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Effect of lebrikizumab on comorbid chronic urticaria in patients with atopic dermatitis: a case series

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Introduction

Atopic dermatitis (AD) and chronic urticaria share type 2-driven inflammatory pathways and may co-exist in the same patient. Dupilumab, which targets the interleukin (IL)-4 receptor, is also licensed for chronic spontaneous urticaria (CSU). It is unclear if the newer IL-13 inhibitor biologics used for AD could treat chronic urticaria. The aim of this case series is to report the effect of lebrikizumab on chronic urticaria disease activity in patients treated for AD in routine clinical practice.

Materials and Methods

This is a retrospective case series of five adults with AD (with treatment initiation >6 months) and comorbid chronic urticaria treated with lebrikizumab. Urticaria Activity Score over 7 days (UAS7), Urticaria Control Test (UCT), Dermatology Life Quality Index (DLQI), and Eczema Area and Severity Index (EASI) were recorded from medical records where available before and after lebrikizumab initiation.

Results

Of the five patients (four female, age range 22-51), four had CSU; one had both CSU and cholinergic urticaria. All were receiving high-dose second generation antihistamines. AD significantly improved in four patients, reflected by reductions in EASI and DLQI. Chronic urticaria outcomes were varied; one patient achieved complete remission (UAS7 0; UCT 16) 11 months after starting lebrikizumab and discontinued antihistamines. Four patients demonstrated persistent or minimally changed chronic urticaria activity despite treatment, with post-treatment UAS7 scores ranging from 6 to 24 and UCT scores ranging from 2 to 11. One patient's AD did not adequately respond to lebrikizumab; switch to upadacitinib resulted in significant improvement of both her AD and CSU.

Table 1. Clinical characteristics and urticaria outcomes in patients treated with lebrikizumab for atopic dermatitis

Patient	Age/Sex	Pre-Lebrikizumab Scores (UAS7 / UCT / DLQI / EASI)	Post-Lebrikizumab Scores (UAS7 / UCT / DLQI / EASI; time after start)	*Prior urticaria Treatments	Clinical Summary
1	40 / F	DLQI:16; EASI: 24 UAS7 and UCT not recorded	DLQI: 4 ; EASI: 4.5 UAS7: 24 ; UCT: 2 (12 months post-treatment)	Cetirizine Montelukast Ranitidine Fexofenadine Famotidine Dapsone	Severe CSU persisted despite lebrikizumab
2	35 / F	DLQI: 10; EASI: 15 UAS7 and UCT not recorded	DLQI: 2; EASI:4.6 UAS7: 0; UCT: 16 (11 months post-treatment)	Chlorphenamine Fexofenadine	No CSU flares since starting lebrikizumab; complete control.
3	25 / M	DLQI:19; EASI: 39.1 UAS7 and UCT not recorded	DLQI: 2 ; EASI: 1.5 UAS7: 19; UCT: 8 (17 months post-treatment)	Fexofenadine	CSU persisted since starting lebrikizumab; unclear change from baseline; moderate ongoing activity.
4	22 / F	DLQI: 25; EASI: 14 UAS7: 18; UCT 5	DLQI: 11; EASI not recorded UAS7: 19; UCT: 4; (7 months post-treatment)	Fexofenadine Montelukast Omalizumab	No improvement in CSU after lebrikizumab.
5	51 / F	DLQI: 17; EASI: 17.7 UAS7 and UCT not recorded	DLQI: 1; EASI: 4 UAS7: 6; UCT: 11; (20 months post-treatment)	Fexofanadine Tralokinumab Dupilumab	CSU persisted since starting lebrikizumab; unclear change from baseline; mild ongoing activity

Abbreviations: F, female; M, male; CSU, chronic spontaneous urticaria; UAS7, Urticaria Activity Score over 7 days; UCT, Urticaria Control Test; DLQI, dermatology life quality index; EASI, eczema area and severity index.

*Concomitant antihistamines and/or montelukast were continued throughout follow-up, with no other treatment modifications.

Conclusions

Lebrikizumab was associated with variable effects on chronic urticaria in patients treated for AD, ranging from complete remission to persistent urticarial activity. These findings suggest IL-13 blockade may benefit a selected subgroup of patients while others may derive limited benefit. Prospective studies with larger sample size are needed to clarify the role of IL-13 inhibition in chronic urticaria management.