Lebrikizumab for the treatment of severe atopic dermatitis: Real- world data from the Czech Republic BIOREP Registry

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INTRODUCTION

- Atopic dermatitis (AD) is a multifactorial chronic inflammatory skin disease that affecting approximately 7% of adults and up to 20% of children worldwide, posing a significant burden on patients' quality of life.[1,2]
- It is characterized by intense, persistent pruritus and sleep disturbances, often resulting in sleep deprivation. These symptoms lead to anxiety, depression, reduced quality of life, and decreased productivity.[3]
- Among conventional systemic therapy, cyclosporin is the only approved immunosuppressant for the treatment of AD.
- Patients with severe AD are candidates for biological therapies (dupilumab, tralokinumab, lebrikizumab) or Janus kinase inhibitors (JAKi), including abrocitinib, baricitinib, and upadacitinib.[4]
- Lebrikizumab is a novel, high-affinity monoclonal antibody that selectively binds to interleukin (IL)-13.[5,6]

OBJECTIVES

- To retrospectively assess the effectiveness and safety of lebrikizumab in patients with severe atopic dermatitis

METHOD

- This observational, retrospective, multicenter cohort study analyzed data from patients enrolled in the Czech national registry of patients with inflammatory skin diseases, BIOREP, who were treated with targeted therapies.
- In the Czech Republic, dupilumab has been available for the treatment of severe AD since 2018, JAKi (abrocitinib, baricitinib, and upadacitinib) since 2022, and lebrikizumab since 2024.
- At a time of analyses, the registry included 2,174 patients with severe AD.
- As of July 2025, 49 centers were registered in BIOREP, with 45 treating AD and 34 using lebrikizumab.
- In total, 2,882 treatment series were recorded, including 344 involving lebrikizumab.
- Three validated scores - the Eczema Area and Severity Index (EASI), itch severity, and sleep disturbance - were assessed at baseline, week 16 and week 24. Treatment effectiveness was evaluated using mean percentage changes from baseline and the proportion of patients achieving EASI50, EASI75, EASI90, and EASI100.
- Changes in itch severity and sleep disturbance were also recorded.

RESULTS

- The study included 344 patients treated with lebrikizumab.
- At month 4, 194 patients were evaluated; at month 6, 105 patients.
- EASI50 was achieved in 92.3% and 97.1% at months 4 and 6, respectively; EASI75 in 69.6% and 83.9%; EASI90 in 39.7% and 46.7%; and EASI100 in in 9.3% and 9.5%. *Figure 1*
- Itch severity, assessed using a 10-point numeric rating scale (NRS), decreased from a baseline mean of 7.1 (median [Me] 7.0) to 2.9 (Me 2.0) at month 4 and 2.6 (Me 2.0) at month 6. *Figure 2*
- Sleep disturbance improved from a baseline mean of 6.1 (Me 6.5) to 2.0 (Me 1.0) at month 4 and 1.8 (Me 1.0) at month 6. *Figure 3*
- Treatment discontinuation occurred in 7.8% (n=27) of cases. The main reason was loss of effectiveness (3.5%), followed by adverse events (AEs; 2.6%).
- A total of 32 AEs were reported in 27 patients (7.8%) with no serious AEs. Most common AE was conjunctivitis, affecting 22 patients (6.4%). No new safety concerns were identified.
- The predicted drug survival rate at 6 months of treatment was 87.8%.

Figure 2. *Pruritus improvement*

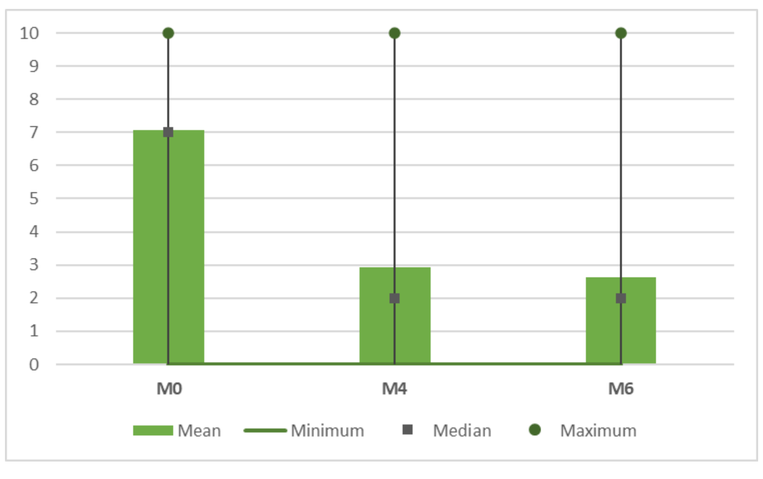

Figure 1. *EASI improvement*

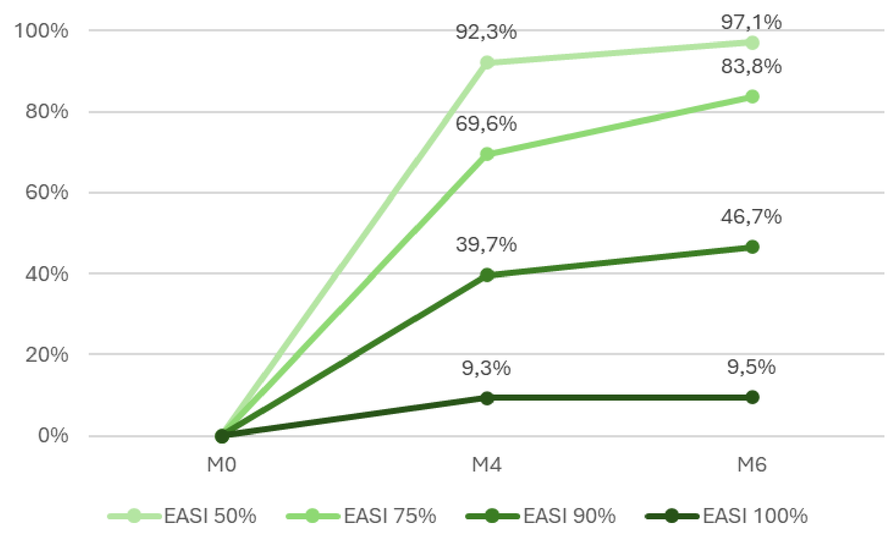

Table 1. *Reason for discontinuation*

Reasons for discontinuation or switch	N (%)
Loss of efficacy	12 (3.5%)
Adverse events	9 (2.6%)
Patient´s wish	3 (0.9%)
Pregnancy (N,%)	1 (0.3%)
Other (N,%)	2 (0.6%)
Total	**27 (7.8%)**

Figure 3. *Sleep improvement*

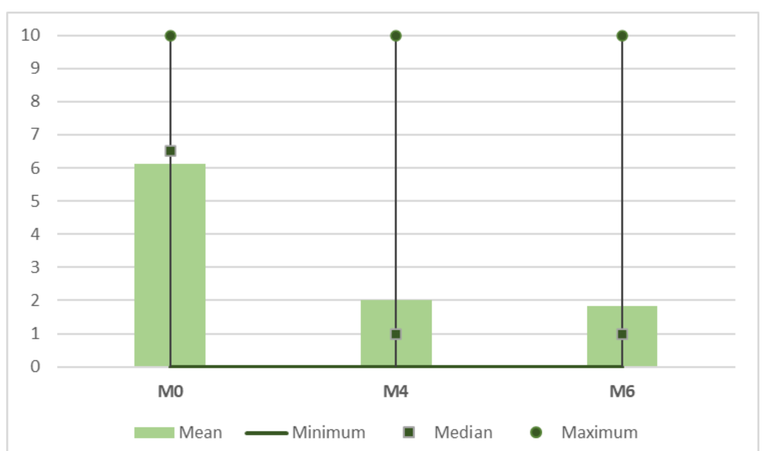

Figure 4. *Survival probability*

Table 2. *Adverese Events*

Adverse Events (AEs)	N (%)
Number of reported AEs	32 (9.3%)
Number of patients	27 (7.8%)
Conjunctivitis	22 (6.4%)
Effluvium/alopecia	4 (1.2%)
Face dermatitis	2 (0.6%)
Injection site reaction	1 (0.3%)
Generalized rash	1 (0.3%)
Urticaria	1 (0.3%)
Skin burning	1 (0.3%)

CONCLUSION

- In our real-world analysis, lebrikizumab showed high effectiveness and a favorable safety profile.
- EASI75 and EASI90 responses at week 16 (69.6% and 39.7%) exceeded those reported in double-blind, placebo-controlled, phase 3 trials (ADvocate1: 58.8% and 38.3%; ADvocate2: 52.1% and 30.7%).[5,6] Real-world data from Japanese AD patients reported week 16 EASI50/75/90/100 responses of 83.1%, 57.1%, 27.3%, and 11.7%, respectively.[7] In comparison, our cohort achieved superior results: 92.3%, 69.6%, 39.4%, and 9.3%, respectively.
- Based on real-life data, lebrikizumab showed strong effectiveness and a favorable safety profile. No serious AEs were observed. The most common AE, conjunctivitis (6.4%), was less frequent than in ADvocate1 and ADvocate2 trials (7.4% and 7.5%, respectively).[5,6]
- These findings support lebrikizumab as an effective treatment for severe AD.

References

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