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Atopic Dermatitis: Patient Characteristics and Patient-Reported Outcomes on Topical Therapy

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Background

- Topical therapies including corticosteroids and calcineurin inhibitors are standard of care for many patients with atopic dermatitis (AD)[1]
- Prolonged use of topical corticosteroids is associated with diminished skin health, and both topical calcineurin inhibitors and the phosphodiesterase-4 inhibitor crisaborole may cause application site reactions (eg, stinging and burning) that may prompt treatment discontinuation[1,2]
- Studies evaluating the impact of topical AD therapy in a real-world setting are needed to better understand patient unmet needs

Objective

- To evaluate disease control, physician and patient satisfaction, and patient-reported outcomes (PROs) among adolescent and adult patients with AD receiving topical therapy, alone or in combination with systemic therapy

Methods

Study Design and Assessments

- This was a retrospective, point-in-time, observational study of physician-completed medical records and matched patient surveys drawn from 2 Adelphi AD Disease Specific Programmes (DSPs™) in the United States
  - One DSP was conducted in adults (≥18 years) in 2018 and the other in pediatric patients (≤17 years) in 2019, with broadly similar methodology across the 2 DSPs
- Patient record forms completed by physicians about their patients with AD included details on patient demographics, clinical characteristics, and treatment history
  - Uncontrolled disease was defined as deteriorating/changing; controlled was defined as improving/stable
- The patient self-completion form captured PROs including Dermatology Life Quality Index (DLQI[3]; adults), Children's DLQI (CDLQI[4]; adolescents), Patient-Oriented Eczema Measure (POEM),[5] and Work Productivity and Activity Impairment (WPAI[6]; adults only) questionnaires; higher values indicate worse impairment across measures
- Physicians and patients independently provided an assessment of satisfaction with disease control

Participants

- For this analysis, eligible patients were adults (≥18 years) and adolescents (12–17 years) either currently experiencing or with a history of moderate or severe AD (based on subjective rating by treating physician) who had been receiving their current AD therapy for ≥1 month

Statistical Analyses

- Analyses of disease control, physician and patient satisfaction, and PROs were conducted in the subpopulation of patients who were currently receiving topical therapy alone or in addition to systemic therapy; patients receiving systemic therapy alone were excluded
- Continuous and categorical variables were described using descriptive statistics
- Independent sample *t* tests compared patients with controlled vs uncontrolled disease; a *P* value <0.05 was considered statistically significant
- Data were analyzed using STATA version 16.1 (StataCorp LP, College Station, TX, USA)

Results

Study Population

- **Tables 1** and **2** summarize the types of participating physicians and the current AD treatments of patients included in the analysis, respectively

Table 1. Summary of Participating Physicians From the Adelphi AD DSP™

Physician Type, n (%)	Adult AD DSP™ (n=150)	Adolescent AD DSP™ (n=103)
PCP/internist	60 (40.0)	10 (9.7)
Pediatrician	N/A	22 (21.4)
Dermatologist	70 (46.7)	50 (48.5)
Allergist/immunologist	20 (13.3)	21 (20.4)

AD, atopic dermatitis; DSP, Disease Specific Programme; N/A, not applicable; PCP, primary care physician.

Table 2. Current Treatments*

Treatment Type, n (%)	Adult Patients With AD (n=424)	Adolescent Patients With AD (n=151)
Topical only[†]	284 (67.0)	114 (75.5)
Topical plus systemic[‡]	110 (25.9)	30 (19.9)
Systemic[‡] only	13 (3.1)	4 (2.6)
No current or prior treatments	15 (3.5)	3 (2.0)
Other[§]	2 (0.5)	0

AD, atopic dermatitis.
* As described by the treating physician. Table includes treatments for all patients who received current treatment for ≥1 month; subsequent analyses only examined patients receiving topical only or topical plus systemic therapy (adult, n=394; adolescent, n=144).
† Includes topical corticosteroids, topical calcineurin inhibitors, or crisaborole.
‡ Includes systemic corticosteroids, systemic immunosuppressants, or biologics.
§ Not topical corticosteroids, topical calcineurin inhibitors, crisaborole, systemic corticosteroids, systemic immunosuppressants, or biologics.

- Patient demographics and baseline clinical characteristics of adult and adolescent patients receiving topical therapy alone or topical plus systemic therapy are shown in **Table 3**

Table 3. Patient Demographics and Baseline Clinical Characteristics

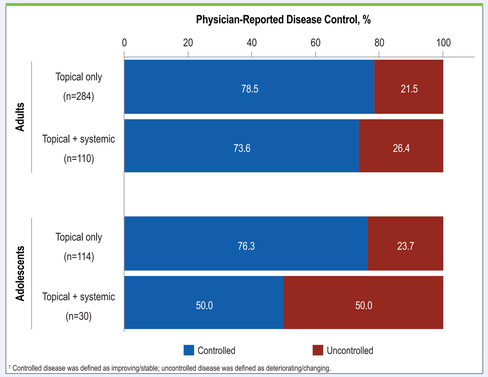
	Adult Patients		Adolescent Patients	
Parameter	Topical Only (n=284)	Topical Plus Systemic (n=110)	Topical Only (n=114)	Topical Plus Systemic (n=30)
Age, mean (SD), y	37.9 (15.2)	39.1 (14.4)	14.4 (1.7)	15.3 (1.8)
Male, n (%)	122 (43.0)	55 (50.0)	67 (58.8)	18 (60.0)
BMI, mean (SD), kg/m^2	25.5 (4.6)	26.7 (3.6)	22.1 (2.5)	23.4 (4.0)
Race/ethnicity, n (%)				
White	197 (69.4)	81 (73.6)	83 (72.8)	23 (76.7)
Hispanic/Latino	27 (9.5)	7 (6.4)	5 (4.4)	2 (6.7)
Black	21 (7.4)	5 (4.5)	12 (10.5)	2 (6.7)
Other	39 (13.7)	17 (15.5)	14 (12.3)	3 (10.0)
Employment status, n (%)				
Working full time	173 (60.9)	73 (66.4)	N/A	N/A
Working part time	27 (9.5)	7 (6.4)	N/A	N/A
≥1 Type II inflammatory disease, n (%)*	158 (55.6)	56 (50.9)	61 (53.5)	21 (70.0)
Allergic rhinitis	105 (37.0)	39 (35.5)	42 (36.8)	11 (36.7)
Asthma	78 (27.5)	33 (30.0)	28 (24.6)	10 (33.3)
Allergic contact dermatitis	32 (11.3)	11 (10.0)	4 (3.5)	3 (10.0)
Concomitant conditions, n (%)				
Cardiovascular diseases	63 (22.2)	25 (22.7)	0	0
Mood/sleep disorders	52 (18.3)	25 (22.7)	2 (1.8)	3 (10.0)
Metabolic diseases	36 (12.7)	7 (6.4)	1 (0.9)	2 (6.7)
Other	34 (12.0)	9 (8.2)	66 (57.9)	20 (66.7)
None of the above	164 (57.7)	60 (54.5)	47 (41.2)	9 (30.0)
Current IGA score, n (%)				
0	10 (3.5)	2 (1.8)	3 (2.6)	1 (3.3)
1	37 (13.0)	10 (9.1)	12 (10.5)	3 (10.0)
2	103 (36.3)	15 (13.6)	28 (24.6)	1 (3.3)
3	128 (45.1)	76 (69.1)	55 (48.2)	11 (36.7)
4	6 (2.1)	7 (6.4)	16 (14.0)	14 (46.7)

BMI, body mass index; IGA, Investigator's Global Assessment; N/A, not applicable.
* The 3 most commonly reported type II inflammatory diseases are shown.

Disease Control

- Rates of physician-assessed disease control are shown in **Figure 1**
  - Disease was defined as uncontrolled in approximately 20% to 50% of patients while using current topical treatments

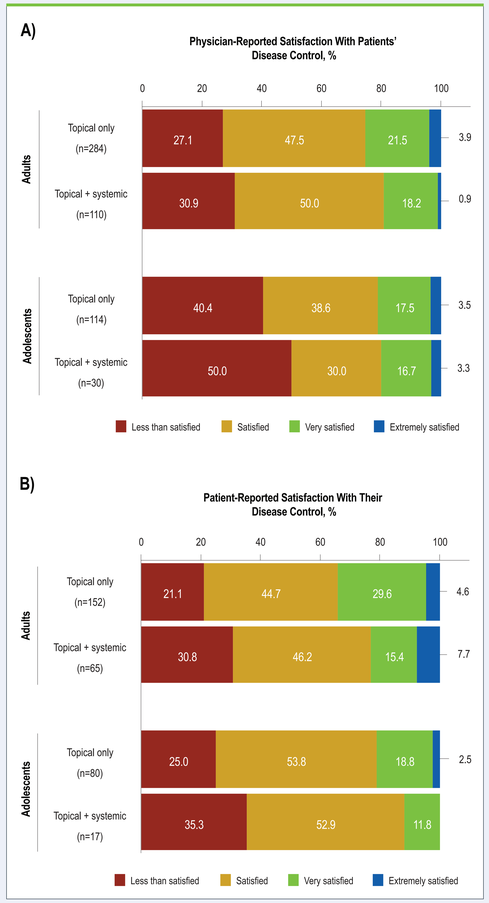
Figure 1. Physician-Defined Disease Control†



† Controlled disease was defined as improving/stable; uncontrolled disease was defined as deteriorating/changing.

- Rates of physician- and patient-reported satisfaction with disease control are shown in **Figure 2**
  - Approximately 25% to 50% of physicians reported being "less than satisfied" with the current level of control achieved (**Figure 2A**)
  - Additionally, 20% to 35% of patients reported that they were "less than satisfied" with their current level of disease control (**Figure 2B**)

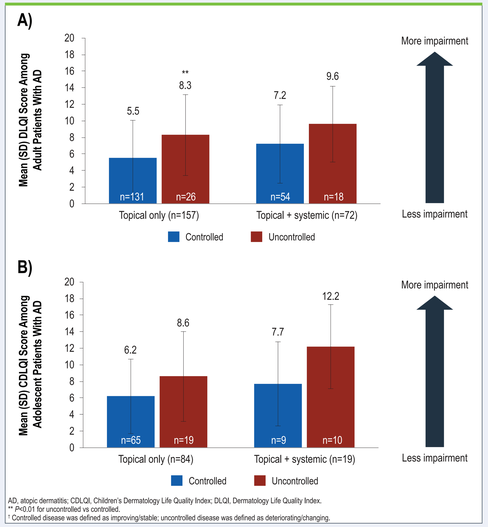
Figure 2. Rates of (A) Physician and (B) Patient Satisfaction With Disease Control on Current Treatment



Patient-Reported Outcomes

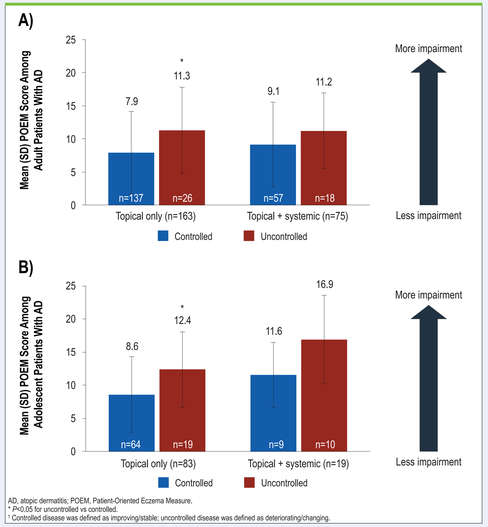
- Decreased quality of life (**Figure 3**), worse patient-reported AD severity (**Figure 4**), and greater impairment in work productivity (**Figure 5**) were observed among patients with physician-defined uncontrolled vs controlled disease

Figure 3. (A) DLQI and (B) CDLQI Scores Among Patients on Topical AD Therapy With Controlled vs Uncontrolled Disease†



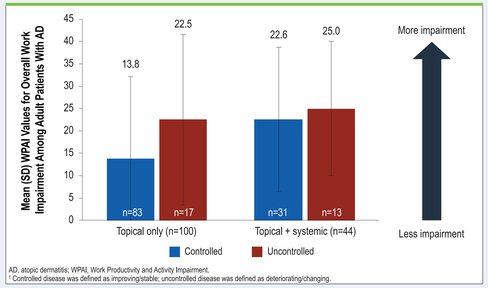
AD, atopic dermatitis; CDLQI, Children's Dermatology Life Quality Index; DLQI, Dermatology Life Quality Index.
** *P*<0.01 for uncontrolled vs controlled.
† Controlled disease was defined as improving/stable; uncontrolled disease was defined as deteriorating/changing.

Figure 4. POEM Scores Among (A) Adult and (B) Adolescent Patients on Topical AD Therapy With Controlled vs Uncontrolled Disease†



AD, atopic dermatitis; POEM, Patient-Oriented Eczema Measure.
* *P*<0.05 for uncontrolled vs controlled.
† Controlled disease was defined as improving/stable; uncontrolled disease was defined as deteriorating/changing.

Figure 5. WPAI Values for Overall Work Impairment Among Adult Patients on Topical AD Therapy With Controlled vs Uncontrolled Disease†



AD, atopic dermatitis; WPAI, Work Productivity and Activity Impairment.
† Controlled disease was defined as improving/stable; uncontrolled disease was defined as deteriorating/changing.

Limitations

- The study was potentially limited by response bias inherent in retrospective and self-reported outcomes studies
- Diagnosis of the target patient group and classification of controlled vs uncontrolled disease was based on the judgment of the responding physician and not standardized criteria

Conclusions

- **High rates of uncontrolled disease were reported by physicians of patients receiving topical AD therapy**
- **Both adult and adolescent patients receiving topical therapy and their physicians frequently reported being "less than satisfied" with current treatment**
- **Patients with uncontrolled disease had worse quality of life and higher symptom burden vs those with controlled disease**
- **An unmet need remains for topical treatments that can improve disease control and patient outcomes**

Disclosures

PA, JA, and JP are employees of Adelphi Real World, which received funding for this project from Incyte Corporation. JHL and VNJ are employees and shareholders of Incyte Corporation.

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