authors used multivariate logistic regression to analyze the association between atopic dermatitis subtypes and other allergic diseases.

RESULTS. Four subtypes of atopic dermatitis were identified. These phenotypes were identified as early transient (n = 96; 9.2%), early persistent (n = 67; 6.5%), late (n = 50; 4.8%), and never/infrequent (n = 825; 79.5%). The early transient and early persistent phenotypes had onset before 2 years of age, while the late phenotype had onset at or after 2 years of age. Multivariate logistic regression demonstrated a strong association between the early transient (adjusted odds ratio [aOr], 3.69; 95% confidence interval [CI], 1.93–7.035) and early persistent (aOR, 7.08; 95% CI, 3.59–13.975) subtypes with food allergy up to age 6 years, in addition to an association between the early persistent subtype and asthma up to age 6 (aOR, 2.87; 95% CI, 1.31–6.31). The late subtype had a positive association with allergic rhinitis. Parental history of allergy was a risk factor for the early persistent subtype.

CONCLUSIONS. The authors identified 4 subtypes of atopic dermatitis by using latent class analysis, and demonstrated associations between early phenotypes of atopic dermatitis and other allergic disease, including food allergy and asthma.

REVIEWER COMMENTS. This is a timely study that reinforces current trends in the literature. Knowing risk association with the early atopic dermatitis phenotypes may help guide future research and clinical care in regard to food allergy and asthma prevention strategies.

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Efficacy and Safety of Crisaborole Ointment, a Novel, Nonsteroidal Phosphodiesterase 4 (PDE4) Inhibitor for the Topical Treatment of Atopic Dermatitis (AD) in Children and Adults

Paller AS, Tom WL, Lebwohl MG, et al. *J Am Acad Dermatol*. 2016;75(3):494–503.e6

PURPOSE OF THE STUDY. To assess the efficacy and safety of crisaborole ointment, which is a phosphodiesterase 4 inhibitor, for the topical treatment of atopic dermatitis.

STUDY POPULATION. This study includes the results from 2 identically designed phase 3 clinical trials conducted in the United States that included a total of 1522 individuals who were 2 years of age or older. About 85% of study participants were less than 18 years of age, and 55% of study participants were female. About 60% of study participants were white and 28% were black.

METHODS. Patients aged 2 years or older were enrolled in 2 identically designed, vehicle-controlled, double-blind studies and were randomly assigned (2:1, crisaborole: vehicle). Study participants had an Investigator's Static Global Assessment (ISGA) score of mild to moderate atopic dermatitis. Exclusion criteria prohibited previous use of biologic therapy or systemic corticosteroids within 28 days or topical corticosteroids or topical calcineurin inhibitors within 14 days. Instructions included the application of a layer of the study drug to cover all atopic dermatitis–affected areas at baseline twice daily for the duration of the 28-day study period. The primary efficacy end point was an ISGA score at day 29 of clear (score 0) or almost clear (score 1) with a 2-grade or more improvement from baseline.

RESULTS. There were no significant differences across treatment groups or across studies in either disease severity or baseline demographics. More patients treated with crisaborole achieved efficacy in an ISGA score at day 29 than vehicle-treated patients (first phase 3 study: 32.8% vs 25.4%, P = .38; second phase 3 study: 31.4% vs 18%, $P < .001$). Furthermore, patients treated with crisaborole achieved efficacy in an ISGA score and improvement in pruritus earlier than those treated with vehicle alone. Crisaborole was well tolerated, with infrequent adverse events of a mild to moderate severity level.

CONCLUSIONS. Crisaborole demonstrated improvement in overall disease severity, pruritus, and other signs of atopic dermatitis with a favorable safety profile.

REVIEWER COMMENTS. This study highlights the results of 2 large phase 3 trials that demonstrated the clinical efficacy and benefit of crisaborole for the treatment of mild to moderate atopic dermatitis. As a phosphodiesterase 4 inhibitor, crisaborole represents a novel, nonsteroidal topical therapy that has been recently FDA approved to improve management for atopic dermatitis.

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Pediatric Patch Testing: A 10-Year Retrospective Study

Ascha M, Irfan M, Bena J, Taylor JS, Sood A. *Ann Allergy Asthma Immunol*. 2016;117(6):661–667

PURPOSE OF THE STUDY. To review the demographics, referral criteria, efficacy of testing, and comorbid conditions among patients who are evaluated by patch testing for concern for allergic contact dermatitis (ACD).

STUDY POPULATION. Data were collected from 157 pediatric patients (3–18 years old, median 13 years old) who were evaluated for patch testing at the Cleveland Clinic Foundation Department of Dermatology from 2005–2015. Of participants, 58.6% were female, and 68.8% were atopic.

METHODS. A retrospective chart review was conducted with institutional review board approval. Outcomes reviewed

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