-plantar psoriasis. A total of 7 adults patients with moderate to severe PPP were retrospective analysed. Tildrakizumab 100 mg was administered at weeks 0, 4 and then every 12 weeks, by subcutaneous injection. Patients were visited at baseline, at week 16 and at week 28. Safety and efficacy were assessed at weeks 0, 16 and 28. Physician's Global Assessment (PGA) and Palmoplantar Pustular Psoriasis Area and Severity Index (PPPASI) clinical score were used to measure the efficacy. The mean PGA score was reduced from 3.6 at baseline to 1.7 after 16 weeks and 1.3 after 28 weeks. The mean PPPASI score was reduced from 19.2 at baseline to 9.2 after 16 weeks and 5.2 after 28 weeks. In conclusion tildrakizumab represents a safe and effective treatment for psoriasis even in difficult areas such as the palms and soles.

Keywords: Psoriasis; Palmo-Plantar Psoriasis; Tildrakizumab; Biologics; Psoriasis Treatment

Dear Editor,

Palmoplantar psoriasis (PPP) is a rare variant of psoriasis clinically characterized by hyperkeratosis, erythema, desquamation, sometimes associated with fissures and the appearance of sterile pustules afflicting the palmar and/or plantar region. These lesions are frequently associated with itching and/or burning sensation and their presence can limit, even considerably, normal daily and work activities, negatively impacting in patient's quality of life [1].

Biological agents have transformed the therapeutic approach towards moderate/severe psoriasis. However, most of the phase 2 and 3 clinical trials for the approval and safety assessment of biologics agents in the treatment of psoriasis excluded patients with PPP. We report our clinical experience of patients with PPP treated with tildrakizumab, an anti-IL23p19 subunit monoclonal antibody, approved for the treatment of moderate-severe chronic plaque psoriasis in adult candidates for systemic therapy and monitored for 28 weeks of follow-up.

A total of 7 patients with moderate-to-severe plaque psoriasis (body surface involvement (BSA) ≥10%, and Psoriasis Area and Severity Index score (PASI) score ≥ 10) and PPP were treated with tildrakizumab. Patients were

three males and four females aged 39 to 63 years. All patients had palmo-plantar involvement and contraindications or intolerant/unresponsive to previous topical and systemic treatments commonly used in cases of PPP. Previous systemic therapy was acitretin, cyclosporine, narrowband UVB phototherapy, Bath-PUVA, methotrexate, etanercept, secukinumab and risankizumab. The severity of PPP is assessed using the Palmoplantar Pustular Psoriasis Area and Severity Index (PPPASI) clinical score which considers the erythema, desquamation, presence of pustules and extension of the disease on the palmar and/or plantar sites (possible score range, 0-72, with higher scores indicating greater area and severity).

The Physician's Global Assessment (PGA) score is also useful as it allows the clinician to estimate the disease burden and/or therapeutic response with a score between 0 ("Cleared/100% improvement") to 7 ("Severe"). Tildrakizumab 100 mg was administered at weeks 0, 4 and then every 12 weeks, by subcutaneous injection. Patients were visited at baseline (T0), at week 16 (T1) and at week 28 (T2).

The mean PGA score was reduced from 3.6 at baseline to 1.7 after 16 weeks and 1.3 after 28 weeks. The mean PPPASI score was reduced from 19.2 at baseline to 9.2 after 16 weeks and 5.2 after 28 weeks (Table 1).

Age	Sex	History of Psoriasis	Previous therapy	PPPASI T0	PGA T0	PPPASI T1	PGA T1	PPPASI T2	PGA T2
56	F	3y	Cyclosporine, Acitretin	15.2	3	8	2	3.6	1
51	F	12y	Bath-PUVA, Cyclosporine, Methotrexate	12.1	3	8.4	2	7.9	2
62	F	9y	Controindicatons to systemic therapy	21.6	4	10.2	2	2.4	1
63	M	8y	Acitretin	13	2	5.6	1	5.2	1
39	F	2y	Cyclosporine	25	4	7.8	1	5	1
49	M	7y	NB-UVB Phototherapy, Secukinumab, Etanercept, Risankizumab	23.6	4	11.6	2	9.6	2
52	M	2y	Acitretin	24	5	12.8	2	2.4	1

Table 1: Characteristics and changes of values of Palmoplantar Pustular Psoriasis Area and Severity Index (PPPASI), Physician's Global Assessment (PGA) in our cohort of patients at baseline (T0), after 16 weeks (T1) and 28 weeks (T2) of treatment.

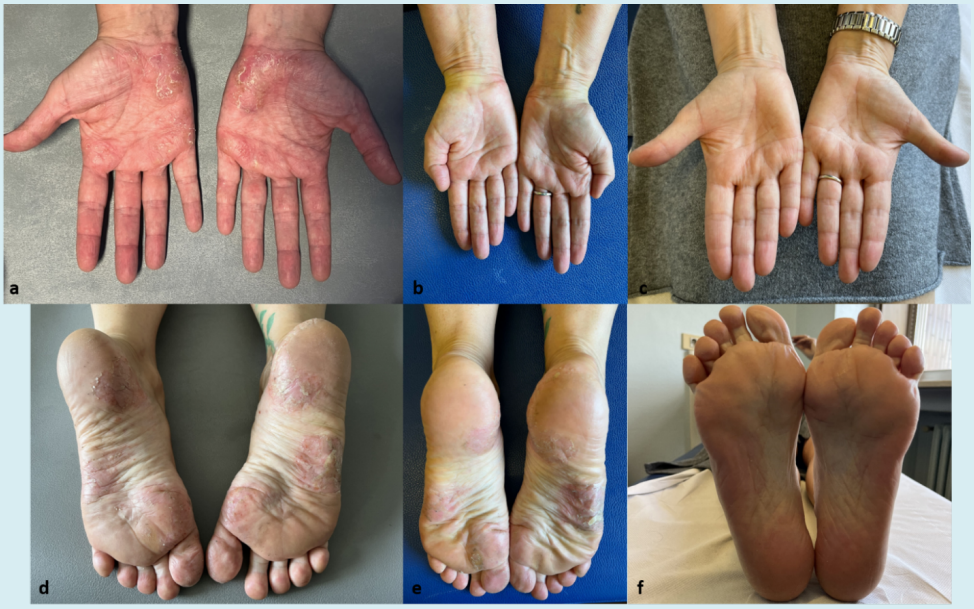

Figure 1: Palmo-plantar psoriasis in a 62-year-old women at the baseline (a,c), after 16 weeks (b,d) and after 28 weeks (e,f) of therapy with tildrakizumab. Palmoplantar Pustular Psoriasis Area and Severity Index (PPPASI) dropped from 21.6 to 10.2 after 16 weeks and to 2.4 after 28 weeks.

Tildrakizumab was overall well tolerated and showed a remarkable rapidity of action, significantly improving the symptoms and quality of life of our patients after only 16 weeks of treatment. All patients continued with their allocated therapy at week 28 maintaining the clinical response (Figure 1).

Nowadays, data regarding the efficacy of biologic agents in PPP are scarce and being limited to a small number of clinical trials and isolated clinical reports. The clinical efficacy of anti-TNF agents (adalimumab, etanercept, infliximab) in PPP have been contradictory, showing a moderate efficacy in the treatment of PPP with better results in infliximab-treated patients [2]. Ustekinumab, an anti-IL-12/IL-23, has also shown mixed results in the treatment of PPP and palmoplantar pustulosis [3].

The aetiology of PPP is still unknown but activation in IL23/17 pathway appears to play a central role in the pathophysiology of the disease [4]. In fact, the activation of Th17 and Th22 lymphocytes is induced by IL23 produced by antigen-presenting cells (APC). This lymphocyte subpopulation releases different cytokines including IL17 and IL22 capable to promote and empower the local inflammation and stimulating keratinocyte hyperplasia. Several clinical trials have reported good results for IL-17 inhibitors like secukinumab, ixekizumab and bimekizumab [5-7]. Only few data are available regarding the more modern IL-23 blockers therapy such as tildrakizumab, risankiumab and guselkumab.

Our experience shows that tildrakizumab is effective in the treatment of psoriasis even in difficult areas such as the palms and soles, confirming the data previously reported in the literature [5,8-10]. However, further studies with extended follow-up are needed to evaluate the efficacy and safety of selective IL-23 antagonists in larger patient's cohorts.

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