Efficacy and Safety of Crisaborole in Patients With Mild-to-Moderate Atopic Dermatitis With and Without Comorbid Allergies or Asthma

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Presented at the RAD 2021 Virtual Conference
June 13, 2021

Editorial/medical writing support under the guidance of the authors was provided by Stephanie Agbu, PhD, at ApotheCom, San Francisco, CA, USA, and was funded by Pfizer Inc., New York, NY, USA, in accordance with Good Publication Practice (GPP3) guidelines (*Ann Intern Med*. 2015;163:461-454).This study was sponsored by Pfizer Inc.

DISCLOSURES

PL has served as a clinical trial investigator for AbbVie, AOBiome, La Fondation pour la Dermatite Atopique, National Eczema Association, and Regeneron; has served on consulting/advisory boards for AbbVie, Altus Labs, Amyris, Arbonne, Bodewell, Burt's Bees, Dermavant, Dermira, DermTap, Dermveda, Eli Lilly, Exeltis, Franklin BioScience, gpower, IntraDerm, Johnson & Johnson, Kimberly Clark, Kiniksa Pharmaceuticals, LEO Pharma, L'Oréal, Menlo Therapeutics, Micreos Human Health, Modernizing Medicine, MyOR Diagnostics, National Eczema Association, Odeza, Realm Therapeutics, Regeneron, Sanofi US Services, Syncere Skin Systems, Theraplex, UCB, Unilever, Verrica Pharmaceuticals, and YobeeCare; has served as a speaker for Pfizer Inc., Eli Lilly, Galderma, La Roche-Posay, LEO Pharma, Pierre Fabre Dermatologie, and Regeneron; has received royalties from Theraplex; and is a stockholder of LearnHealth/LearnSkin, Medable, and Modernizing Medicine. **MJC** has served as a clinical trial investigator for Astellas, Galapagos, Johnson & Johnson, LEO Pharma, La Roche-Posay, MSD, Novartis, Perrigo, Regeneron, Sanofi Genzyme, and Stiefel; has served as an advisory board member, consultant, and/or invited lecturer for Pfizer Inc., Amgen, Astellas, Bayer, Johnson & Johnson, LEO Pharma, L'Oréal, MSD, Novartis, Regeneron, Sanofi Genzyme, Stiefel, and Unilever; has received honoraria from Astellas, Johnson & Johnson, LEO Pharma, Novartis, Regeneron, Sanofi Genzyme, and Stiefel; and has received research funding from Bayer. **MSB** has served as a consultant for Pfizer Inc., ALK, Covis Pharma, Merck, Regeneron, and Sanofi Genzyme. **AK** has served on advisory boards and has served as a speaker for AstraZeneca, GlaxoSmithKline, Kamada, Novartis, Rafa, Takeda, and Teva. **WCC** has served on advisory boards for Eli Lilly, Janssen, LEO Pharma, Ortho Dermatologics, Sun Pharma, and UCB and has served as a speaker for Eli Lilly, Janssen, and Sun Pharma. **JLW**, **MO**, **CZ,** and **LT** are employees and stockholders of Pfizer Inc.

Methods

- CrisADe CORE 1 (ClinicalTrials.gov, NCT02118766) and CORE 2 (NCT02118792) were identically designed, randomized, double-blind, vehicle-controlled, 28-day, phase 3 studies of crisaborole versus vehicle in patients aged ≥2 years with AD per Hanifin and Rajka criteria,[1] mild-to-moderate disease per the ISGA, and %BSA ≥5 (excluding the scalp) who were randomly assigned 2:1 to receive crisaborole or vehicle twice daily[2]
- In this post hoc analysis, patients were stratified by history of asthma/allergies (including but not limited to allergic rhinitis, food, and other allergies)
- Efficacy and safety outcomes included
  - **ISGA success**, defined as an ISGA of clear (0) or almost clear (1) with a ≥2-grade improvement from baseline, at day 29
  - **ISGA of clear (0) or almost clear (1)** at day 29
  - **SPS improvement**, defined as a weekly average SPS score ≤1 point with ≥1-point improvement from baseline, at week 4
  - **TEAEs** (all cause and treatment related), serious AEs, and AEs of special interest

Results

Baseline Characteristics

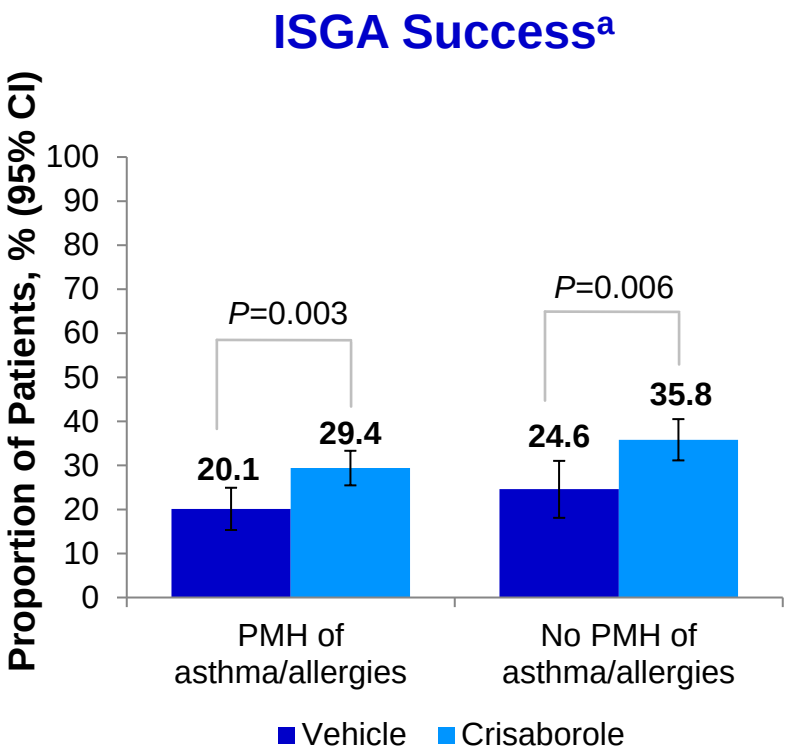
Demographic or Characteristic		PMH of Asthma/Allergies		No PMH of Asthma/Allergies	
		Vehicle n=304	Crisaborole n=585	Vehicle n=202	Crisaborole n=431
Age, mean (SD), y		12.1 (11.1)	12.4 (11.4)	12.1 (12.5)	12.2 (13.1)
%BSA, mean (SD)		19.5 (18.7)	19.7 (19.0)	16.1 (14.8)	16.5 (16.5)
ISGA, n (%)	Mild (2)	103 (33.9)	213 (36.4)	90 (44.6)	180 (41.8)
	Moderate (3)	201 (66.1)	372 (63.6)	112 (55.5)	251 (58.2)
SPS, n (%)	Moderate (2)	101 (33.2)	189 (32.3)	66 (32.7)	142 (33.0)
	Severe (3)	86 (28.3)	183 (31.3)	50 (24.8)	125 (29.0)
Prior use of systemic corticosteroids,[a] n (%)		123 (40.5)	207 (35.4)	50 (24.8)	104 (24.1)
Concurrent use of antihistamines, n (%)		115 (37.8)	213 (36.4)	19 (9.4)	32 (7.4)

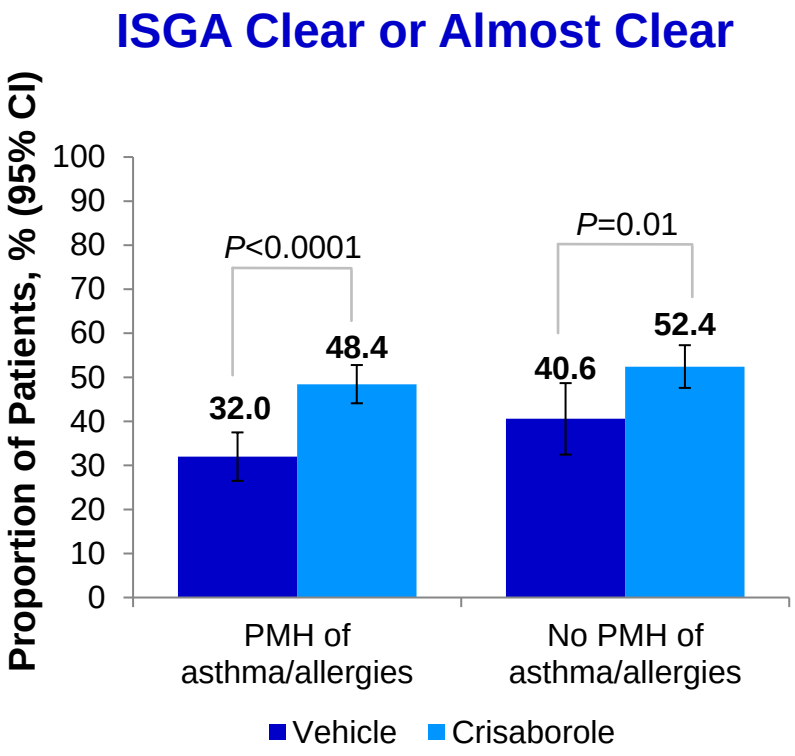
%BSA, percentage of treatable body surface area; AD, atopic dermatitis; AE, adverse event; ISGA, Investigator's Static Global Assessment; PMH, past medical history; SPS, Severity of Pruritus Scale; TEAE, treatment-emergent adverse event.

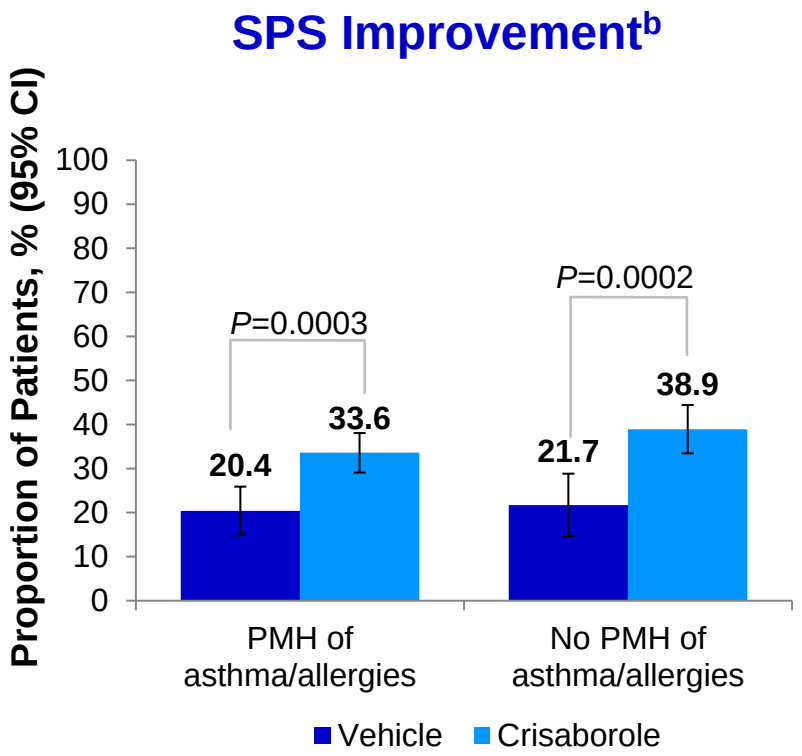
[a]Within 90 days before starting study treatment.

1. Hanifin JM, Rajka G. *Acta Derm Venereol*. 1980;60:44-47. 2. Paller AS et al. *J Am Acad Dermatol*. 2016;75:494-503.e496.

Significant Improvement in Severity of AD and Pruritus Was Observed With Crisaborole Compared With Vehicle in Patients With or Without a History of Asthma/Allergies







ISGA, Investigator's Static Global Assessment; PMH, past medical history; SPS, Severity of Pruritus Scale; TEAE, treatment-emergent adverse event.

[a]ISGA success is defined as an ISGA of clear or almost clear with ≥2-grade improvement from baseline. [b]Improvement in SPS is defined as weekly average SPS score ≤1 point with a ≥1-point improvement from baseline.

Safety Profile and Discussion

- Among crisaborole-treated patients with asthma/allergies
  - 95 (16.2%) experienced mild TEAEs
  - 99 (16.9%) experienced moderate TEAEs
  - 14 (2.4%) experienced severe TEAEs
- The most common treatment-related TEAE was application site pain
  - Patients with asthma/allergies: crisaborole, 5.1%; vehicle, 1.7%
  - Patients without asthma/allergies: crisaborole, 3.5%; vehicle, 0.5%
- 6 crisaborole-treated patients with asthma/allergies experienced serious TEAEs (application site infection, asthma, laceration, Kawasaki disease, pneumonia, suicidal ideation; each n=1) considered unrelated to treatment
  - 1 vehicle-treated patient with asthma/allergies experienced a treatment-related serious TEAE (cellulitis)
- Exacerbation of asthma was reported in 9 patients in the asthma/allergies cohort, and exacerbation of allergic rhinitis was reported in 3 patients in the asthma/allergies cohort
  - Anaphylaxis was not reported in any subgroup

	PMH of Asthma/Allergies		No PMH of Asthma/Allergies	
	Vehicle n=301	Crisaborole n=585	Vehicle n=198	Crisaborole n=427
AE (all cause), n (%)				
Application site pain	5 (1.7)	30 (5.1)	1 (0.5)	15 (3.5)
Upper respiratory tract infection	6 (2.0)	25 (4.3)	11 (5.6)	9 (2.1)
Viral upper respiratory tract infection	7 (2.3)	15 (2.6)	4 (2.0)	11 (2.6)
Pyrexia	4 (1.3)	11 (1.9)	4 (2.0)	13 (3.0)
Cough	6 (2.0)	11 (1.9)	3 (1.5)	5 (1.2)
Vomiting	3 (1.0)	8 (1.4)	2 (1.0)	9 (2.1)
TEAE of special interest, n (%)				
Asthma	1 (0.3)	8 (1.4)	0	0
Allergic rhinitis	0	3 (0.5)	1 (0.5)	0
Anaphylaxis	0	0	0	0

DISCUSSION

- Crisaborole is effective in treating patients aged ≥2 years with mild-to-moderate AD irrespective of a history of asthma/allergies, and no new safety concerns were identified
- Crisaborole may be suitable for the management of AD in patients with or without comorbid asthma/allergies

AD, atopic dermatitis; AE, adverse event; PMH, past medical history; TEAE, treatment-emergent adverse event.