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LETTER TO THE EDITOR

Survival, efficacy and safety of tralokinumab after 32 and 52 weeks of treatment for moderate-to-severe atopic dermatitis in adults: A multicentre real-world study

Dear Editor,

Tralokinumab, a fully human monoclonal antibody inhibiting the signalling of IL-13, is a new treatment option for adult patients with moderate-to-severe AD, which has proven safe and efficacious in clinical trials.[1–3] Extension trials investigating the long-term efficacy and safety of tralokinumab are ongoing.[4] We recently conducted a 16-week real-life case-series study in adults with moderate-to-severe AD treated with tralokinumab.[5] Nevertheless, no real-world studies both at weeks 32 and 52 have yet been reported.

Herein, we report an extension analysis of the same case series of AD adults beyond 16 weeks, together with new data collected from patients referring to 5 dermatological centres. We evaluated tralokinumab drug survival, efficacy (Eczema Area and Severity Index [EASI]), Numerical Rating Scale (NRS)-itch, NRS-sleep, Dermatology Life Quality Index (DLQI) and safety up to week 32 and week 52. The study was approved by the local Ethics Committee. The baseline demographic and clinical characteristics of the 171 (98 F, 57.3%; mean [SD] age 40.6 [17.4] years) AD adult patients are presented in Table 1. The first patient treated with tralokinumab was recorded in April 2022; a data lock took place in March 2023.

By the data lock, 165 patients (96.5%) were still using tralokinumab, while 6 patients (3.5%) had permanently discontinued it, 2 of whom due to adverse events (AEs) (psoriasis, which occurred after 4 and 16 weeks, respectively), 2 due to inefficacy, 1 owing to AD remission and 1 owing to pregnancy. One patient temporarily discontinued tralokinumab in the fourth month because of conjunctivitis, which resolved after 1-month corticosteroids eyedrops treatment. Considering the adults who permanently discontinued tralokinumab, the overall drug survival rate at week 52 was 85.9%. There was a continuous improvement in terms of EASI, itch-NRS, sleep-NRS and DLQI from week 16 to week 52 of treatment (Figure 1). The mean EASI score (24.4 at baseline) decreased to 1.6 at week 32 and to 1.1 at week 52, with a mean percentage decrease of 93.4% and 95.5%, respectively. The mean percentage reduction of itch-NRS score (mean value of 7.7 at baseline, 1.6 at week 32 and 1.3 at week 52) was 79.2% at week 32 and 83.1% at week 52. The mean percentage reductions of sleep-NRS (mean value 6.1 at baseline, 0.7 at

TABLE 1 Baseline demographic and clinical characteristics of the study population.

Characteristics	No. (%)
Total (%)	171 (100)
Sex (%)	
Female	98 (57.3)
Male	73 (42.7)
Age, years, mean (SD)	40.6 (17.4)
BMI, mean (SD)	23.8 (3.1)
Age at AD onset (%)	
Early onset (<18 years)	113 (66.1)
Late-onset	58 (33.9)
AD duration, years, mean (SD)	21.8 (13.4)
AD Phenotype (%)	
Classical	127 (74.3)
Prurigo	30 (17.5)
Generalized Lichenoid	3 (1.7)
Generalized inflammatory	2 (1.2)
Nummular	9 (5.3)
Erythroderma	0 (0)
Immunosuppressive drug history (%)	
No prior immunosuppressive drug	25 (14.6)
1 prior immunosuppressive drug	91 (53.2)
≥2 prior immunosuppressive drugs	55 (32.2)
Prior biologics or JAK inhibitors	51 (29.8)
Baseline systemic immunosuppressants	28 (16.4)
Baseline topical immunosuppressants	153 (89.5)
Atopic comorbidities (%)	
Allergic rhinitis	65 (38.0)
Allergic conjunctivitis	50 (29.2)
Allergic asthma	40 (23.4)
Food allergy	17 (9.9)
Other comorbidities (%)	
Diabetes	5 (2.9)
Alopecia areata	2 (1.2)
Autoimmune thyroiditis	9 (5.3)
Inflammatory bowel disease	3 (1.8)
Hypertension	26 (15.2)
Cancer	3 (1.8)
Chronic kidney disease	3 (1.8)

Abbreviations: AD, Atopic Dermatitis; BMI, Body Mass Index; SD, Standard Deviation.

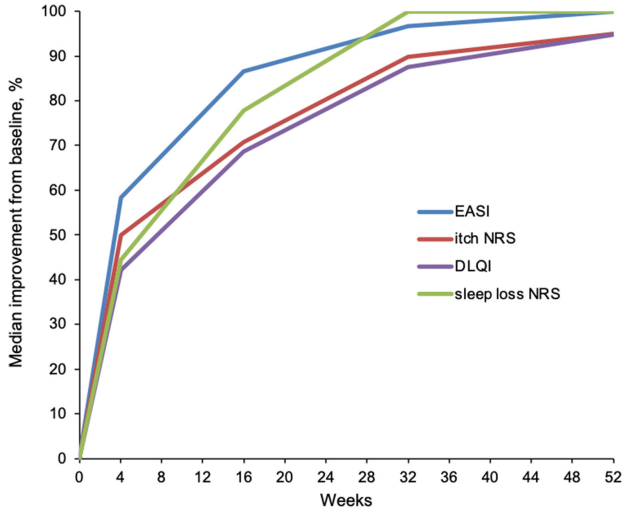

FIGURE 1 Median percentage improvement in EASI, itch NRS, sleep loss NRS, and DLQI from baseline through 52 weeks of tralokinumab treatment. DLQI, Dermatology Life Quality Index; EASI, Eczema Area and Severity Index; NRS, Sleep Numerical Rating Scale.

week 32 and 0.8 at week 52) were 88.5% and 86.8%, respectively. The mean percentage reductions in DLQI score (mean value 13.2 at baseline, 2.4 at week 32 and 1.5 at week 52) were 81.8% and 88.6%, respectively. For all the assessments, the mean percentage reductions from baseline to week 32 and week 52 were statistically significant ($p < 0.01$).

Overall, 100% ($n = 61/61$) of patients reached EASI-50, 95.1% ($n = 58/61$) of patients reached EASI-75 and 73.8% ($n = 45/61$) of patients reached EASI-90 at week 32. After 52 weeks of treatment, the proportion of patients achieving EASI-50, EASI-75 and EASI-90 was 100% ($n = 22/22$), 95.4% ($n = 21/22$) and 95.4% ($n = 21/22$), respectively. The absence of a medication washout period in our patients, 85.4% of whom had used prior systemic immunosuppressants and 30% of whom had used prior biologics or JAK inhibitors and the add-on therapy with topical corticosteroids in 89.5% of patients, may have favoured our better results compared with those from clinical trials.[1] Conjunctivitis was diagnosed in 3/171 patients (1.7%); the first episode occurred on average after 16 weeks and healed within week 32 of tralokinumab treatment after corticosteroid eye drops treatment.[6] Other AEs included injection-site reaction (5/171; 2.9%), psoriasis (2/171; 1.2%), herpes viral infection (1/171; 0.6%) and erythroderma (1/171; 0.6%).[7]

In conclusion, our data support a good survival of tralokinumab after 32 and 52 weeks in patients with AD. Tralokinumab maintained long-term control of AD signs and symptoms and was well-tolerated. This is a long-term prospective cohort study with a limited sample size; additional real-world studies will increase the reliability of these preliminary findings.

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CONFLICT OF INTEREST STATEMENT
EP has been a consultant and speaker for Sanofi Genzyme, LEO Pharma, Novartis, AbbVie, Almirall, Janssen, Galderma and Boehringer-Ingelheim. DS has been a consultant and speaker for Sanofi Genzyme, LEO Pharma, Novartis. AG has been a consultant and speaker for Sanofi Genzyme, LEO Pharma, AbbVie. MR has been a consultant and speaker for Sanofi Genzyme, LEO Pharma, Pfizer, Almirall, AbbVie, L'Oreal. FB has no conflict of interest. PGCP has no conflict of interest. GG has received personal fees from AbbVie, Almirall, Amgen, Biogen, Boehringer-Ingelheim, Bristol-Myers Squibb, Eli Lilly, Fresenius Kabi, Galderma, Genzyme, LEO Pharma, Novartis, Pfizer, Regeneron, Samsung and Sanofi. LN has been a consultant and speaker for AbbVie, Almirall, Bristol Myers Squibb, Janssen, LEO Pharma, Novartis and Sanofi Genzyme. SMF has been a consultant and speaker for AbbVie, Sanofi Genzyme, Amgen, Almirall, Galderma, Lilly, Novartis, Menarini, Unifarco.

DATA AVAILABILITY STATEMENT
The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to the privacy or ethical restrictions.

ETHICS STATEMENT
This investigation was approved by the Ethical Committee of the participant Hospitals and Universities. The patients in this manuscript have given written informed consent to the publication of their case details.

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REFERENCES

1. Wollenberg A, Blauvelt A, Guttman-Yassky E, Worm M, Lynde C, Lacour JP, et al. Tralokinumab for moderate-to-severe atopic dermatitis: results from two 52-week, randomized, double-blind, multicentre, placebo-controlled phase III trials (ECZTRA 1 and ECZTRA 2). Br J Dermatol. 2021;184:437–49.
2. Paller AS, Flohr C, Cork M, Bewley A, Blauvelt A, Hong HCH, et al. Efficacy and safety of tralokinumab in adolescents with moderate to severe atopic dermatitis: the phase 3 ECZTRA 6 randomized clinical trial. JAMA Dermatol. 2023;159:596–605. https://doi.org/10.1001/jamadermatol.2023.0627
3. Silverberg JI, Adam DN, Zirwas M, Kalia S, Gutermuth J, Pinter A, et al. Safety of tralokinumab in adult patients with moderate-to-severe atopic dermatitis: pooled analysis of five randomized, double-blind, placebo-controlled phase II and phase III trials. Am J Clin Dermatol. 2022;23:547–59.
4. Blauvelt A, Langley RG, Lacour JP, Toth D, Laquer V, Beissert S, et al. Long-term 2-year safety and efficacy of tralokinumab in adults with moderate- to-severe atopic dermatitis: interim analysis of the ECZTEND open-label extension trial. J Am Acad Dermatol. 2022;87:815–24.
5. Pezzolo E, Naldi L. Tralokinumab in the treatment of resistant atopic dermatitis: an open-label, retrospective case series study. J Acad Dermatol Venereol. 2023;37:e644–5.
6. Licata G, Tancredi V, Pezzolo E, Pertusi G, Tolino E, Arisi M, et al. Efficacy and safeness of tralokinumab in patients with atopic dermatitis who developed conjunctivitis under dupilumab: a case series. J Acad Dermatol Venereol. 2023;37(8):e1064–5. https://doi.org/10.1111/jdv.19108
7. Pezzolo E, Gambardella A, Guanti M, Bianchelli T, Bertoldi A, Giacchetti A, et al. Tralokinumab shows clinical improvement in patients with prurigo nodularis-like phenotype atopic dermatitis: a multicenter, prospective, open-label case series study. J Am Acad Dermatol. 2023;89(2):430–2. https://doi.org/10.1016/j.jaad.2023.04.056