P0188

Efficacy of Abrocitinib Monotherapy by Body Location in Patients With Moderate-to-Severe Atopic Dermatitis: Pooled Results From Phase 2b/3 Studies

Jonathan I. Silverberg,[1] Hidehisa Saeki,[2] Audrey Nosbaum,[3] Chia-Yu Chu,[4] Neal Bhatia,[5] Pinaki Biswas,[6] Saleem A. Farooqui,[7] Michael C. Cameron,[6] Natalie C. Yin[6]

[1]The George Washington University School of Medicine and Health Sciences, Washington, DC, USA; [2]Nippon Medical School, Tokyo, Japan; [3]Centre Hospitalier Lyon-Sud, Hospices Civils de Lyon, Pierre-Bénite, France; [4]National Taiwan University Hospital and National Taiwan University College of Medicine, Taipei, Taiwan; [5]Therapeutics Clinical Research, San Diego, CA, USA; [6]Pfizer Inc., New York, NY, USA; [7]Pfizer R&D UK Ltd., Sandwich, United Kingdom

BACKGROUND

- Atopic dermatitis (AD) is a common chronic inflammatory skin disorder characterized by intense pruritus and eczematous lesions[1,2]
- Abrocitinib is an oral, once-daily, Janus kinase 1 selective inhibitor under investigation for the treatment of moderate-to-severe AD
  - The phase 2b trial (NCT02780167) demonstrated that abrocitinib monotherapy was effective and safe in reducing signs and symptoms of AD in patients with moderate-to-severe AD[2]
  - In 2 phase 3 monotherapy trials (JADE MONO-1 [NCT03349060] and JADE MONO-2 [NCT03575871]), significantly greater proportions of abrocitinib-treated patients achieved Investigator Global Assessment (IGA) response (clear [0] or almost clear [1] with ≥2-grade improvement) and ≥75% improvement in Eczema Area and Severity Index (EASI-75) than those given placebo[3,4]
- Although the overall efficacy of abrocitinib has been described in terms of IGA and composite EASI responses, the signs and extent of AD vary by body location[2-4]
  - EASI is an assessment of AD that evaluates 4 signs (erythema, induration/papulation, excoriation, and lichenification) in 4 body regions (head and neck, trunk, lower limbs, and upper limbs)[5]

OBJECTIVE

- To investigate whether abrocitinib reduced disease severity across all body locations

METHODS

Study Design and Patients

- Eligible patients were randomly assigned 1:1:1:1:1 in the phase 2b study (NCT02780167) to receive abrocitinib (200 mg, 100 mg, 30 mg, or 10 mg) or placebo or were randomly assigned 2:2:1 in the 2 phase 3 studies (JADE MONO-1 [NCT03349060] and JADE MONO-2 [NCT03575871]) to receive abrocitinib (200 mg or 100 mg) or placebo[2-4]
- Patients enrolled in the studies were aged 18-75 years (phase 2b) or ≥12 years (phase 3) and had
  - A clinical diagnosis of moderate-to-severe AD (IGA ≥3, EASI ≥12 [phase 2b] or ≥16 [phase 3], percentage of body surface area (%BSA) affected ≥10, Peak Pruritus Numerical Rating Scale [PP-NRS; used with permission of Regeneron Pharmaceuticals, Inc. and Sanofi] ≥4 [phase 3 only]) for ≥1 year[2-4,6]
  - A recent (within 12 months in phase 2b; within 6 months in phase 3) history of inadequate response to topical medications for AD given for ≥4 weeks or an inability to receive topical treatment because it was medically inadvisable[2-4]
- Rescue medication (including topical corticosteroids) was prohibited in all studies[2,3]
- Data were pooled for patients who received abrocitinib 200 mg, abrocitinib 100 mg, or placebo in the 3 abrocitinib monotherapy trials[2-4]

Analysis of Efficacy by Body Location

- EASI subscores indicating the severity of the signs of AD (erythema, induration/papulation, excoriation, and lichenification) for each of the 4 body regions (head and neck, trunk, lower limbs, and upper limbs) were examined separately
- This analysis focused on the effectiveness by body location of abrocitinib 200 mg or 100 mg and placebo in improving EASI scores

RESULTS

Demographics and Baseline Disease Characteristics

- Demographics and baseline disease characteristics are summarized in **Table 1**

Table 1. Demographics and Baseline Characteristics

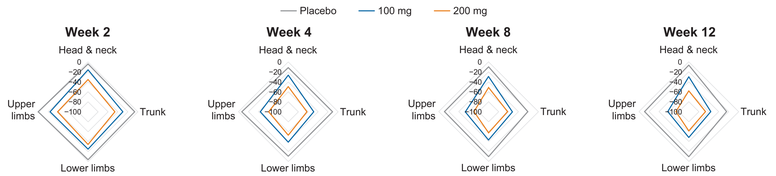
Characteristic	Pooled Treatment Group			
	Placebo N=210	Abrocitinib 100 mg N=369	Abrocitinib 200 mg N=363	Total N=942
Age, mean (SD), years	35.0 (15.0)	35.9 (15.8)	34.1 (16.4)	35.0 (15.9)
Age, n (%)				
12-17 years	25 (11.9)	51 (13.8)	48 (13.2)	123 (13.2)
18-65 years	178 (84.8)	297 (80.5)	289 (79.6)	764 (81.1)
≥65 years	7 (3.3)	21 (5.7)	26 (7.2)	54 (5.7)
Male sex, n (%)	117 (55.7)	215 (58.3)	197 (54.3)	529 (56.2)
Race, n (%)				
White	141 (67.1)	253 (68.6)	231 (63.6)	625 (66.3)
Asian	39 (18.6)	80 (21.7)	85 (23.4)	204 (21.7)
Black or African American	22 (10.5)	31 (8.4)	30 (8.3)	83 (8.8)
Multiracial	2 (1.0)	2 (0.5)	8 (2.2)	12 (1.3)
Other	3 (1.0)	2 (0.5)	5 (3.2)	10 (2.6)
Not reported	1 (1.4)	1 (0.3)	4 (1.1)	8 (0.8)
Ethnicity, n (%)				
Not Hispanic or Latino	196 (93.3)	352 (95.4)	349 (96.1)	897 (95.2)
Hispanic or Latino	11 (5.2)	14 (3.8)	12 (3.3)	37 (3.9)
Not reported	3 (1.4)	3 (0.8)	2 (0.6)	8 (0.8)
Disease duration, mean (SD), years	23.5 (15.2)	23.7 (16.1)	22.0 (15.1)	23.0 (15.5)
IGA, n (%)				
Moderate (3)	132 (62.9)	228 (61.8)	231 (63.6)	591 (62.7)
Severe (4)	78 (37.1)	141 (38.2)	132 (36.4)	351 (37.3)
EASI score, mean (SD)	27.6 (11.8)	29.4 (12.4)	29.0 (13.4)	28.8 (12.7)

EASI, Eczema Area and Severity Index; IGA, Investigator's Global Assessment.

Efficacy of Abrocitinib Monotherapy by Body Location

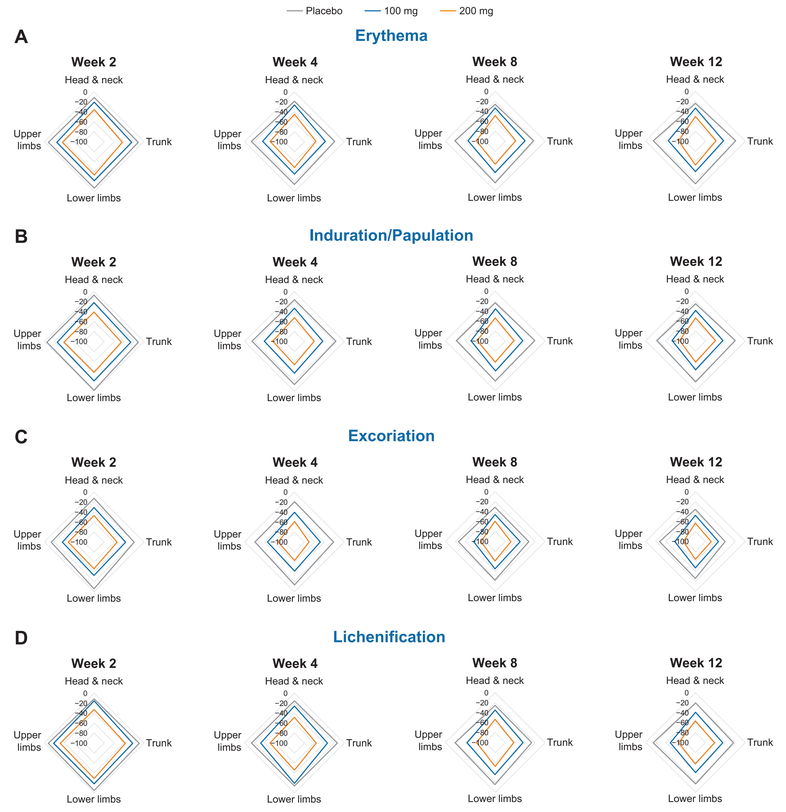
- From weeks 2 to 12, abrocitinib-treated patients (200 mg or 100 mg) had greater and dose-dependent reductions in least squares mean (LSM) changes from baseline in EASI subscores in all body regions compared with placebo-treated patients (**Figure 1**)
- At weeks 4, 8, and 12, reductions in LSM changes from baseline in EASI trunk, lower limb, and upper limb subscores were numerically greater than reductions in head and neck scores (**Figure 1**)
- The dose-dependent reductions in LSM changes from baseline were consistent across all AD signs measured by EASI (**Figure 2**)
- At week 12, the response to abrocitinib in the upper limbs was numerically higher than the response in other body regions; this difference was consistent across all AD signs (**Figures 1** and **2**)

Figure 1. LSM Change From Baseline in Extent of Disease and Severity of Signs of AD From EASI by Body Region From Weeks 2 to 12



AD, atopic dermatitis; EASI, Eczema Area and Severity Index; LSM, least squares mean.

Figure 2. LSM Change From Baseline in Severity of Signs of AD: (A) Erythema, (B) Induration/Papulation, (C) Excoriation, and (D) Lichenification From EASI by Body Region From Weeks 2 to 12



AD, atopic dermatitis; EASI, Eczema Area and Severity Index; LSM, least squares mean.

CONCLUSIONS

- In this post hoc analysis, patients with moderate-to-severe AD treated with abrocitinib 200 mg or 100 mg had greater improvements (reduction) in the extent of disease and severity of AD signs in all body locations than patients treated with placebo

REFERENCES

1. Eichenfield LF et al. *J Am Acad Dermatol.* 2014;71:116-132.
2. Gooderham MJ et al. *JAMA Dermatol.* 2019;155:1371-1379.
3. Silverberg JI et al. *JAMA Dermatol.* 2020;156:863-873.
4. Simpson EL et al. *Lancet.* 2020;396:255-266.
5. Hanifin JM et al. *Exp Dermatol.* 2001;10:11-18.
6. Yosipovitch G et al. *Br J Dermatol.* 2019;181:761-769.

ACKNOWLEDGMENTS

Editorial/medical writing support under the guidance of the authors was provided by Marianna Johnson, PhD, and Juan Sanchez-Cortes, 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;163:461-464).

This study was sponsored by Pfizer Inc.

Presented at the 29th EADV Congress, EADV Virtual; October 28-November 1, 2020