Unveiling the Burden and Impact of Flare in Patients with Moderate-to-Severe Atopic Dermatitis: Results from the Adelphi Real World Disease Specific Programme in Europe

RWD108

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Key Conclusions

1. Despite the availability of advanced systemic therapies for AD, some patients with moderate-to-severe AD continue to experience flares, indicating a lack of disease control
2. Most frequently reported signs and symptoms occurring during the current flare were comparable between the physicians and patients, yet physicians may be underestimating the frequency and severity of flare
3. The burden of flare and differences between patient and physician perceptions of flares identified in this research highlight the importance of defining patient-centred measures and developing new therapies to better address flares in patients with AD

Background

- Atopic dermatitis (AD) is a chronic, immune-mediated, inflammatory skin disease characterised by an inflamed and itchy skin that typically manifests during childhood[1]
  - In Europe, AD affects approximately 18.6% of children/adolescents and 4.4% of adults[2]
- AD follows a chronic-remitting course; although some patients have reported minimal changes in AD, other patients exhibit periods of remission interrupted by acute exacerbations or 'flares', often defined as disease worsening that requires treatment escalation or intensification[3]
- The management and control of flares is an important treatment goal described in clinical guidelines[4-6]
- There is a need to better understand the patients' and the physicians' experiences of flares to advance patient care and identify future areas of research

Objective

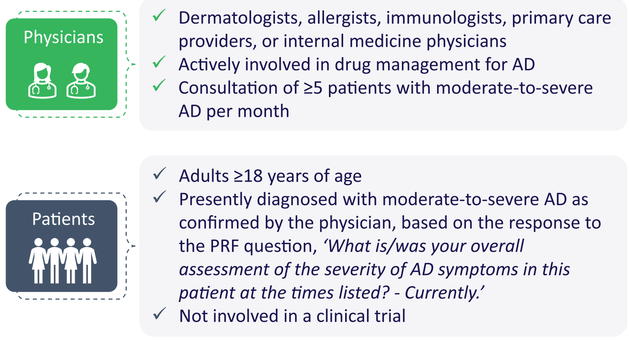
- To understand the characteristics, burden, and impact of flares in patients with moderate-to-severe AD from physicians' and patients' perspectives in Europe

Methods

Study design

- Data were obtained from the Adelphi AD Disease Specific Programme™, a cross-sectional survey involving retrospective data collected from physicians and their adult patients with moderate-to-severe AD, conducted between August 2022 and March 2023 in France, Germany, and the United Kingdom (UK)
- Physicians completed online patient record forms (PRFs) for their next five consulting patients to obtain a random sample, which included retrospective chart data and cross-sectional information, recorded after the recent consultation (**Figure 1**)
- The same patients were offered to voluntarily complete patient self-completion (PSC) forms

Figure 1. Key eligibility criteria



AD, atopic dermatitis; PRF, patient record form.

Study measures and statistical analysis

- Based on the physicians' assessment, patients were further classified as either 'currently flaring' or 'not currently flaring', as per the response to the PRF question, '*Is the patient currently experiencing an acute episode (flare) as a result of their AD?*'
- Demographics; clinical assessments (Eczema Area and Severity Index [EASI], Investigator Global Assessment [IGA], and body surface area [BSA]); current AD treatment; the frequency, duration, and severity of flares; and associated signs and symptoms were captured from both physician and patient reports
- EuroQol 5-dimension visual analog scale (EQ-5D VAS), Dermatology Life Quality Index (DLQI), Patient-Oriented Eczema Measure (POEM), Work Productivity and Activity Impairment (WPAI), and worst itch (derived from the Itch Numerical Rating Scale) were obtained from patients with completed PSC forms
- Descriptive statistical analyses were used to summarise study measures in patients who were 'currently flaring' and 'not currently flaring'

Funding

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References

1. Girolomoni G, et al. *Ther Adv Chronic Dis*. 2021;12:20406223211002979.
2. Augustin M, et al. *J Eur Acad Dermatol Venereol*. 2022;36 (Suppl 7):3–16.
3. Girolomoni G and Busà VM. *Ther Adv Chronic Dis*. 2022;13:20406223211066728.
4. Wollenberg A, et al. *J Eur Acad Dermatol Venereol*. 2022;36(9):1409–31.
5. Davis DMR, et al. *J Am Acad Dermatol*. 2024;90(2):e43–e56.
6. Sidbury R, et al. *J Am Acad Dermatol*. 2014;71(6):1218-33.

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Disclosures

James Piercy (presenter) is an employee of Adelphi Real World.

Cori Gray, **Laurence Lucats**, **Ella Brookes,** and **Kassim Rahawi** are employees of Sanofi and may hold stocks or stock options in the company.

Oliver Howell, **James Haughton**, and **Peter Anderson** are employees of Adelphi Real World.

Results

Demographics and clinical characteristics

- Overall, 278 physicians (France: 92, Germany: 100, UK: 86) completed PRFs for 707 patients (France: 276, Germany: 225, UK: 206) with moderate-to-severe AD (mean age: 35.7 years; 52% male; mean disease duration: 7.5 years; **Table 1**)
- The mean scores for EASI and IGA were 7.3 and 2.6, and the mean BSA was 18.0%, as assessed by physicians, with majority of the patients being prescribed topical corticosteroids (86%; **Table 1**)

Table 1. Demographics and clinical characteristics of patients with moderate-to-severe AD as per physicians' report

Variables	No. of patients[a], *n*	Moderate-to-severe AD
Age (years), mean (SD)	707	35.7 (15.4)
Male, *n* (%)	707	370 (52%)
Time since diagnosis of AD (years), mean (SD)	388	7.5 (10.3)
Severity of AD symptoms, *n* (%)	707	
Moderate		616 (87%)
Severe		91 (13%)
EASI score[b], mean (SD)	697	7.3 (7.5)
IGA score[c], mean	707	2.6
BSA (%)[d], mean (SD)	586	18.0 (14.6)
Treatment regimen prescribed for AD, *n* (%)	707	
TCS		605 (86%)
TCI		144 (20%)
Immunosuppressants		99 (14%)
Biologics		94 (13%)
Oral JAK-I		46 (7%)

[a]The total number of patients (*n*) varied because of missing data.
[b]The EASI score ranges from 0 to 72; 0 - clear or no eczema, 0.1 to 1.0 - almost clear, 1.1 to 7 - mild disease, 7.1 to 21 - moderate disease, 21.1 to 50 - severe disease, and ≥51 to 72 - very severe disease.
[c]The IGA score ranges from 0 to 4; 0 - clear, 1 - almost clear, 2 - mild, 3 - moderate, 4 - severe.
[d]BSA% ranges from 0% to 100% with higher scores indicating a greater BSA involvement.
AD, atopic dermatitis; BSA, body surface area; EASI, Eczema Area and Severity Index; IGA, Investigator Global Assessment; JAK-I, Janus kinase inhibitor; SD, standard deviation; TCI, topical calcineurin inhibitor; TCS, topical corticosteroid.

- Physicians reported 62% (280/455) of patients having ≥2 flares (average flare duration = 13.5 days), whereas 70% (96/138) of patients self-reported having ≥2 flares (average flare duration = 10.5 days) in the past year (**Table 2**)
- Only 48% of patients responded to reporting every flare to their physician

Table 2. Characteristics of flares in patients with moderate-to-severe AD as per physicians' and patients' reports

Variables	Physician report	Patient report
Pattern of disease, *n* (%)	*n* = 707	*n* = 198
Acute episodes only (no day-to-day symptoms in between acute episodes)	136 (19%)	30 (15%)
Day-to-day symptoms only (no acute episodes)	126 (18%)	43 (22%)
A mix of acute episodes and day-to-day symptoms in between acute episodes	381 (54%)	120 (61%)
Too early to tell	64 (9%)	5 (3%)
Number of flares patients had experienced in the last 12 months, *n* (%)	*n* = 455[a]	*n* = 138[b]
0	24 (5%)	4 (3%)
1	151 (33%)	38 (28%)
2	148 (33%)	27 (20%)
3	73 (16%)	18 (13%)
≥4	59 (13%)	51 (37%)
Mean (SD)	2.2 (2.0)	3.6 (4.4)
Severity of typical flare, *n* (%)	*n* = 517[a]	*n* = 153[b]
Mild	10 (2%)	5 (3%)
Moderate	365 (71%)	109 (71%)
Severe	108 (21%)	39 (25%)
Don't know	34 (7%)	3 (2%)
Duration of typical flare (days)	*n* = 435[a]	*n* = 152[b]
Mean (SD)	13.5 (11.4)	10.5 (12.4)

[a]Only asked for patients whose physician had stated that their pattern of disease included flares. Variation in base due to missing data.
[b]Only asked for patients whose physician had stated that they had flares in the past. Variation in base due to missing data.
AD, atopic dermatitis; SD, standard deviation.

Clinical characteristics of patients with current flare

- Based on physicians' report, 42% (299/707) of patients were currently experiencing flares with majority experiencing moderate (79%) and severe (21%) AD symptoms (**Table 3**)
- The most common AD treatments prescribed to patients who were currently flaring and those not currently flaring i.e. topical corticosteroids (88% vs. 84%), topical calcineurin inhibitors (18% vs. 22%), oral/injected corticosteroids (18% vs. 17%), and immunosuppressants (12% vs. 15%; **Table 3**)
- The mean EASI and IGA scores and the percentage of BSA were higher in the AD cohort who were currently flaring than those not currently flaring (**Table 3**)

Signs and symptoms of AD in patients with current flare

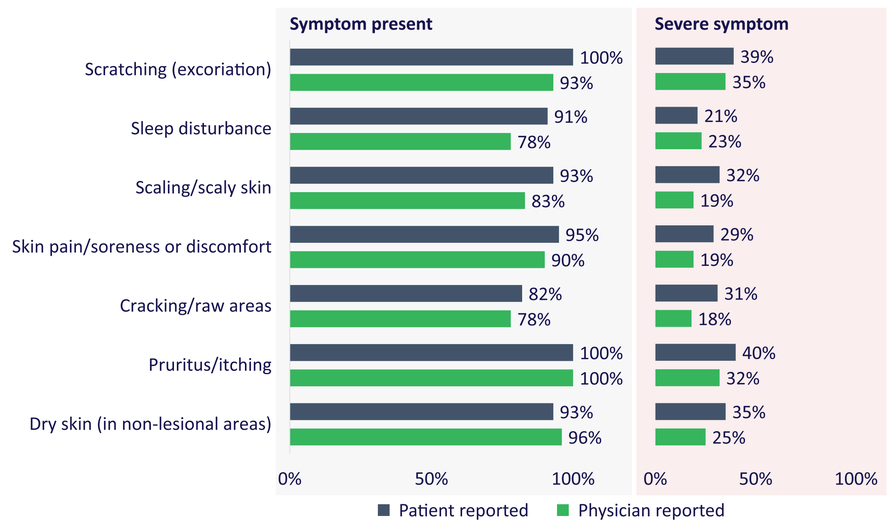
- The most common signs and symptoms experienced by ≥80% of patients during the current flare episode as reported by both physicians and patients were itching, scratching, dry skin, skin pain, and scaling/scaly skin (**Figure 2**)
- Cracking/raw areas and sleep disturbance were also common in >80% of patients who self-reported these symptoms
- Itching and scratching (excoriation) appeared to be the most severe symptoms of current flare, as reported by both physicians and patients (**Figure 2**)

Table 3. Clinical characteristics of patients with moderate-to-severe AD who were currently flaring versus those not currently flaring

Variables	Currently flaring *n* = 299	Not currently flaring *n* = 408
Severity of AD symptoms, *n* (%)		
Mild	0 (0%)	0 (0%)
Moderate	237 (79%)	379 (93%)
Severe	62 (21%)	29 (7%)
Treatment regimen prescribed for AD, *n* (%)		
TCS	263 (88%)	342 (84%)
TCI	54 (18%)	90 (22%)
Oral/injected corticosteroids	53 (18%)	70 (17%)
Immunosuppressants	37 (12%)	62 (15%)
Biologics	29 (10%)	65 (16%)
Oral JAK-I	10 (3%)	36 (9%)
EASI score[a], mean (SD)	8.5 (9.1)	6.5 (6.0)[b]
IGA score[c], mean	2.8	2.5
BSA (%)[d], mean (SD)	21.7 (17.6)	15.4 (11.4)[e]

[a]The EASI score ranges from 0 to 72; 0 - clear or no eczema, 0.1 to 1.0 - almost clear, 1.1 to 7-mild disease, 7.1 to 21 - moderate disease, 21.1 to 50 - severe disease, and ≥51 to 72 - very severe disease.
[b]Base value, *n* = 398. Variation in base due to missing data.
[c]The IGA score ranges from 0 to 4; 0 - clear, 1 - almost clear, 2 - mild, 3 - moderate, 4 - severe.
[d]BSA% ranges from 0% to 100% with higher scores indicating a greater BSA involvement.
[e]Base value, *n* = 339. Variation in base due to missing data.
AD, atopic dermatitis; BSA, body surface area; EASI, Eczema Area and Severity Index; IGA, Investigator Global Assessment; JAK-I, Janus kinase inhibitor; SD, standard deviation; TCI, topical calcineurin inhibitors; TCS, topical corticosteroid.

Figure 2. Frequency of signs/symptoms experienced during current AD flare and the symptom severity as per physicians' and patients' reports

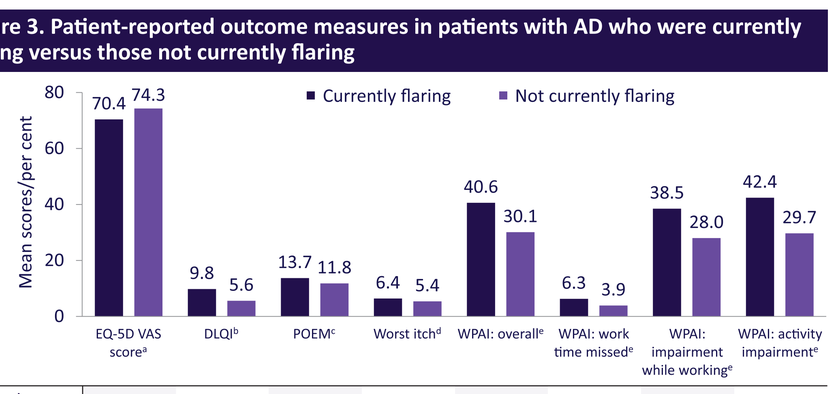


Data presented as per cent (%).
For symptom present base *n*[a]=299; for severity base *n*[b,c] varied: Scratching (excoriation)=46, Sleep disturbance=46, Scaling/scaly skin=41, Skin pain/soreness or discomfort=44, Cracking/raw areas=44, Pruritus/itching=50, Dry skin=46
[a]The results were evaluated based on responses to the PRF question, '*As a result of this acute episode (flare), what are this patient's AD symptoms and their severity?*' only to those who were currently flaring based on physicians' classification.
[b]The results were evaluated based on the responses from the patient to the PSC question, '*As a result of your current flare please indicate the severity of the symptoms you are experiencing*' only to those who were currently flaring based on physicians' classification.
[c]Base varied if the patient response was missing for the specific symptom.
AD, atopic dermatitis; *n*, number of completed PRFs and PSCs; PRF, patient record form; PSC, patient self-completion.

Flare impact and burden

- The mean EQ-5D VAS scores were numerically lower (worse) and the mean DLQI, POEM, worst itch, and the WPAI scores were numerically higher (worse) in patients who were currently flaring than those who were not currently flaring (**Figure 3**)
  - A greater proportion of patients who were flaring had a 'severe' or 'very severe' itch (worst itch scores ≥7) than those not currently flaring (48% vs. 39%, respectively)

Figure 3. Patient-reported outcome measures in patients with AD who were currently flaring versus those not currently flaring



Currently flaring , *n*	66	65	66	65	38	39	40	63
Not currently flaring, *n*	146	133	146	145	82	82	88	141

Data presented as mean scores. WPAI scores presented as per cent (%).
[a]The EQ-5D VAS score ranges from 0 to 100; a higher score indicates better health.
[b]The DLQI score ranges from 0 to 30; a higher score indicates a greater QoL impairment.
[c]The POEM score ranges from 0 to 28; a higher score indicates a greater disease severity.
[d]The worst itch score is derived from the Itch NRS and ranges from 0 to 10; a higher score (≥7) indicates a more severe itch.
[e]For the WPAI, a higher score indicates a greater impairment.
AD, atopic dermatitis; DLQI, Dermatology Life Quality Index; EQ-5D VAS, EuroQol 5-dimension visual analog scale; NRS, Numerical Rating Scale; POEM, Patient-Oriented Eczema Measure; PRO, patient-reported outcome; QoL, quality of life; WPAI, Work Productivity and Activity Impairment.

Limitations

- The physician assessment of disease flare lacked a formal diagnostic checklist, leading to potential variability between physicians
- Cross-sectional data in AD may not capture the overall disease experience, limit longitudinal associations, and be susceptible to recall bias
- Voluntary PSC completion resulted in a smaller sample for PROs by flare status, limiting generalisability to all patients with AD
- This analysis was descriptive in nature; further research is needed to establish causality

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