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Nail Psoriasis Improvement During Tildrakizumab Therapy: A Real-Life Experience

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ABSTRACT

The aim of this retrospective study of patients affected by plaque psoriasis who underwent tildrakizumab therapy was to describe and compare the response of the nail psoriasis and the plaque psoriasis elsewhere in the body. Eight patients treated with tildrakizumab, 4 males and 4 females with a mean age of 61 years affected by psoriasis (mean baseline-PASI:13) with nail involvement (mean baseline mNAPSI: 51.9), were followed for at least 20 weeks. At week 4, the mean PASI was 6.6 (49% improvement), and the mean mNAPSI was 30.8 (40.6% improvement). At week 20, the mean PASI was 2.1 (84% improvement), and the mean mNAPSI was 5.1 (90% improvement).

The fast improvement of the nail psoriasis in the 8 patients was unexpected, considering the fact that Tildrakizumab is a molecule that in RCTs (reSURFACE-1 and 2) studies has proved to be efficacious against plaque psoriasis but not strikingly fast, requiring at least 20 weeks to achieve the best PASI-improvements in most patients. Evidence regarding nail improvement during tildrakizumab are scarce. Studies including a higher number of patients are required in order to confirm our observation of the fast improvement of nail psoriasis during Tildrakizumab.

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INTRODUCTION

In this retrospective study of patients affected by plaque psoriasis who underwent tildrakizumab therapy, the aim was to describe and compare the response of the nail psoriasis and the plaque psoriasis elsewhere in the body. Clinical charts were reviewed for: demographics, psoriasis severity (Psoriasis Area Severity Index [PASI], mNAPSI [modified Nail Psoriasis Area Severity Index], F-PGA [fingernail physician global assessment]), disease duration, and previous therapies.

Eight patients treated with tildrakizumab – 4 males and 4 females with a mean age of 61 years affected by psoriasis (mean baseline-PASI:13) with nail involvement (mean baseline mNAPSI: 51.9) – were followed for at least 20 weeks. Demographics, disease duration, previous therapies, and severity indexes are reported in Table 1. Four patients were naïve to biological therapies.

At week 4, the mean PASI was 6.6 (49% improvement), and the mean mNAPSI was 30.8 (40.6% improvement). At week 20, the

TABLE 1.

Clinical and Therapy Summary, Evolution Measures During Tildrakizumab

Patient #	Age-Sex	Duration of Disease (years)	Previous Systemic Therapies	PASI Day 0	PASI Week 4	PASI Week 20	m-NAPSI Day 0	m-NAPSI Week 4	m-NAPSI Week 20	F-PGA Day 0	F-PGA Week 4	F-PGA Week 20
#1	87-M	21	Mtx	13	8	3	102	68	6	4	3	1
#2	26-F	25	Mtx	16	8	5	83	61	5	3	2	1
#3	72-M	15	CsA, Mtx, Eta	11	4	1	39	21	0	2	1	0
#4	61-F	11	CsA, Mtx, Eta	13	3	1	20	3	2	2	0	0
#5	50-F	16	Mtx, Ada	17	10	2	22	12	0	2	1	0
#6	72-F	3	Mtx	6	2	1	19	9	1	2	1	0
#7	59-M	12	Mtx, Eta	12	8	1	36	16	2	2	1	0
#8	60-M	40	Mtx	16	10	2	94	56	25	3	3	2

Sex, M: male, F: female; PsA, confirmed psoriatic arthritis; CsA, cyclosporine A; Mtx, methotrexate; Eta, etanercept; Ada, adalimumab; PUVA, Psoralen + ultraviolet A photo-therapy.

FIGURE 1. Mean-PASI and mean-mNAPSI evolution during tildrakizumab therapy.

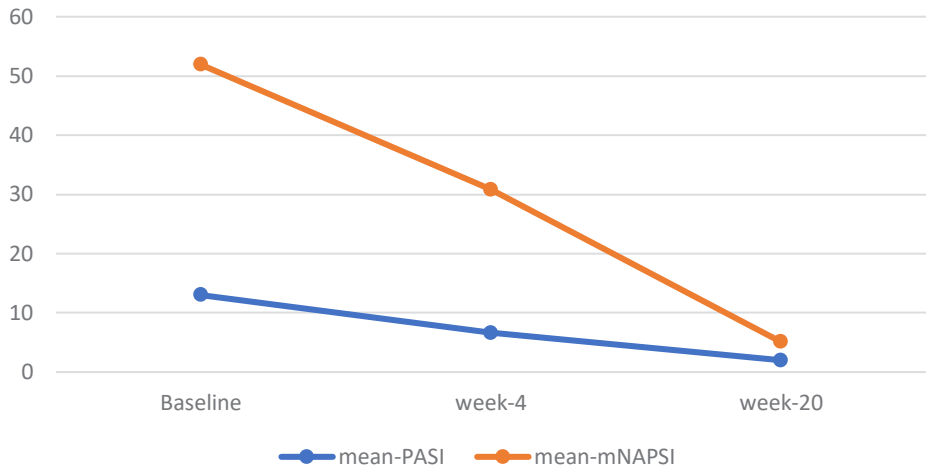
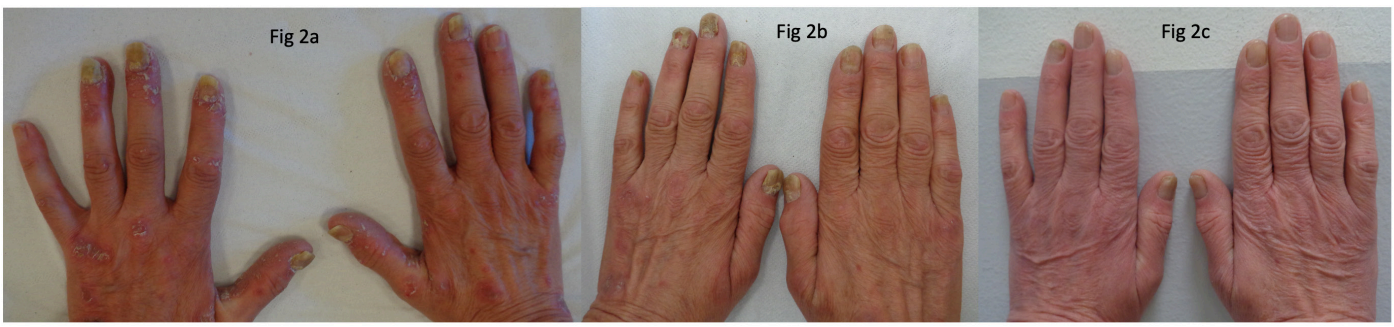


FIGURE 2. Clinical improvement of nail psoriasis. (2a) Clinical picture at baseline. (2b) Improvement at week 4. (2c) Improvement at week 0.



mean PASI was 2.1 (84% improvement), and the mean mNAPSI was 5.1 (90% improvement). Comparative PASI and mNAPSI scores-evolution are shown in Figure 1.

The aim of this real-life report is to underline the unexpectedly fast improvement of the nail psoriasis in the 8 patients, considering that evidence regarding nail improvement during tildrakizumab is scarce.[1,2] (Figure 2).

Tildrakizumab is a humanized monoclonal antibody that targets the p19 subunit of IL-23, approved to treat moderate to severe psoriasis.[1] Regarding nail psoriasis, a case report documented the efficacy.[2] A Phase 3b clinical trial is currently under way (NCT03897075) and results have not yet been published. Regarding other anti-IL-23 available molecules, 2 patients treated with risankizumab registered a mean NAPSI improvement of 11% at week 4 and 61% at week 16.[3] Guselkumab efficacy in nail psoriasis has been evaluated in a secondary analysis of 2 randomized controlled trials (RCT) reporting an improvement of 37.5% of NAPSI at week 6 and a NAPSI-improvement of 52.9% vs 51.2% in the adalimumab treated group at week 4.[4]The IXORA-R study compared nail responses between ixekizumab and guselkumab at week 4 obtaining a PGA-F of clear or minimal nail psoriasis in 75% (62/83) vs 54% (32/59), P=0.02, demonstrating the fast onset of effect of ixekizumab.[5] The TRANSFIGURE trial evaluated the efficacy of secukinumab 150 mg and 300 mg in nail psoriasis: a higher efficacy was observed on the 300 mg arm with a 43.5% of NAPSI improvement at week 6 and 71.5% at week 80, confirming the slow and progressive improvement of the nail involvement during treatment in contrast with the response of plaque psoriasis that affects the skin where the degree of improvement is higher at week 6 and tends slowly to decrease during time.[6,7] The same increasing improvement during time was demonstrated during brodalumab vs ustekinumab in 3 RCT (AMAGINE-1/-2/-3), where the mean-NAPSI improvement at week 2 was 43.4% for brodalumab vs 31.8% for ustekinumab, 58.9% vs 76.9% at week 4, and 83% vs 75% at week 52 (P<0.05%).[7,8]

Recently a network-meta-analysis has been performed comparing 39 studies including 15,673 patients with nail psoriasis treated with 9 biologic treatments (ustekinumab, efalizumab,

secukinumab, etanercept, guselkumab, adalimumab, ixekizumab, and infliximab) and 2 small molecules (apremilast and tofacitinib), all therapies shown to significantly improve nail score compared with placebo in weeks 10 to 16 and weeks 24 to 26.[9] According to the SUCRA, tofacitinib was ranked best at weeks 0 to 16, followed by infliximab; and ixekizumab was ranked best at weeks 4 to 28, followed by infliximab. Unfortunately, data regarding tildrakizumab were not included in the metanalysis because of the lack of RCT or case series.[9]

Our experience with tildrakizumab in nail psoriasis includes only 8 patients, and studies including a larger number of patients are required in order to confirm our observation of fast improvement of nail psoriasis. Tildrakizumab is a molecule that in RCTs (reSURFACE-1 and 2) studies has proved to be efficacious against plaque psoriasis, but not strikingly fast, requiring 20 weeks to achieve the best PASI-improvements in most patients, as confirmed in our 8 patients.[1]

Nail psoriasis is highly distressing and in severe cases requires prompt treatment.[7-10] This report is the first attempt to evaluate and compare the nail response with the rest of the body response in patients that followed tildrakizumab therapy for at least 20 weeks. These data become important if we considered that quality of life impairment is higher in patients affected by nail involvement when compared with psoriasis vulgaris.[10]

DISCLOSURES

The author has no funding sources and no conflicts of interest to declare.

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The patients in this manuscript have given written informed consent to publication of their case details.

REFERENCES

1. Reich K, Papp KA, Blauvelt A, et al. Tildrakizumab versus placebo or etanercept for chronic plaque psoriasis (reSURFACE 1 and reSURFACE 2): results from two randomised controlled, phase 3 trials. *Lancet*. 2017;390:276-288.
2. Ismail FF, May J, Moi J, Sinclair R. Clinical improvement in psoriatic nail disease and psoriatic arthritis with tildrakizumab treatment. *Dermatol Ther.* 2020;33(2):e13216.
3. Megna M, Fabbrocini G, Ruggiero A, Cinelli E. Efficacy and safety of risankizumab in psoriasis patients who failed anti-IL-17, anti-12/23 and/or anti IL-23: Preliminary data of a real-life 16-week retrospective study. *Dermatol Ther.* 2020;33(6):e14144.
4. Foley P, Gordon K, Griffiths CEM, et al. Efficacy of guselkumab compared with adalimumab and placebo for psoriasis in specific body regions: A secondary analysis of 2 randomized clinical trials. *JAMA Dermatol.* 2018;154(6):676-683.
5. Blauvelt A, Leonardi C, Elewski B, et al. A head-to-head comparison of ixekizumab vs guselkumab in patients with moderate-to-severe plaque psoriasis: 24-week efficacy and safety results from a randomized, double-blinded trial. *Br J Dermatol.* 2021;184(6):1047-1058.
6. Reich K, Sullivan J, Arenberger P, et al. Secukinumab shows high and sustained efficacy in nail psoriasis: 2.5-year results from the randomized placebo-controlled TRANSFIGURE study. *Br J Dermatol.* 2021;184(3):425-436.
7. Bardazzi F, Starace M, Bruni F, Magnano M, Piraccini BM, Alessandrini A. Nail Psoriasis: An Updated Review and Expert Opinion on Available Treatments, Including Biologics. *Acta Derm Venereol.* 2019;99(6):516-523.
8. Elewski B, Rich P, Lain E, et al. Efficacy of brodalumab in the treatment of scalp and nail psoriasis: results from three phase 3 trials. *J Dermatolog Treat.* 2022;33(1):261-265. doi:10.1080/09546634.2020.1749546
9. Huang IH, Wu PC, Yang TH, et al. Small molecule inhibitors and biologics in treating nail psoriasis: A systematic review and network meta-analysis. *J Am Acad Dermatol.* 2021;85(1):135-143.
10. Stewart CR, Algu L, Kamran R, et al. The impact of nail psoriasis and treatment on quality of life: A systematic review. *Skin Appendage Disord.* 2021;7(2):83-89.

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