Abstract N°: ID-26

Topic: Atopic dermatitis/ Eczema

Atopic Dermatitis and Candida albicans Sensitization: Prevalence and Clinical Impact

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Introduction

Candida spp. are common opportunistic microorganisms in the human body. The most frequent and highly pathogenic species in the mycobiome is *Candida albicans*, which causes fungal sensitization.

Objective: to determine fungal sensitization to Candida albicans in patients with atopic dermatitis (AD).

Materials and Methods

A total of 137 patients with AD, aged 10 to 67 years, were observed. Among them, 58 (43.8%) were male and 79 (56.2%) were female. All patients had active manifestations of the disease and a verified diagnosis according to J. Hanifin и G. Rajka criteria. Control group consisted of 38 robust persons. Mycological examination of intestinal samples (culture on Sabouraud agar) was performed in all patients. Total IgE levels were determined by chemiluminescent immunoassay (CLIA), and IgG to Candida albicans was assessed by ELISA. The POEM index, recommended by HOME (Harmonising Outcome Measures for Eczema), was also evaluated in patients with AD.

Results

Among all AD patients, Candida spp. were detected in 67.9% (93 patients). Intestinal proliferation of yeast-like fungi of the genus Candida (>1000 CFU/ml) was observed in 59.1% (55 patients). In the oral mucosa, Candida spp. were identified in 40.9% of cases (38 patients). Intestinal candidiasis and oral candidiasis were diagnosed in this patient group. Species identification revealed predominance of Candida albicans (68%). Female patients accounted for 54.7%. CLIA testing of total Ig E in AD patients with intestinal and oral candidiasis showed a 2.6-fold increase, with a mean value of 235.5 ± 13.7 IU/ml compared to 90 IU/ml in the control group ($p<0.001$). IgG antibodies against Candida albicans exceeded the normal value by 3.4-fold, with a mean level of 0.68 ± 0.05 ng/ml versus 0.2 ± 0.03 ng/ml in the control group ($p<0.001$). In AD patients with fungal sensitization to Candida albicans, the POEM index was 22.7 points, corresponding to severe disease, whereas in AD patients without fungal sensitization the index indicated moderate disease severity (15.1 points).

Conclusions

Given the high prevalence of Candida albicans (68%), IgG antibodies against Candida albicans and total Ig E were considered as criteria for fungal sensitization. In atopic dermatitis, fungal sensitization was associated with intestinal and oral candidiasis, as well as elevated levels of total Ig E and IgG antibodies against Candida albicans. Women were more frequently affected (54.7%). The skin manifestations of AD complicated by fungal sensitization were characterized by severe disease according to the POEM index.

Abstract N°: ID-50

Topic: Atopic dermatitis/ Eczema

A Decade of Research on Janus Kinase Inhibitors in Atopic Dermatitis: A Global Bibliometric Analysis (2015–2024)

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Introduction
In recent years, the therapeutic application of Janus kinase (JAK) inhibitors in dermatology-particularly in the management of atopic dermatitis-has expanded markedly. This bibliometric study aimed to characterize research themes, evaluate the scientific productivity of authors and countries, and highlight emerging areas that may guide future research in this field over the past decade.

Materials and Methods
The bibliometric analysis of JAK inhibitors in atopic dermatitis from 2015 to 2024 was conducted using the Web of Science Core Collection (WoSCC) database as the search data source. Bibliometric analyses and data visualizations were performed using CiteSpace, VOSviewer, and the Bibliometrix package in R.

Results
We included 1413 studies in our analysis. The cluster plot divided all keywords into 9 categories. Pruritus and alopecia areata were the most frequently co-occurring keywords alongside atopic dermatitis, while delgocitinib and abrocitinib were the most frequently investigated JAK inhibitors. The United States produced the highest number of publications over the past decade. Mount Sinai and the University of California System showed notable post-2020 growth, reaching ~190 and ~145 publications by 2025, respectively, reflecting growing academic engagement. Emma Guttman-Yassky emerged as both the most influential and the most cited author in the field, as reflected by citation impact, followed by Jonathan Silverberg.

Conclusions
Janus kinase (JAK) inhibitors represent one of the most effective and trending therapeutic classes in atopic dermatitis. These agents are not only highly effective for atopic dermatitis but also show promising efficacy in other dermatologic conditions, such as alopecia areata.

Abstract N°: ID-59

Topic: Atopic dermatitis/ Eczema

Case Series: Scabies complicating Dupilumab therapy for atopic dermatitis

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Introduction

Classified as a neglected tropical disease in 2017 by the World Health Organisation, scabies infestation caused by the *Sarcoptes scabiei* mite is a common dermatological condition.[1] Modes of transmission include prolonged skin-to-skin contact with an infested individual or contact with contaminated surfaces. Dupilumab is a recombinant human immunoglobin G4 monoclonal antibody that inhibits suppresses type 2 inflammation.

Materials and Methods

We present a case series of four patients who had scabies diagnosed while on dupilumab treatment for atopic dermatitis. The Type 2 immune response is the primary immune response for both ordinary and crusted scabies and dupilumab inhibits this response. This inhibition could be the reason behind treatment resistance and crusted presentations in this case series.

Conclusions

Clinicians should be aware of the possible development of scabies in patients on Dupilumab and the potential of scabies masquerading as atopic dermatitis at the time of instituting this medication.

Abstract N°: ID-158

Topic: Atopic dermatitis/ Eczema

Comparative efficacy of combined azathioprine and narrowband UVB at 311 nm

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Introduction

Atopic dermatitis (AD) is a chronic inflammatory dermatosis characterized by immune dysregulation, epidermal barrier impairment, and significant impact on quality of life. Narrowband UVB-311 nm (NB-UVB-311nm) is an established treatment; however, combining systemic immunomodulation with phototherapy may enhance therapeutic response.This study compares the clinical efficacy of azathioprine in combination with NB-UVB-311 nm versus NB-UVB-311 nm monotherapy.

Materials and Methods

Two groups of patients with moderate-to-severe atopic dermatitis (AD), each consisting of five participants, were evaluated over a 4-week period. Group 1 received NB-UVB-311 nm monotherapy, while Group 2 received combined therapy with oral azathioprine and NB-UVB-311 nm. Both groups underwent NB-UVB-311nm phototherapy 3–4 times per week, starting at 0.1 J/cm^2 with gradual dose escalation according to tolerance.

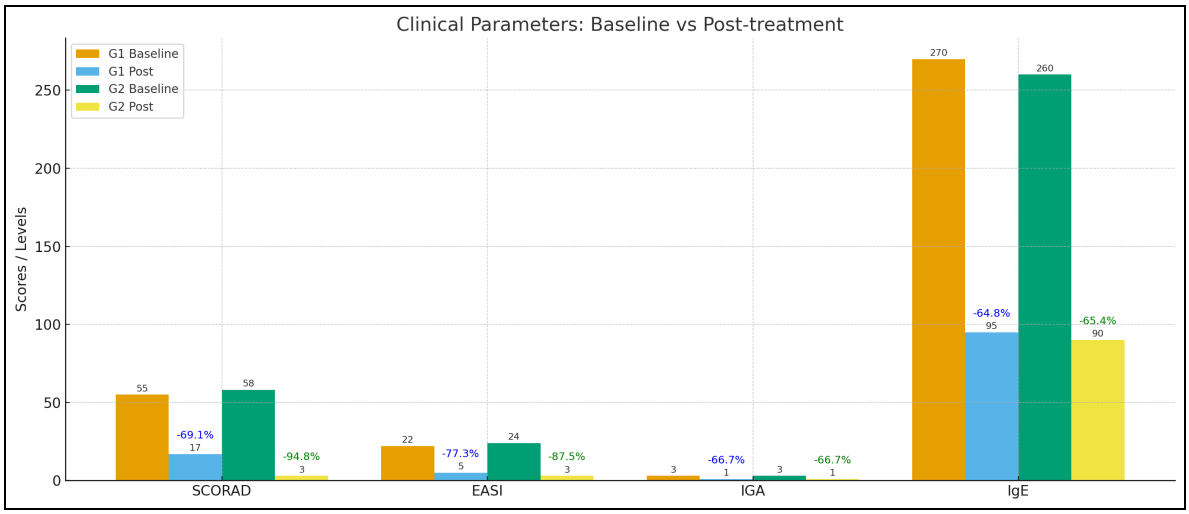
Patients in Group 2 additionally received azathioprine 50 mg twice daily during the same treatment period. Clinical outcomes included the Scoring Atopic Dermatitis index (SCORAD, 0–103), the Eczema Area and Severity Index (EASI, 0–72), the Investigator's Global Assessment (IGA, 0–4), total serum IgE levels, and the Dermatology Life Quality Index (DLQI, 0–30).

Safety monitoring was performed through regular clinical assessment and laboratory testing.

Results

Both treatment groups demonstrated significant clinical improvement across all evaluated parameters. SCORAD scores in Group 1 decreased from 53.8 ± 8.9 to 17.5 ± 4.0, whereas Group 2 exhibited a more substantial reduction from 56.7 ± 8.4 to 2.5 ± 1.4 ($p < 0.01$). A similar trend was observed in EASI, with Group 1 improving from 22.1 ± 3.4 to 4.3 ± 1.3 and Group 2 from 23.4 ± 2.6 to 2.6 ± 2.4 ($p < 0.01$). IGA scores in Group 1 declined from 2.8 ± 0.5 to 1.4 ± 0.5, while Group 2 showed a more pronounced improvement from 2.7 ± 0.6 to 0.9 ± 0.4 ($p < 0.01$). Serum IgE levels also decreased markedly in both cohorts, from 268.6 ± 4.7 to 96.5 ± 4.3 in Group 1 and from 261.2 ± 6.1 to 89.5 ± 3.7 in Group 2 ($p < 0.01$). DLQI scores indicated clinically meaningful enhancement of quality of life in both groups, with the combined-therapy group achieving a more pronounced reduction, consistent with faster symptom control and earlier relief of pruritus.(figure1)

Treatment was well tolerated in both groups. No serious adverse events occurred.



clinical parameters: baseline vs post-treatment

Conclusions

Combined therapy with oral azathioprine and NB-UVB-311 nm resulted in faster, more profound, and statistically superior improvement across key clinical and immunological parameters—including SCORAD, EASI, serum IgE levels, IGA, and DLQI—compared with NB-UVB-311 nm monotherapy. The combination demonstrated a favorable short-term safety profile and may be considered an effective therapeutic option for patients with moderate-to-severe atopic dermatitis requiring enhanced disease control.

Abstract N°: ID-159

Topic: Atopic dermatitis/ Eczema

COMBINED AZATHIOPRINE AND NB-UVB311 NM PHOTOTHERAPY IN PATIENTS WITH MODERATE-TO-SEVERE ATOPIC DERMATITIS

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Introduction

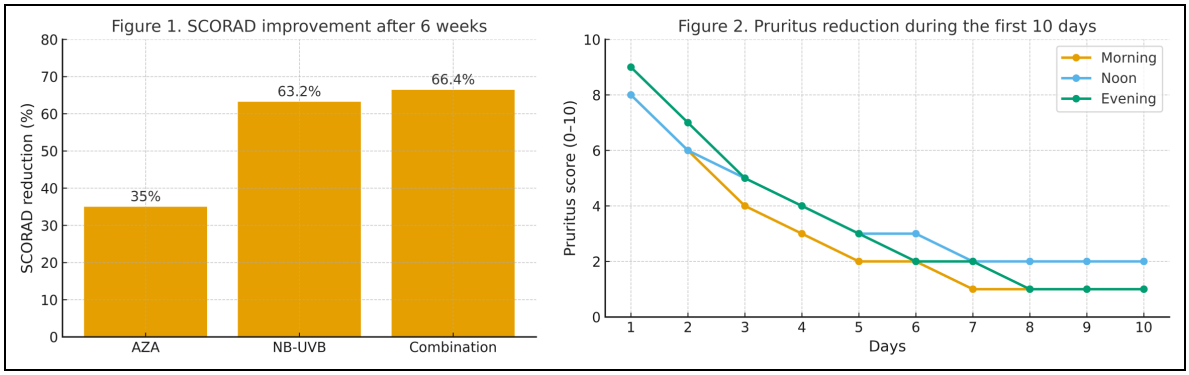
Atopic dermatitis (AD) is a chronic, relapsing inflammatory dermatosis characterized by recurrent eczematous eruptions and debilitating pruritus. In cases that exhibit inadequate response to standard therapies, systemic immunosuppressive agents and phototherapy are recommended. Both azathioprine (AZA) and narrowband ultraviolet B at 311 nm (NB-UVB 311 nm) have demonstrated therapeutic efficacy as individual modalities; however, robust evidence regarding the clinical benefits of their concurrent administration remains limited. The present study sought to rigorously evaluate the therapeutic effectiveness of AZA, NB-UVB 311 nm, and their combined regimen in patients with moderate-to-severe AD.

Materials and Methods

Twelve patients were allocated into three groups (n = 4 each). Group 1 received oral azathioprine (AZA) 50 mg twice daily (morning and evening). Group 2 underwent narrowband UVB 311 nm (NB-UVB 311 nm) phototherapy three times weekly. Group 3 received combined therapy consisting of AZA 50 mg twice daily together with NB-UVB 311 nm phototherapy three times weekly. The treatment period lasted six weeks. Disease severity was evaluated using the SCORAD index, and pruritus intensity was assessed using a 0–10 visual analogue scale.

Results

After six weeks, SCORAD decreased by 35% in the AZA group, by 63.2% in the NB-UVB 311 nm group, and by 66.4% in the combination group (Figure 1). Within the first ten days, pruritus reduction was more pronounced in the combination group: morning scores decreased from 8 to 1, noon from 8 to 2, and evening from 9 to 1 (Figure 2), indicating a faster antipruritic response compared with monotherapy.



Conclusions

Both AZA and NB-UVB 311 nm improved atopic dermatitis; however, their combination produced greater SCORAD reduction and more rapid itch relief. These findings support the integration of systemic immunosuppression with targeted phototherapy in patients with refractory atopic dermatitis.

Abstract N°: ID-200

Topic: Atopic dermatitis/ Eczema

Dupilumab Impacts Bone Mineralization Biomarker and Growth In Children Aged 2–5 Years With Moderate-To-Severe Atopic Dermatitis

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Introduction
Dupilumab increases growth and bone alkaline phosphatase (BALP), a biomarker for bone formation, in children aged 6–11 years of low stature with severe atopic dermatitis (AD). Here, we evaluate dupilumab's impact on total serum ALP, a proxy biomarker for bone mineralization, and growth in children 2–5 years with moderate-to-severe AD.

Materials and Methods
Children 2–5 years with moderate-to-severe AD in the Phase 3 LIBERTY PRESCHOOL trial (NCT03346434) received TCS + dupilumab 200/300mg q4w or placebo for 16 weeks. Total serum ALP levels were measured at baseline, Weeks 4 and 16. Mean height percentile changes in children below the 50th height percentile at baseline were evaluated at Week 16.

Results
Total ALP increased significantly at Week 16 following dupilumab treatment (within reference intervals, LS mean change +53.2 IU/L vs baseline; P<0.0001 vs placebo), with a greater increase in boys (+74.7 IU/L vs baseline; P=0.001 vs placebo) vs girls (+29.9 IU/L vs baseline; P=0.0004 vs placebo). At Week 16, boys 2–5 years below the 50th height percentile at baseline show a near-significant mean change in height percentile (boys: dupilumab (n=18) 23.8vs placebo (n=21) 5.1, P=0.0506; girls (n=18), 6.1 vs (n=7), −0.6, non-significant numerical increase).

Conclusions
Children 2–5 years with moderate-to-severe AD treated with dupilumab for 16 weeks exhibited increases in serum ALP, a proxy-biomarker of bone mineralization. Shorter boys on dupilumab appear to experience greater growth after just 16 weeks compared to children on placebo. Longer-term evaluation is needed to appreciate dupilumab's growth impact in

both sexes.

Abstract N°: ID-220

Topic: Atopic dermatitis/ Eczema

Influence of parental practices on the severity of atopic dermatitis and sleep quality in children

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Introduction
Atopic dermatitis is common in children and causes intense itching, which can disrupt sleep. Parental practices, particularly hydration, the use of vegetable oils or medicated creams, can influence the severity of lesions and the impact on sleep.

The objective of this study is to evaluate the effect of parental practices on the severity of atopic dermatitis and sleep quality in affected children.

Materials and Methods
A cross-sectional observational study was conducted on 112 children followed for atopic dermatitis, collecting data on parental practices, disease severity (SCORAD), and sleep quality (Children's Sleep Habits Questionnaire, CSHQ).

Results
The study involved 112 children followed for atopic dermatitis, with a mean age of 6.8 ± 3.2 years, and a male predominance (58.9%). The average duration of the disease was 3.5 ± 2.1 years, and 47.3% had a family history of atopy. Among the parental practices, daily hydration was systematic (100%), the use of vegetable oils was reported by 42%, and 76% used medicated creams during flare-ups; gentle skin care was reported by 61%. According to the SCORAD, AD was mild (<25) in 38.4%, moderate (25–50) in 44.6%, and severe (>50) in 17.9%. Poor sleep quality (CSHQ ≥41) was found in 61%, with nocturnal awakenings (58%), difficulties falling asleep (42%), and daytime sleepiness (35%). SCORAD correlated positively with CSHQ ($r = 0.63$; $p < 0.001$), and winter exacerbations or intense itching were associated with increased nocturnal disturbances ($p < 0.01$). Environmental exposure (parental smoking, pets, pollution) did not influence sleep. Hydration and gentle care were linked to a lower SCORAD and better sleep, while the use of vegetable oils showed a tendency toward a slightly higher SCORAD ($p = 0.04$).

Conclusions

Parental practices influence the severity of atopic dermatitis and sleep quality. Educating parents on appropriate topical care is essential to reduce itching and improve sleep, while remaining cautious about natural products that could potentially trigger sensitization.

Abstract N°: ID-228

Topic: Atopic dermatitis/ Eczema

Cutaneous manifestations of secondary hypogammaglobulinemia: a case report and literature review

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Introduction

We would like to present a case of a 20-year-old patient admitted for inpatient treatment with suspected exacerbation of a known atopic dermatitis. Sharply demarcated erosions with peripheral scaling as well as partially lichenified macules were observed in the nuchal and sternal regions and on the trunk, without vesicle formation. The skin lesions had first appeared four months prior to admission. Pruritus was absent. The patient denied new medications, infections or vaccinations. A possible trigger was reported to be an insect bite. In the outpatient setting, she had received several courses of systemic and topical antibiotics with only transient and insufficient improvement.

Materials and Methods

N/A

Results

PCR testing excluded tinea corporis and herpes infection. Skin swab cultures revealed abundant growth of *Staphylococcus aureus* and *Streptococcus agalactiae* (group B) without relevant antibiotic resistance. Direct and indirect immunofluorescence ruled out a bullous autoimmune dermatosis. Histopathological examination showed findings consistent with a chronic eczematous reaction. Total serum IgE levels were within the normal range.

Under topical therapy with betamethasone–polyhexanide and clotrimazole, only slight improvement was observed after one week, prompting further diagnostic evaluation.

A detailed medical history revealed an additional underlying condition: autoimmune haemolytic anaemia with warm antibodies and treatment with rituximab (RTX) 24 months prior. Serological testing demonstrated secondary hypogammaglobulinaemia affecting all immunoglobulin classes. Even before RTX administration, a mild IgA deficiency and borderline low levels of the other immunoglobulin classes had been documented. Due to a history of hair loss following a single intravenous immunoglobulin (IVIG) infusion administered for severe community-acquired pneumonia 12 months earlier, the patient declined renewed IVIG substitution.

Conclusions

RTX is a chimeric monoclonal antibody targeting CD20-positive B cells, leading to depletion of immunoglobulin-producing cells. Immunoglobulin levels usually recover spontaneously or following IVIG supplementation; however, persistent hypogammaglobulinaemia has been reported in rare cases. While infections and eczema are typical cutaneous manifestations of primary immunodeficiencies, skin lesions in secondary immunodeficiencies are rarely described. The recurrent impetigo-like skin lesions observed in our patient are therefore likely manifestations of her secondary hypogammaglobulinaemia. This case highlights that, in persistent (superinfected) dermatitis, secondary immunodeficiencies should be considered alongside primary causes, and appropriate laboratory investigations should be initiated.

Abstract N°: ID-243

Topic: Atopic dermatitis/ Eczema

Efficacy and Safety of Amlitelimab, a Nondepleting Anti-OX40 Ligand Antibody, in Combination With Topical Therapy in Participants With Moderate-to-Severe Atopic Dermatitis: 24-Week Results From the SHORE Phase 3 Trial

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Introduction
Amlitelimab, a nondepleting, anti-OX40 ligand (OX40L) antibody, blocks OX40L–OX40 interactions upstream of T-cell expansion and inflammatory cytokine production in atopic dermatitis (AD). SHORE (NCT06224348), a phase 3, randomized, double-blind, placebo-controlled trial evaluated the efficacy and safety of amlitelimab in patients with moderate-to-severe AD on background topical corticosteroids with/without topical calcineurin inhibitors (TCS/TCI).

Materials and Methods
Eligible participants aged ≥12 years (n=643) were randomized 2:1:1 to receive TCS/TCI with 250mg amlitelimab given subcutaneously every-4-weeks (Q4W) +500mg loading dose (+LD), Q12W +LD, or placebo for 24 weeks (doses halved for patients <40kg). For US/US-reference countries, the primary endpoint was vIGA-AD 0/1 response at Week 24. Key secondary endpoints included vIGA-AD 0/1 with only barely perceptible erythema (BPE), EASI-75, and PP-NRS≥4 response. Statistical analysis was conducted using nonresponder imputation after rescue/prohibited medication use and early discontinuation due to lack of efficacy.

Results
Amlitelimab demonstrated significantly higher efficacy versus placebo across primary and key secondary endpoints: vIGA-AD 0/1 (Q4W: 28.7%, Q12W: 32.3% vs placebo: 16.8%; $F \leq 0.01$), vIGA-AD 0/1 BPE (25.3%, 29.1% vs 13.7%; $F \leq 0.01$), EASI-75 (48.1%, 46.8% vs 32.3%; $F \leq 0.025$), and PP-NRS≥4 (38.2%, 33.3% vs 21.5%; $F \leq 0.025$). Amlitelimab was well tolerated, with no new safety concerns identified and no deaths reported in the study.

Conclusions
Amlitelimab in combination with TCS/TCI—across both Q4W and extended Q12W dosing regimens—demonstrated

progressive improvements, without plateau, in skin clearance and disease severity through Week 24 and was well tolerated. These results confirm the efficacy and safety of amlitelimab in a setting that more closely reflects clinical practice.

Abstract N°: ID-251

Topic: Atopic dermatitis/ Eczema

Lebrikizumab provides clinically meaningful response in adults and adolescents with moderate-to-severe atopic dermatitis: ADhope1 study primary results

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Introduction

Lebrikizumab (LEB) is approved for moderate-to-severe atopic dermatitis (AD) and has previously demonstrated efficacy and a favourable safety profile.[1–3] Here, we report efficacy and safety of LEB in adults and adolescents with moderate-to-severe AD in the ADhope1 study (NCT05990725). The study included patients with more moderate AD than those in phase 3 trials and assessed response based on absolute EASI, a more clinically meaningful endpoint than the relative EASI improvements of regulatory trials. All patients moved to LEB 250 mg every 4 weeks (Q4W) at Week (W) 16, regardless of their response.

Materials and Methods

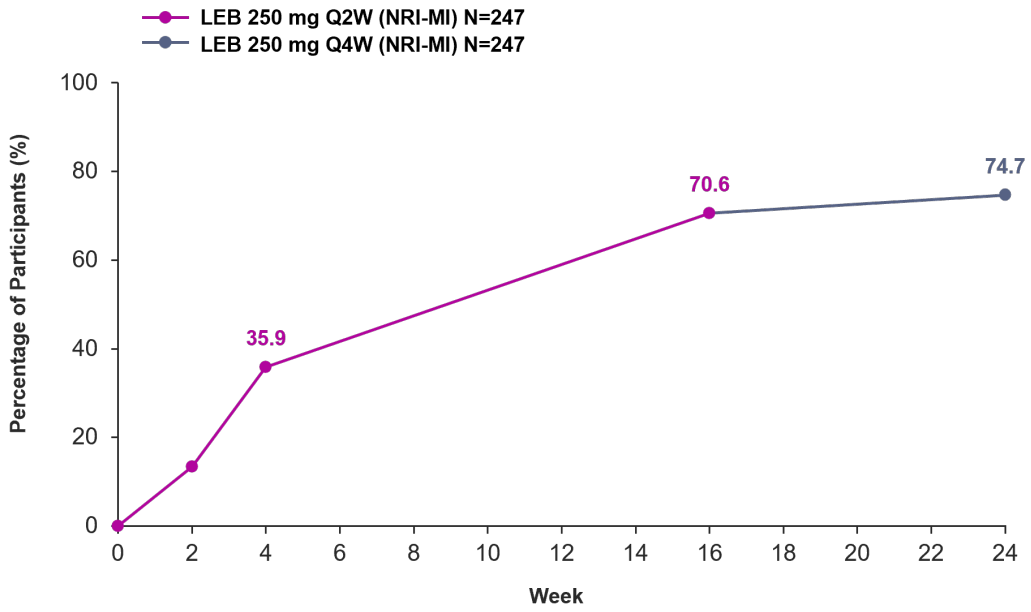
ADhope1 was an open-label, 24-W study enrolling adults and adolescents (≥12 to <18 years, ≥40 kg) with an Eczema Area and Severity Index (EASI) ≥12, Investigator's Global Assessment (IGA) ≥3, ≥10% body surface area (BSA) of uncontrolled AD, and who were not adequately controlled with topical therapies. Prior exposure to dupilumab was allowed. Patients received a 500 mg LEB loading dose at baseline and W2, followed by 250 mg Q2W until W16, when all patients were moved to 250 mg Q4W until W24, regardless of response. Topical corticosteroid (TCS) use was allowed. The primary efficacy endpoint was the percentage of patients achieving absolute EASI ≤7 at W24. Additional endpoints included percentage of patients achieving EASI 75, IGA 0/1, EASI 90 and ≥4-point improvement in Pruritus Numeric Rating Scale (P-NRS), as well as safety. 13 patients from one site had to be excluded due to quality issues and data are reported in the modified Full Analysis Set (mFAS). Treatment discontinuation due to lack of efficacy was considered as non-response, while treatment discontinuations due to any other reason, as well as any other missing data, were handled through multiple imputation. Data collected after use of prohibited medication was included in the analysis.

Results

260 patients were enrolled. Efficacy was assessed in 247 patients from the mFAS and safety in all treated patients (Safety Analysis Set [SAF]; N=260). At baseline, the mean age (standard deviation [SD]) of patients was 32.8 (14.1) years, 61.1% were male and 8.5% had previous dupilumab exposure (mFAS). Mean (SD) EASI score was 23.1 (9.0), mean (SD) P-NRS was 6.7 (1.6) and IGA scores of 3 (moderate) and 4 (severe) were reported in 74.1% and 25.9% of patients, respectively. During the study, 44.5% of patients (n=110) used any TCS and 32.8% (n=81) were using TCS at baseline before initiating lebrikizumab.

At W24, 74.7% of patients achieved EASI ≤7 (**Figure 1**). Percentage of patients achieving EASI 75, IGA 0/1, EASI 90 and ≥4-point improvement in P-NRS at W24 were 63.5%, 41.3%, 34.1% and 47.3%, respectively. At least one treatment emergent adverse event (TEAE) was reported in 78.5% (n=204) of patients. Most TEAEs were mild (n=86, 33.1%) or moderate (n=110, 42.3%). Incidence of serious adverse events (n=7, 2.7%) and TEAEs leading to treatment discontinuation were low (n=6, 2.3%). The most common TEAEs, reported in ≥5% of patients, were nasopharyngitis (n=66, 25.4%), conjunctivitis (n=46, 17.7%, most were mild or moderate and did not lead to treatment discontinuation), exacerbation of atopic dermatitis (n=32, 12.3%), headache (n=19, 7.3%) and dry eye (n=18, 6.9%).

Figure 1. EASI ≤7 responses through W24, mFAS, NRI-MI



Treatment discontinuation due to lack of efficacy was considered as non-response, while treatment discontinuations due to any other reason, as well as any other missing data, were handled through multiple imputation. Data collected after use of prohibited medication were included in the analysis. EASI: Eczema Area and Severity Index; LEB: lebrikizumab; mFAS: modified Full Analysis Set; MI: multiple imputation; NRI: non-responder imputation; QXW: every X weeks; W: Week.

Conclusions

LEB provided a clinically meaningful response in both skin and itch endpoints. These findings are in line with the efficacy and safety outcomes demonstrated in randomised controlled trials. Conjunctivitis rates were consistent with the drug class profile, no new safety signals were observed.

Abstract N°: ID-271

Topic: Atopic dermatitis/ Eczema

Atopic Dermatitis in Indigenous Communities: Barriers to Care and Teledermatology Solutions

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Introduction
Indigenous communities in Canada experience higher atopic dermatitis prevalence alongside profound barriers to dermatologic care, shaped by historical and ongoing structural inequities related to colonization. These barriers include historical trauma, geographic isolation, unsafe water, inadequate housing, and cultural safety gaps. Despite significant disease burden, Indigenous participants comprise only 0.91% of atopic dermatitis clinical trial enrollment. This review synthesizes evidence on prevalence, assessment approaches, access barriers, and intervention models, centering Indigenous perspectives and structural determinants of health.

Materials and Methods
A systematic search of five databases identified six studies; an environmental scan catalogued 49 programs. No randomized trials specific to atopic dermatitis management in Indigenous populations exist. Dermatologic conditions affected 16.6-53.5% of Indigenous populations, exceeding general rates. Barriers emerged across four domains: systemic (historical trauma, research exclusion), geographic (remote locations accessible only by plane or ice roads), resource-related (water insecurity, mold exposure, medication costs), and cultural safety deficits (limited Indigenous providers, dismissal of traditional healing). Promising interventions included Indigenous Extension for Community Healthcare Outcomes telementoring, hybrid models combining community navigators with electronic consultations, outreach rotations, and co-designed care pathways. Most programs reported positive outcomes but lacked standardized metrics for wait times, disease control, or equity stratification.

Results
Improving atopic dermatitis care for Indigenous communities requires approaches beyond clinical service delivery. Findings support the importance of addressing upstream determinants such as water security and housing, strengthening cultural safety training, Indigenous governance following Ownership-Control-Access-Possession principles, and developing standardized equity-focused evaluation metrics. Dermatologists can contribute through advocacy, adapting care to patients' material realities, and partnering with communities to co-design sustainable models of care.

Conclusions
Improving atopic dermatitis care for Indigenous communities requires approaches beyond clinical service delivery.

Findings support the importance of addressing upstream determinants such as water security and housing, strengthening cultural safety training, Indigenous governance following Ownership-Control-Access-Possession principles, and developing standardized equity-focused evaluation metrics. Dermatologists can contribute through advocacy, adapting care to patients' material realities, and partnering with communities to co-design sustainable models of care.

Effective atopic dermatitis care for Indigenous communities demands more than teledermatology. It requires addressing systemic barriers including water insecurity, housing conditions, and cultural safety gaps while centering Indigenous governance and traditional healing practices.

Abstract N°: ID-296

Topic: Atopic dermatitis/ Eczema

Efficacy of 0.20% *Centella asiatica* Extract (ECa 233) Cream Compared with 1% Hydrocortisone Cream for Eczema: A Double-Blind Randomized Non-Inferiority Trial

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Introduction
Eczema is a common, chronic, multifactorial inflammatory skin disorder that substantially impairs patients' quality of life. *Centella asiatica* extract (ECa 233), which exhibits anti-inflammatory, wound-healing, and moisturizing properties attributed to its major bioactive compounds, including madecassoside and asiaticoside, has emerged as a potential non-steroidal therapeutic alternative. This double-blind, randomized, non-inferiority study aimed to compare the efficacy of 0.20% ECa 233 cream with 1% hydrocortisone cream in the management of eczema.

Materials and Methods
This randomized controlled trial included 30 adults (18–65 years) with bilateral eczematous lesions of comparable size (<10% difference). Participants received a 0.20% w/w ECa 233 nanogel cream on one side and a 1% hydrocortisone cream on the contralateral side. Assessments were performed at baseline and at weeks 1, 2, 4, and 6. Outcomes included erythema index (EI), skin hydration, transepidermal water loss (TEWL), skin pH, Investigator's Global Assessment (IGA), pruritus visual analog scale (VAS), patient satisfaction, and safety.

Results
Twenty-nine participants (72.4% female; mean age 40.5 ± 10.8 years) completed the study. Both treatments significantly reduced EI at week 6 and produced early and sustained improvements in skin hydration, TEWL, and pruritus from week 1 onward. No significant between-group differences were observed at any time point. Non-inferiority of the 0.20% ECa 233 cream to the 1% hydrocortisone cream was demonstrated for EI (95% CI, −0.469 to 0.095), as well as for TEWL, pruritus, and skin hydration outcomes. IGA improvement increased over time in both groups, with earlier and higher proportions of >50% improvement observed in the ECa 233 group. Skin pH remained within the physiological range. Overall satisfaction was high in both groups. One mild, transient adverse event was reported in the ECa 233 group.

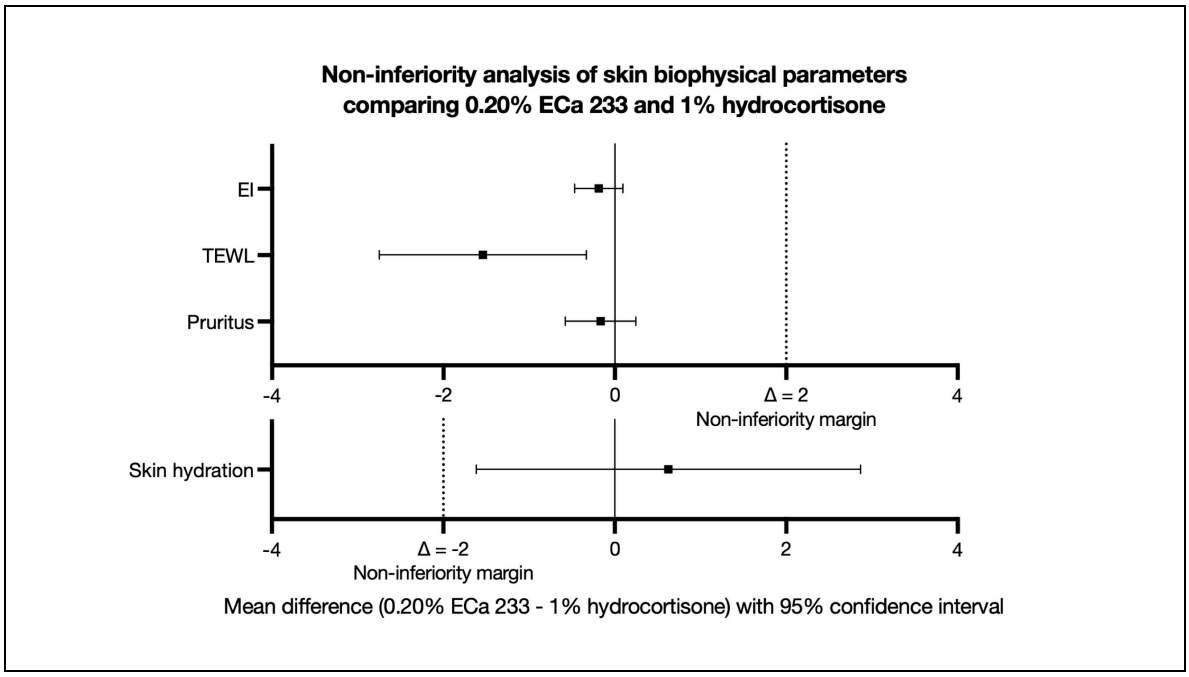

Figure 1. Non-inferiority analysis of skin biophysical parameters. Mean differences (0.20% ECa 233 minus 1% hydrocortisone) with 95% confidence intervals are shown for erythema index (EI), transepidermal water loss (TEWL), pruritus, and skin hydration. Dashed vertical lines indicate the prespecified non-inferiority margins (Δ). Non-inferiority was concluded when the upper bound of the 95% confidence interval was below the margin (Δ = 2). For skin hydration, a margin of −2 was applied due to the inverse direction of the outcome measure.

Conclusions

A 0.20% ECa 233 nanogel cream was non-inferior to a 1% hydrocortisone cream in the management of eczema, providing comparable clinical and biophysical improvements with good tolerability, supporting its role as an effective non-steroidal therapeutic alternative.

Abstract N°: ID-344

Topic: Atopic dermatitis/ Eczema

Evaluation of Inflammatory Blood Parameters and Their Association with Disease Severity in Atopic Dermatitis

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Introduction

Atopic dermatitis (AD) is a chronic, relapsing inflammatory skin disease characterized by eczematous lesions and intense pruritus, affecting both children and adults. Although T helper 2 (Th2)–driven inflammation represents the dominant immune response in AD, the contribution of routinely available hematological parameters beyond eosinophil count and total IgE remains incompletely defined. This study aimed to compare inflammatory blood parameters in patients with mild and severe AD and healthy controls, and to identify potential biomarkers reflecting disease activity.

Materials and Methods

In this retrospective study, patients aged 16–90 years diagnosed with AD between 2010 and 2025 were evaluated. A total of 44 treatment-naive AD patients (mild AD, n=18; severe AD, n=26) and 30 healthy controls were included. Pre-treatment complete blood count parameters, including eosinophil, neutrophil, lymphocyte, monocyte, basophil, immature granulocyte, and platelet counts, as well as C-reactive protein and total immunoglobulin E levels, were recorded. Inflammatory indices—eosinophil-to-lymphocyte ratio (ELR), eosinophil-to-neutrophil ratio (ENR), eosinophil-to-monocyte ratio (EMR), eosinophil-to-immature granulocyte ratio (EIGR), neutrophil-to-lymphocyte ratio (NLR), platelet-to-lymphocyte ratio (PLR), and lymphocyte-to-monocyte ratio (LMR)—were calculated. Comparisons were performed between the AD and control groups and between mild and severe AD. Statistical significance was set at $p \leq 0.05$.

Results

Age and sex distributions were comparable across groups. Compared with healthy controls, patients with AD exhibited significantly higher eosinophil counts ($p<0.001$), platelet counts ($p=0.013$), and elevated ENR, ELR, EMR, and EIGR values (all $p<0.001$). No significant differences were observed in neutrophil, lymphocyte, immature granulocyte counts, or in NLR, PLR, and LMR ($p>0.05$). When disease severity was considered, patients with severe AD demonstrated significantly higher ELR values, alongside significantly lower lymphocyte counts and reduced LMR compared with mild AD ($p<0.05$). Other parameters did not differ significantly between severity groups.

Conclusions

Eosinophil-based inflammatory indices, particularly ELR, are significantly elevated in atopic dermatitis and further increase with disease severity, while lymphocyte-related parameters decline in severe disease. The observed elevation in platelet counts in patients with AD may reflect platelet involvement in type 2–driven inflammation through the release of pro-inflammatory mediators and interactions with eosinophils and endothelial cells. Conversely, reduced lymphocyte counts in severe AD may be associated with chronic immune activation, peripheral lymphocyte redistribution to

inflamed skin, or relative lymphocyte exhaustion in the context of sustained Th2-skewed inflammation. Collectively, these findings suggest that readily available hematological parameters may provide complementary insights into systemic inflammatory burden and disease severity in atopic dermatitis.

Abstract N°: ID-347

Topic: Atopic dermatitis/ Eczema

Depressive symptoms and quality of life in patients with atopic dermatitis: associations with disease severity in a Brazilian sample

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Introduction

Atopic dermatitis (AD) is a chronic inflammatory skin disease marked by pruritus, erythema, and xerosis. It affects up to 25% of children and 1–10% of adults, leading to significant morbidity and reduced quality of life.[1] Beyond skin symptoms, AD causes notable psychological effects such as sleep disturbance, social stigma, and chronic stress, which can contribute to depression and anxiety.[2] Previously, we evaluated how AD affected sexual function in this cohort. This study examines additional psychosocial factors, specifically depressive symptoms and quality of life, and their relationship to disease severity and overall health.

Materials and Methods

We performed a cross-sectional study at the dermatology outpatient clinic of Pedro Ernesto University Hospital (UERJ) between 2022 and 2024. The participants consisted of adults aged 18 to 79 years with a clinical diagnosis of AD. Patients with chronic debilitating illnesses were excluded.

AD severity was assessed using the SCORAD index[3], depressive symptoms were evaluated with the Beck Depression Inventory (BDI-II)[4], and quality of life was measured with the Dermatology Life Quality Index (DLQI)[5] and the EQ-5D-3L[6], which encompasses five key domains of health-related quality of life. Statistical analyses employed Student's t-tests, Fisher's exact test, Chi-square tests, and Pearson/Spearman correlations ($p<0.05$).

Results

Among 70 adults with AD (57.1% women; mean age 32.9 years), the mean SCORAD score was 29.7 ± 19.3, reflecting predominantly mild to moderate disease. Mean DLQI and BDI-II scores were 9.2 ± 6.6 and 17.5 ± 13.2, respectively, with 34.3% reporting substantial impairment in dermatology-specific quality of life and 57.1% exhibiting depressive symptoms; women had significantly higher BDI-II scores than men (22.1 ± 13.6 vs. 11.3 ± 9.8; $p < 0.001$). EQ-5D-3L scores averaged 0.68 ± 0.20, below the Brazilian population norm of 0.82 ($p < 0.001$) (Table 1). SCORAD correlated positively with DLQI ($r = 0.52$, $p < 0.001$) and BDI-II ($r = 0.36$, $p = 0.02$), and negatively with VAS ($r = –0.40$, $p = 0.01$), as seen in Table 2. These results indicate that greater disease severity was associated with worse dermatology-specific quality of life and higher depressive symptoms, highlighting the combined physical and psychological burden of AD.

Conclusions

This study confirms that AD imposes a substantial psychological and quality-of-life burden. Greater disease severity was associated with higher levels of depressive symptoms and more impaired dermatology-specific quality of life. These findings are consistent with international evidence highlighting the psychosomatic impact of AD, including emotional

distress and social limitations.[7]

Women experienced higher depressive symptom scores than men, consistent with literature reporting gender disparities in emotional responses to chronic skin diseases. Such differences may reflect both biological susceptibility and sociocultural factors influencing coping and self-perception.[8]

The lower EQ-5D-3L scores compared to Brazilian norms reinforce that AD imposes a global reduction in perceived health status.[9] Together, these findings emphasize the necessity of comprehensive care strategies integrating dermatological and mental health support.[10]

Finally, AD is associated with a substantial psychological burden, with depressive symptoms and compromised quality of life strongly correlating with disease severity. Clinical management should target not only skin inflammation but also emotional well-being, emphasizing holistic care and the integration of psychosocial support.

Abstract N°: ID-354

Topic: Atopic dermatitis/ Eczema

Long-Term Disease Control and Safety With Ruxolitinib Cream in Adults With Moderate Atopic Dermatitis Following Failure of Prior Topical Therapies: Results From the TRuE-AD4 Phase 3b Study

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Introduction
Patients with moderate atopic dermatitis (AD) often receive systemic therapy. In TRuE-AD4, ruxolitinib cream demonstrated efficacy and safety at Week 8 in adults with moderate AD having inadequate response/intolerance/contraindication to topical corticosteroids and topical calcineurin inhibitors (post-TCS and -TCI). Here, we report 24-week disease control and safety in these patients.

Materials and Methods
Adults with Investigator's Global Assessment (IGA) of 3, Eczema Area and Severity Index (EASI) >7, itch numerical rating scale (NRS) ≥4, and 10%–20% affected body surface area (BSA) post-TCS and -TCI were randomized to twice-daily 1.5% ruxolitinib cream or vehicle for 8 weeks. Patients who achieved ≥50% improvement from baseline in EASI (EASI-50) continued double-blind, twice-daily treatment as needed for 16 weeks. Patients not maintaining EASI-50 at 2 consecutive visits could enter an open-label ruxolitinib cream as-needed escape arm.

Results
A total of 121 patients continued with double-blind treatment as needed after Week 8. Most patients (84.3%) completed double-blind treatment, with 84.5% having achieved EASI-75 and 70.9% having achieved IGA 0/1 with ≥2-point improvement from baseline at Week 24. Mean affected BSA (2.5%) and itch NRS 7-day scores (2.4) were low. Few patients switched to the escape arm (11.6%), and none discontinued due to lack of efficacy. Ruxolitinib cream was well tolerated in the as-needed period; 2 patients interrupted treatment and none discontinued due to treatment-emergent adverse events.

Conclusions
In summary, in patients with moderate AD in which TCS and TCI have failed, ruxolitinib cream may be an effective therapy option to delay/prevent progression to systemic therapy.

Abstract N°: ID-451

Topic: Atopic dermatitis/ Eczema

Low–Surface Tension Cleansing Without Surfactants: A New Approach for Patients With Skin Disease

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Introduction
Personal hygiene is important for all adults; however, individuals with skin disease may find casual cleansing during the day difficult due to skin irritation. Wet wipes are a convenient option for adults with no skin disease who need to freshen up when away from home. For those with skin disease the wipe may leave behind a residue containing irritating surfactants. This research examined the tolerability and efficacy of a novel minimal ingredient wet wipe in adults with skin disease and help improve quality of life.

Materials and Methods
27 male and female subjects 18+ years of age who signed consent and with dermatologist diagnosed skin disease were enrolled in a 14-day study. Subjects underwent baseline dermatologist investigator clinical grading and self-assessment for dryness, skin texture/roughness (tactile), skin texture/roughness (visual), desquamation/flakiness, erythema, and overall appearance of healthy skin. The investigator assessed tolerability in terms of skin itching, stinging, and burning on the same ordinal scale by querying the subject. All assessments were conducted on the same 5-point ordinal grading scale (0=none, 1=minimal, 2=mild, 3=moderate, 4=severe). These assessments were repeated at day 14. Subjects used 2-4 wipes for all over body cleansing daily and recorded use in a compliance diary.

Results
27/27 subjects successfully completed the study. There was a statistically significant dermatologist investigator assessed improvement with the study wipe represented by a 42% improvement in tactile skin roughness (p=0.008), a 43% improvement in visual skin texture roughness (p=0.004), a 64% improvement in skin desquamation (p=0.031), a 32% improvement in skin erythema (p=0.008), and a 38% improvement in overall appearance of healthy skin (p=0.002). No sensory issues were noted by the subjects. The subjects rated statistically significant improvement in all the studies skin parameters to include a 38% improvement in dryness (p=0.001), 43% improvement in tactile skin roughness (p=0.002), a 43% improvement in visual skin texture roughness (p=0.00s), a 45% improvement in skin desquamation (p=0.005), a 27% improvement in skin erythema (p=0.005), and a 26% improvement in overall appearance of healthy skin (p=0.003).

Conclusions
The ability of the studied wipe to provide excellent cleansing of the body is due to the low surface tension of the purified water used to wet the rayon base sheet. Surface tension is the attractive force between water molecules that draws them together to produce a discrete droplet. The purified water used to wet the wipes combined with the grapefruit seed extract results in a further reduced surface tension. This avoids the addition of chemical surfactants common in cosmetic products.

Typically, wipe manufacturers achieve this low surface tension through the addition of surfactants with hydrophobic and hydrophilic end chains, where the hydrophobic end binds to the surface dirt and the hydrophilic end binds to water resulting in skin cleansing. However, surfactants can damage the skin barrier by not only removing surface dirt, but also attaching to the lipids in the intercellular spaces. This concern led to the development of wet wipes without any surfactants containing 99.9% ultra pure water and 0.1% fruit seed extract, a gentle skin conditioner, with trace amounts of benzalkonium chloride for preservation. Water used in wet wipes must be specially treated to remove salt and residual minerals that contribute to water hardness.

This different technique for creating a wet wipe means people with skin disease who normally cannot use a wet wipe now have a convenient and hygienic option without aggravating their skin disease.

Abstract N°: ID-467

Topic: Atopic dermatitis/ Eczema

Real-World Disease Burden and Treatment Patterns in Moderate-to-Severe Atopic Dermatitis Uncontrolled by Topical Therapy: Results from the China Atopic Dermatitis Registry Study

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Introduction
Atopic dermatitis (AD) is a chronic inflammatory skin disease with substantial burden in moderate-to-severe cases. This study aimed to describe patient characteristics and real-world treatment patterns in patients with moderate-to-severe AD uncontrolled by topical therapy and have no history of defined systemic therapy.

Materials and Methods
The China Atopic Dermatitis Registry Study (NCT05023668) enrolled patients aged ≥12 years with moderate-to-severe AD (SCORing AD [SCORAD] score ≥25, Investigator Global Assessment score ≥3 or Eczema Area and Severity Index ≥24) and uncontrolled by topical therapy. Follow-up occurred at baseline (BL), and at month 1, 4, 8, and 12. This analysis described patient characteristics and treatment patterns at BL and month 12. Patients who received systemic therapy (immunosuppressants, systemic corticosteroids, biologics, or Janus kinase inhibitors) more than 1 day prior to BL were excluded. Subgroup analyses assessed the data by age (12–17, 18–64, and ≥65 years).

Results
A total of 10000 participants were screened, of which 8535 had no prior systemic therapy record. The mean age was 42.7±20.5 years, and 56.3% were male. A personal history of allergic disease was reported by 56.6%, most commonly allergic rhinitis (64.1%). Mean SCORAD 53.3±16.0 and peak pruritus numerical rating scale (PP-NRS) 7.0±2.2 indicated severe signs and symptoms, and Atopic Dermatitis Control Test (ADCT) 13.6±5.4 showed poor disease control at BL. Quality of life was impaired, with mean Dermatitis Life Quality Index (DLQI) 11.3±6.8 and children DLQI 10.5±6.2. In the past year, 9.9% were hospitalized at least once (mean cost ¥6107.8±6247.0), while 87.3% had outpatient visits (mean cost ¥679.0±1144.0). At BL, topical anti-inflammatory therapy was used by 64.9% of the patients; systemic anti-inflammatory therapy was used by 33.2%, among which dupilumab was the most common. Basic/moisturizing therapy was used by 30.5% at BL. Among the 5,784 patients who completed the 12-month follow-up, the use of systemic anti-

inflammatory therapy increased to 42.2%, with dupilumab being the most prevalent systemic drug (36.6%). Basic/moisturizing therapy and topical anti-inflammatory treatments were utilized by 45.5% and 39.0% of patients, respectively. Within systemic anti-inflammatory therapy, 36.6% of patients received dupilumab, 5.0% received Janus kinase inhibitors, and 0.8% received systemic corticosteroids.

Subgroup analysis showed high severity across all age groups. The elderly had a higher SCORAD 58.4±16.4, PP-NRS 7.7±1.9, and ADCT 15.2±5.3. Adolescents had a high allergic comorbidity rate (68.9%), whereas the elderly had a lower rate (42.7%). In the elderly group, 17.9% were hospitalized at least once in the past year, the mean cost was ¥5866.8±5275.2. At BL, approximately 30% of patients were receiving systemic anti-inflammatory therapy and dupilumab was the most prevalent systemic option across all age cohorts. By Month 12, dupilumab was used in 37.9% of adolescents, 33.6% of adults, and 46.5% of the elderly patients. In contrast, the use of topical anti-inflammatory therapy from 64.9% on average declined to a range of 34.8-40.3% across age groups at Month 12.

Table 1. Patient Characteristics of AD Patients at Baseline

Characteristics	Total (N=8535)	Age stratification		
		12-17 (N=961)	18–64 (N=5929)	≥65 (N=1645)
Age, years, mean±SD	42.7±20.51	14.5±1.70	38.8±13.77	73.3±6.65
Sex, male, n (%)	4802(56.3%)	558(58.1%)	3104(52.4%)	1140(69.3%)
BMI, mean±SD	22.9±3.43	21.2±3.79	23.1±3.38	23.3±3.11
Personal history of allergic diseases, n (%)	4827(56.6%)	662(68.9%)	3463(58.4%)	702(42.7%)
Allergic rhinitis	3093(64.1%)	437(66.0%)	2304(66.5%)	352(50.1%)
Urticaria	781(16.2%)	88(13.3%)	585(16.9%)	108(15.4%)
Food allergies	750(15.5%)	126(19.0%)	521(15.0%)	103(14.7%)
Atopic dermatitis/eczema before 2 years of age	703(14.6%)	217(32.8%)	423(12.2%)	63(9.0%)
Asthma	645(13.4%)	104(15.7%)	410(11.8%)	131(18.7%)
Allergic conjunctivitis	298(6.2%)	47(7.1%)	226(6.5%)	25(3.6%)
Excessive insect bite response	188(3.9%)	23(3.5%)	142(4.1%)	23(3.3%)
Other	340(7.0%)	39(5.9%)	236(6.8%)	65(9.3%)
Method of diagnosis, n (%)				
Zhang's criteria	6086(71.3%)	707(73.6%)	4205(70.9%)	1174(71.4%)
Williams Criteria	2449(28.7%)	254(26.4%)	1724(29.1%)	471(28.6%)
Disease activity, mean±SD				
SCORAD	53.3±16.01	52.2±15.86	52.1±15.62	58.4±16.44
PP-NRS	7.0±2.19	6.5±2.20	6.9±2.21	7.7±1.94
POEM	15.9±6.72	15.2±6.66	15.8±6.75	16.8±6.58
DLQI (> 16 years)	11.3±6.78(N=7886)	10.5±6.17(N=312)	11.6±6.88(N=5929)	10.4±6.47(N=1645)
cDLQI (<16 years)	10.5±6.24(N=649)	10.5±6.24(N=649)	/	/
ADCT	13.6±5.44	12.0±5.33	13.4±5.41	15.2±5.26
ADCT ≥7	7656(89.7%)	805(83.8%)	5295(89.3%)	1556(94.6%)
ADCT <7	879(10.3%)	156(16.2%)	634(10.7%)	89(5.4%)

All data are reported as observed, with missing data excluded.

Funding: This collaborative study was funded by Sanofi.

Conclusions

This large-scale real-world study reveals a substantial disease burden among patients with moderate-to-severe AD uncontrolled by topical therapy. Notably, despite this high burden, only approximately one-third of patients were receiving systemic anti-inflammatory therapy at baseline, this relatively low utilization of systemic therapy suggests

limited access to and insufficient standardization of advanced treatment in China clinical practice.

Abstract N°: ID-469

Topic: Atopic dermatitis/ Eczema

Role of emollient pH in preventing the development of atopic dermatitis: a systematic review and pooled individual data analysis

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Introduction
Regular emollient use during infancy and early childhood has been proposed as a strategy to prevent the development of atopic dermatitis (AD), although results across randomized trials have been inconsistent. The skin surface maintains a weakly acidic pH, generally ranging from 4.5 to 5.5, which is essential for epidermal barrier integrity, lipid processing, and antimicrobial defense. Emollients with an acidic pH may better support these physiological mechanisms. However, evidence comparing the preventive efficacy of emollients according to their pH level remains limited. This study aimed to evaluate whether acidic pH emollients provide superior protection against the development of AD compared with higher pH emollients.

Materials and Methods
A systematic review and pooled individual data analysis were conducted using randomized controlled trials evaluating emollient use for the primary prevention of atopic dermatitis. A comprehensive search of five electronic databases was performed for studies published up to September 15, 2025, using keywords related to emollients, moisturizers, and atopic dermatitis. Trials in which emollients were used solely as adjunctive therapy were excluded. Eligible studies were categorized according to emollient pH: acidic pH (pH≤5.5) and higher pH (pH >5.5). Methodological quality was assessed using a validated risk-of-bias tool for randomized trials. Pooled relative risks (RRs) with 95% confidence intervals (CIs) were calculated for the incidence of AD. This review is registered in PROSPERO (CRD420251166600).

Results
A total of 16 randomized controlled trials evaluated emollients for the prevention of atopic dermatitis. Eight studies met the predefined criteria and were included in the pooled individual data analysis. All included studies demonstrated an acceptable risk of bias. In the acidic pH emollient group (pH≤5.5), 440 participants received emollient intervention and 450 served as controls. Use of acidic pH emollients was associated with a statistically significant reduction in the risk of developing atopic dermatitis, with a pooled RR of 0.729 (95% CI, 0.559–0.950). In the higher pH emollient group (pH >5.5), 213 participants were assigned to the intervention group and 205 to the control group. Emollients with pH >5.5 were associated with a non-significant reduction in AD risk, with a pooled RR of 0.835 (95% CI, 0.640–1.088). These findings demonstrate that a significant preventive effect was observed only in the acidic pH emollient group.

Conclusions
This systematic review and pooled individual data analysis support the role of emollient use in preventing the development of atopic dermatitis and indicate that emollient pH is a critical determinant of preventive efficacy. Acidic pH emollients were associated with a statistically significant reduction in AD incidence, whereas higher pH emollients were not. These results suggest that maintaining an acidic skin environment may be essential for effective primary prevention of atopic dermatitis. Further large-scale randomized trials are warranted to confirm these findings and to establish optimal pH-based preventive strategies.

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Topic: Atopic dermatitis/ Eczema

Diaper Dermatitis: What Lies Beneath the Diapers?

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Introduction

The term **diaper dermatitis** encompasses a group of infectious or inflammatory conditions affecting the perineal region, particularly common in infants. The aim of this study is to describe the epidemiological, clinical, etiological characteristics, and progression of diaper dermatitis in this population.

Materials and Methods

This is a retrospective, descriptive, single-center study including 51 children aged 1 to 5 years who consulted for diaper dermatitis, with a mean age of 16 months.

Results

A female predominance was observed, with 31 girls and 20 boys, resulting in a sex ratio of 0.64. Twenty patients (39.2%) had a concurrent episode of diarrhea, which may have aggravated skin irritation and secondary infection. Regarding lifestyle factors, 20% of children used disposable diapers exclusively, and 70% were fed with mixed feeding (maternal and artificial).

The most frequent etiologies were candidiasis (18 cases, 35.3%), contact eczema (11 cases, 21.6%), and streptococcal dermatitis (5 cases, 9.8%). Other less common causes included impetigo (2 cases, 3.9%), necrotizing dermohypodermitis (1 case, 2%), scabies (2 cases, 3.9%), vulvovaginitis (1 case, 2%), dermatophytosis (1 case, 2%), prurigo (1 case, 2%), condyloma (2 cases, 3.9%), and warts (1 case, 2%).

A systematic clinical evaluation was performed for each child, complemented by dermoscopic examination when lesions required it. Dermoscopy allowed identification of characteristic features according to etiology: in inflammatory dermatoses, erythema, punctate vessels, and desquamation; in fungal infections, white scales with an active peripheral border; and in condylomas, papillomatous structures with a typical vascular pattern.

Additionally, the use of baby diapers was reported in 88.7% of cases, with diaper changes occurring fewer than five times per day in 79% of children.

Conclusions

Diaper dermatitis is common in infants and young children, with candidiasis, contact eczema, and streptococcal dermatitis being the most frequent causes. These conditions are often favored by prolonged diaper use and insufficient diaper-changing frequency. The use of dermoscopy allows for precise diagnosis, while prevention relies on strict hygiene practices and parental education.

Abstract N°: ID-492

Topic: Atopic dermatitis/ Eczema

Efficacy and safety of monotherapy amlitelimab, a non-depleting anti-OX40 ligand antibody, in moderate-to-severe atopic dermatitis: 24-week results from the pivotal COAST 1 and COAST 2 phase 3 trials and efficacy and safety of amlitelimab, a non-depleting anti-OX40 ligand antibody, in combination with topical therapy in participants with moderate-to-severe atopic dermatitis: 24-week results from the SHORE phase 3 trial

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Introduction
Amlitelimab, a non-depleting, anti-OX40L antibody, blocks OX40L–OX40 interactions upstream of T-cell expansion and inflammatory cytokine production in atopic dermatitis (AD). COAST-1 (NCT06130566) and COAST-2 (NCT06181435) were pivotal phase 3, randomized, double-blind, placebo-controlled, duplicate trials evaluating monotherapy amlitelimab in moderate-to-severe AD.

Materials and Methods
Eligible participants aged ≥12 years were randomized 2:1:1 to subcutaneous amlitelimab every-4-weeks (Q4W) +loading dose (+LD), amlitelimab Q12W +LD, or placebo for 24 weeks. For US/US-reference countries, the primary endpoint was vIGA-AD 0/1 response at Week 24. Key secondary endpoints included vIGA-AD 0/1 with only barely perceptible erythema (BPE), EASI-75, and PP-NRS≥4 response. Participants were considered non-responders after rescue/prohibited medication use or early discontinuation due to lack of efficacy.

Results
All ranked prespecified endpoints were met in COAST-1 (N=601); amlitelimab demonstrated significantly higher efficacy versus placebo across lesion and symptom endpoints: vIGA-AD 0/1 (Q4W: 21.1%, Q12W: 22.5% vs placebo: 9.2%; $P<0.01$); vIGA-AD 0/1 BPE (17.4%, 18.5% vs 7.9%; $P<0.02$), EASI-75 (35.9%, 39.1% vs 19.1%; $P<0.001$), and PP-NRS≥4 (22.5%, 24.5% vs 12.7%; $P\leq0.02$). COAST-2 (N=589) met the primary endpoint (vIGA-AD 0/1: Q4W: 25.3%, Q12W: 25.7% vs placebo: 14.8%; $P\leq0.025$). vIGA-AD 0/1 BPE (21.6%, 20.3% vs 13.4%; $P>0.025$) did not reach significance. EASI-75 (41.8%, 40.5% vs 24.2%) and PP-NRS≥4 (26.8%, 27.2% vs 17.1%) reached nominal significance ($P<0.05$). Rates of TEAEs, SAEs, and AESIs were similar across groups.

Conclusions
Amlitelimab monotherapy across both Q4W and extended Q12W dosing regimens demonstrated progressive improvements, without plateau, in skin clearance and disease severity through Week 24 and was well-tolerated.

Abstract N°: ID-499

Topic: Atopic dermatitis/ Eczema

Clinical Evaluation of a Topical Barrier-Repair Cream in Patients with Atopic Dermatitis: A Series of Case Reports

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Introduction

Atopic dermatitis (AD) is a chronic, recurrent inflammatory skin disease characterized by dry skin, intense itching, erythema, papules, and lichenification, significantly impairing patients' quality of life. Dysfunction of the skin barrier and immune abnormalities are central to its pathogenesis. Current treatment primarily relies on topical anti-inflammatory agents (such as corticosteroids and calcineurin inhibitors), but long-term use may cause adverse reactions like skin atrophy and hyperpigmentation. Additionally, issues like dryness and desquamation often compromise treatment adherence. Therefore, safe and effective barrier repair and moisturizing products are crucial in managing AD. This study aimed to evaluate the clinical efficacy and safety of a topical barrier-repair cream in improving skin dryness, itching, erythema, and barrier function among AD patients.

Materials and Methods

Eight atopic dermatitis patients (5 males, 3 females; ages 9 - 43 years) with disease severity ranging from mild to severe were enrolled, as detailed in Figure. All patients used the study cream 1–2 times daily for 28 consecutive days, in addition to their standard treatments (e.g., topical corticosteroids, calcineurin inhibitors, oral antihistamines, biologics). Objective and subjective assessments were conducted at baseline (D0) and after 28 days (D28) of treatment, including clinical symptom evaluation, a pruritus visual analog scale (VAS), and measurements of transepidermal water loss (TEWL) and stratum corneum hydration (SCH) with standard probes. Patient experiences and adverse reactions were also documented.

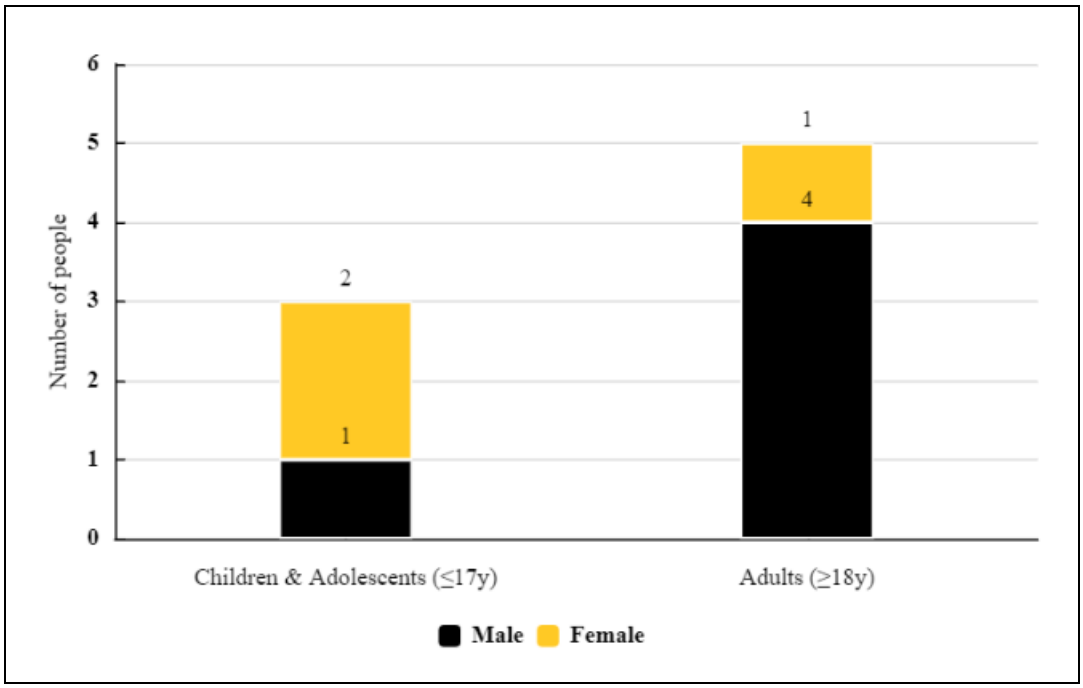

Figure. Gender and age distribution of subjects

Results

The 8 AD patients were categorized into three groups based on treatment intensity for clearer analysis (see Table): the study cream was used as monotherapy in 2 mild cases; as an adjunct to topical and/or oral medications in 4 mild-to-moderate cases; and as an adjunct to systemic biologic therapy (dupilumab) in 2 severe cases. The cream was well-tolerated by all patients throughout the 28-day period, with no severe adverse reactions reported. Clinical improvement was observed across different treatment scenarios: in the two mild cases used as monotherapy, patients reported marked alleviation of skin dryness, itching, and scaling; in moderate-to-severe cases combined with topical anti-inflammatory medications (e.g., corticosteroids, calcineurin inhibitors), enhanced resolution of erythema and lesions was noted alongside standard care; in severe cases receiving systemic therapy (e.g., dupilumab), adjunctive use of the cream was associated with further relief of residual local dryness and pruritus.Objective instrumental assessments, where performed, supported these clinical observations. Measurements of transepidermal water loss (TEWL) and stratum corneum hydration (SCH) at lesional sites showed a consistent trend toward improvement after 28 days, indicating better skin barrier function and hydration.

Patient	Severity	Treatment Regimen	Key Outcome (D0 to D28)
1	Mild	Cream (Monotherapy)	Global clinical improvement
2	Mild	Cream (Monotherapy)	Global clinical improvement
3	Mild-Mod	Cream + Topical Tacrolimus	Pruritus VAS: 7→1 Lesion area: >80% reduction
4	Mild	Cream + Oral Antihistamine	VISIA Redness: -59%.
5	Mod-Sev	Cream + Herbal & Topical Corticosteroid	Improved sensitivity & dryness
6	Mod-Sev	Cream + Topical Calcineurin Inhibitor & Oral Antihistamine	TEWL (Lesion): -42%
7	Severe	Cream + Dupilumab	Reduced scaling & pruritus
8	Severe	Cream + Dupilumab	TEWL: -45%, SCH: +157%

Table. Summary of key outcomes in AD patients using the study cream

Conclusions

In this small case series, the topical barrier-repair cream was well-tolerated and associated with symptomatic and objective improvement in AD patients across a spectrum of disease severities and therapeutic regimens. The observed benefits—reduction in dryness, pruritus, and erythema alongside improved barrier metrics—suggest that the cream's formulation, which includes humectants (e.g., urea), ceramides, filaggrin metabolites, and soothing components, may address multiple facets of AD skin care. These preliminary findings indicate that it could serve as a useful component in the contemporary stepwise management of AD, potentially aiding in symptom control and supporting treatment regimens.

Abstract N°: ID-514

Topic: Atopic dermatitis/ Eczema

Mode of Delivery and Risk of Atopic Dermatitis in Offspring:An Updated Systematic Review and Meta-analysis

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Introduction
Cesarean section (CS) may alter neonatal microbiota and affect the risk of atopic dermatitis (AD). Existing studies are heterogeneous, and recent data have not yet been pooled. This study was conducted to estimate the association between CS and AD and to explore potential sources of heterogeneity.

Materials and Methods
We conducted a random-effects meta-analysis of 49 study populations derived form 46 studies that reported contingency data on AD according to delivery mode. Odds ratios (ORs) were calculated and pooled. Subgroup analyses were performed according to region and study size. Sensitivity analyses were conducted by sequentially excluding each study in turn.

Results
Across over two million participants, CS was associated with a 10 % higher risk of AD (pooled OR 1.10, 95 % CI 1.06–1.14). In regional analyses, Korean cohorts showed a higher OR (1.38), while European and North American cohorts showed ORs of 1.05–1.09. Large cohorts (>10,000 births) yielded an OR of 1.13, whereas small and medium-sized cohorts produced ORs around 1.04–1.07. Sensitivity analyses showed pooled ORs ranging between 1.08 and 1.11.

Conclusions
This updated synthesis suggests a modest but consistent increase in AD risk after CS. Although the effect is small, it may be clinically relevant for patient counselling. Further research should clarify differences between elective and emergency CS and the role of other perinatal modifiers.

Abstract N°: ID-562

Topic: Atopic dermatitis/ Eczema

Rarely diagnosed phenomenon with a lot of potential clinical and prognostic significance.

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Introduction
Meyerson's nevus or halo eczema (halo dermatitis) is a rarely diagnosed phenomenon of benign melanocytic nevus surrounded by eczematous reaction. In 1971 the USA dermatologist Lawrence Meyerson first reported two patients with peculiar pruritic papulosquamous eruption involving some of their pigmented nevi. Fifty-four years later Meyerson phenomenon still remains unclear and possibly underdiagnosed. We are not yet fully aware of the clinical and prognostic significance of this phenomenon.

Materials and Methods
We present two cases of Meyerson nevi, showing two different presentations of the phenomenon.The first patient is a 15 year old boy with a solitary melanocytic nevus on the skin at the lumbar region. A papulosquamous reaction is clearly visible around the nevus. The patient complains of itching in the area of the nevus but denies any preceding health condition. The second patient is a 40 year old woman with multiple Meyerson nevi on the skin of the trunk and upper extremities. The patient has a history for previous excerbation of chronic eczema and shares the complaint of pruritus. Both patients deny having any trauma in the area of the Meyerson nevi.

Results
A Meyerson nevus does not require any specific therapeutical or clinical behaviour, which is probably why many unanswered questions regrding it remain unanswered. We should keep in mind that if the Meyerson nevus is observed in the context of a higher risk nevus it could be related to a future risk of malignancy because of the nature and development of the nevus itself. If the appearance of a Meyerson nevus is in the context of an already existing eczema, it is very likely that this may lead to a more severe course of the disease.

Conclusions
According to our research until now there are about 56 cases published in the medical literature. It is difficult to clarify the significance of this type of nevi. An interesting question to ask is why does the eczematous reaction affect only one or just a few of the present nevi of the patient. There might be a possibility for the Meyerson phenomenon to be seen as a prognostic criteria for diagnosing higher risk nevi. On the other hand it could be related to more severe and dificult to treat eczematous reactions. There are also authors who consider this phenomenon as a "beginning of the end" sign - i.e. the eczema reaction indicates the end of the inflammatory process. Anyhow, Meyerson nevi are an interesting skin finding which should be noted and followed-up in order to be fully understood and to be of a better clinical use, providing us with its possible prognostic meaning in the future.

Abstract N°: ID-565

Topic: Atopic dermatitis/ Eczema

Janus kinase inhibitors for chronic hand eczema: A systematic review and meta-analysis

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Introduction
Chronic hand eczema (CHE) is a debilitating, relapsing inflammatory dermatosis associated with substantial functional impairment, reduced quality of life, and occupational disability. Despite its prevalence, therapeutic options for moderate-to-severe CHE remain limited, and many patients experience inadequate disease control with conventional topical and systemic therapies. Increasing recognition of T-helper-2-driven immune dysregulation in CHE has positioned Janus kinase (JAK) inhibitors as promising targeted treatments. However, the comparative efficacy and safety of topical and oral JAK inhibitors across randomized trials remain unclear. This systematic review and meta-analysis synthesizes randomized controlled trial evidence to assess the clinical efficacy, patient-reported outcomes, and safety profile of JAK inhibitors for CHE.

Materials and Methods
This systematic review was conducted in accordance with PRISMA guidelines and registered on PROSPERO (CRD420251139464). MEDLINE, Embase, and CENTRAL were searched from inception to September 4, 2025, for randomized controlled trials evaluating JAK inhibitors for CHE. Two reviewers independently screened articles, extracted data, and assessed risk of bias using the Cochrane Risk of Bias 2 tool. Validated treatment metrics included Dermatology Life Quality Index (DLQI), Hand Eczema Severity Index (HECSI), Worst Itch Numerical Rating Scale (WI-NRS), and Investigator's Global Assessment (IGA). A random-effects meta-analysis was performed to evaluate the pooled proportion of patients achieving IGA 0/1 for delgocitinib compared with placebo.

Results
Ten randomized controlled trials encompassing 3,737 patients were included (mean age 42.9 years; 55.1% female). Treatments included oral upadacitinib (48.5%), topical delgocitinib (39.0%), topical ARQ-252 (6.3%), topical ruxolitinib (3.7%), and oral guasticitinib (2.6%). Mean treatment duration was 15.6 weeks (range: 8.0-16.0). Across trials, JAK inhibitors consistently outperformed placebo in disease severity, pruritus reduction, and quality-of-life improvement. The greatest reductions in DLQI were observed with topical delgocitinib (-59.4%; placebo -28.0%; 16-weeks) and oral gusacitinib (57.9%; placebo -47.1%; 16-weeks), while ruxolitinib demonstrated the largest HECSI reductions (-84.9%; placebo -37.6%; 16-weeks) and greatest proportion of patients achieving IGA 0/1 (53.2%; placebo 10.9%; 16-weeks). The greatest reduction in WI-NRS was achieved by upadacitinib (-63.1%; placebo -21.6%; 16-weeks). Achievement of IGA 0/1 was highest with ruxolitinib (53.2%; placebo 10.9%; 16-weeks), gusacitinib (26.2%; placebo 6.3%; 16-weeks), and delgocitinib (27.8%; placebo 9.2%; 16-weeks). Meta-analysis of four delgocitinib trials demonstrated significantly greater odds of achieving IGA 0/1 compared with placebo (OR 3.99, 95% CI 2.31-6.89; $p<0.001$). Adverse events occurred in 24.9% of patients and were predominantly mild, most commonly nasopharyngitis (24.2%), acne (16.8%), and headache (15.3%). No treatment discontinuations due to adverse events were reported.

Conclusions
Topical and oral JAK inhibitors provide significant and clinically meaningful improvements in disease severity, pruritus, and quality of life in CHE, with a favorable short-term safety profile. Topical agents, particularly delgocitinib and ruxolitinib, offer targeted, steroid-sparing options for patients with refractory disease. These findings support the

growing role of JAK inhibition in CHE management while underscoring the need for longer-term comparative and real-world studies to inform optimal treatment selection.

Abstract N°: ID-577

Topic: Atopic dermatitis/ Eczema

Modulating the Skin Microbiome in Atopic Dermatitis: A Six-Month Comparative Study of JAK Inhibitors, Dupilumab, Cyclosporine A, and Topical Corticosteroids

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Introduction
Atopic dermatitis (AD) is a chronic inflammatory skin disease characterized by epidermal barrier dysfunction, immune dysregulation, and alterations of the skin bacteriome. Overgrowth of *Staphylococcus aureus* is closely associated with disease severity and exacerbations. Although targeted systemic therapies have substantially improved AD outcomes, their differential effects on the skin bacteriome remain insufficiently characterized. This study aimed to compare the effects of targeted and conventional anti-inflammatory therapies on clinical severity and skin bacteriome composition over six months under standardized conditions.

Materials and Methods
This prospective pilot study included 60 patients with atopic dermatitis treated with Janus kinase (JAK) inhibitors, dupilumab, cyclosporine A, or topical corticosteroids (intermittently used methylprednisolone aceponate). Skin bacteriome samples were collected at baseline and after 3 and 6 months of therapy. Microbial composition was analyzed using 16S rRNA gene amplicon sequencing, and *Staphylococcus aureus* abundance was additionally quantified by quantitative PCR (qPCR). Changes in bacterial diversity and relative taxonomic abundance were evaluated and correlated with clinical disease severity and treatment modality.

Results
All treatment groups demonstrated clinical improvement within the first 3 months. Dupilumab induced an early and sustained reduction in *Staphylococcus aureus*, with near-complete depletion observed by month 3, accompanied by a significant decrease in the ratio of the genus *Staphylococcus* to the genera *Corynebacterium* and *Cutibacterium*. Treatment with JAK inhibitors was associated with clinical improvement and a later, less pronounced reduction in *S. aureus*, with a corresponding decrease in the established dysbiosis ratio observed at month 6. Analysis of the ratio at a higher taxonomic level (Firmicutes to Actinobacteria) yielded comparable results. In contrast, patients treated with cyclosporine A or topical corticosteroids showed clinical improvement without relevant or sustained changes in skin bacteriome composition. Overall bacterial alpha diversity remained unchanged across treatment groups.

Conclusions
These results indicate that anti-inflammatory therapies differ in their effects on the skin bacteriome in atopic dermatitis. Dupilumab was associated with a consistent reduction in *Staphylococcus aureus*, likely reflecting selective inhibition of IL-4 and IL-13 signaling and improvement of Th2-associated barrier dysfunction. JAK inhibitors also led to clinical improvement and a measurable reduction in *S. aureus*, although microbiome changes were less pronounced, possibly due to broader, less specific inhibition of multiple cytokines. In contrast, cyclosporine A and intermittent topical corticosteroids improved disease severity without substantial or sustained changes in bacterial composition. Overall, these findings suggest that targeting type 2 inflammation with biologic or small-molecule therapies can shift the skin bacteriome toward a healthier balance, whereas traditional anti-inflammatory treatments show limited effects. These observations are exploratory and underscore the need for larger, longitudinal studies to clarify which cytokines, pathways, and mechanisms are most important for modulating the skin microbiome in atopic dermatitis.

Abstract N°: ID-586

Topic: Atopic dermatitis/ Eczema

DIVERGENT BIOMARKER PATHWAYS: SERUM IGE AND EOSINOPHILS ARE INDEPENDENT CORRELATES OF ATOPIC DERMATITIS SEVERITY

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Introduction
Atopic dermatitis (AD) is a heterogeneous inflammatory skin disease in which serum immunoglobulin E (IgE) and eosinophil counts (AEC) are often elevated. Their relative contribution to disease severity, and whether they represent overlapping or distinct immunological pathways, remains uncertain.
Objective: To evaluate the correlation of serum IgE and AEC with EASI scores in patients with AD, and to examine whether these biomarkers are inter-related.

Materials and Methods
Thirty-eight patients with mild to moderate AD were prospectively enrolled (mean age 25.0 ± 10.0 years; range 10–52; 71.1% female). Clinical severity was graded with EASI Scoring , and serum IgE and AEC were quantified. Correlations were assessed using Spearman's rank and Pearson analysis.

Results
Of the cohort, 34.2% had mild, 23.7% moderate, and 42.1% severe AD. Mean serum IgE was 661.4 IU/mL (range: 12–10,100 IU/mL; median: 158, IQR: 83.8–328.3), showing wide inter-individual variability. Mean AEC was 344.2 cells/mm^3 (range: 20–820; median: 305). Disease severity strongly correlated with IgE (Spearman's $r = 0.88$, $p < 0.001$) and moderately with AEC ($r = 0.66$, $p < 0.001$). Serum IgE and AEC did not correlate with each other (Pearson's $r = 0.08$, $p = 0.654$), suggesting independent immunopathological drivers.

Conclusions
Both serum IgE and eosinophil counts are significant correlates of AD severity, yet they remain uncoupled from one another. This divergence highlights the multifaceted immune pathways underlying AD and underscores the value of evaluating multiple biomarkers for comprehensive disease assessment. These findings strengthen the case for biomarker-guided stratification in AD and may inform future precision-based therapeutic strategies.

Abstract N°: ID-597

Topic: Atopic dermatitis/ Eczema

The impact of chronic hand eczema on work productivity and quality of life: a cross-sectional study

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Introduction
Chronic hand eczema (CHE) is a multifactorial inflammatory cutaneous disease associated with substantial socioeconomic burden and impaired quality of life. Data on work productivity loss, particularly presenteeism and absenteeism, remain limited and may vary according to national and occupational settings. This study aimed to assess the impact of CHE on work productivity and quality of life in a cohort of Greek patients.

Materials and Methods
This cross-sectional study included employed adult patients diagnosed with CHE who attended a tertiary contact dermatitis clinic between September 2024 and October 2025. Participants completed assessments of disease severity using the Hand Eczema Severity Index (HECSI), quality of life using the Dermatology Life Quality Index (DLQI), and work productivity using the Work Productivity and Activity Impairment (WPAI) questionnaire. WPAI outcomes included absenteeism, presenteeism, overall work productivity loss, and activity impairment over the preceding seven days. Descriptive statistics were calculated, and Spearman's correlation coefficients were used to evaluate associations between WPAI scores, HECSI, and DLQI.

Results
Eighty patients completed the study (32.5% male; mean age 39.1 years). Most participants had moderate-to-severe CHE (mean HECSI 62.6), and 50% reported a very large or extremely large impact on quality of life based on DLQI. Work productivity was predominantly affected by presenteeism rather than absenteeism. Mean absenteeism rate was low (approximately 1.6%), whereas presenteeism was high, averaging 78%, resulting in an overall work productivity loss of approximately 79%. Overall work impairment showed significant positive correlations with disease severity (HECSI: $\rho = 0.58$, $p = 0.002$) and impaired quality of life (DLQI: $\rho = 0.63$, $p < 0.001$).

Conclusions
CHE has a profound impact on work productivity, mainly through high levels of presenteeism despite low absenteeism. Greater disease severity and poorer quality of life are strongly associated with increased work impairment. These findings highlight the hidden occupational burden of CHE and underscore the need for effective disease control strategies to improve both clinical outcomes and work functioning.

Abstract N°: ID-642

Topic: Atopic dermatitis/ Eczema

Real-world comparison of dupilumab and tralokinumab in moderate-to-severe atopic dermatitis: a 12-month prospective observational study

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Introduction
Biologic therapies have substantially improved the management of moderate-to-severe atopic dermatitis (AD). Dupilumab, targeting IL-4 and IL-13 signaling, and tralokinumab, a selective IL-13 inhibitor, are widely used in routine clinical practice. However, real-world comparative data between these two agents, particularly with long-term follow-up, remain limited. The aim of this study was to compare the effectiveness of dupilumab and tralokinumab over 12 months in a real-world setting.

Materials and Methods
This prospective observational study included adult patients with moderate-to-severe AD treated with either dupilumab (n=60) or tralokinumab (n=42) in routine clinical care. Only patients who completed all scheduled visits (baseline, months 3, 6, 9 and 12) were included to allow paired longitudinal assessment.
Clinical outcomes included objective SCORAD (oSCORAD), body surface area (BSA), pruritus and sleep disturbance assessed by visual analogue scales, and Investigator's Global Assessment (IGA). Treatment response was additionally evaluated using oSCORAD-50/75/90 and achievement of IGA 0/1. Descriptive and comparative statistical analyses were performed to evaluate changes over time and differences between treatment groups.

Results
Both biologics led to marked improvements across all clinical parameters over 12 months. Mean oSCORAD decreased from 45.2±15.4 at baseline to 15.0±13.6 at month 12 in the dupilumab group and from 38.6±11.7 to 15.3±9.1 in the tralokinumab group.
In the dupilumab group, the greatest improvement was observed by month 9 (12.9±12.1), followed by a slight increase at month 12 (15.0±13.6), whereas oSCORAD continued to decrease steadily in the tralokinumab group from month 9 (16.8±9.4) to month 12 (15.3±9.1). Similarly, BSA decreased from 35.2±22.3 to 4.2±7.2 by month 9 and increased to 8.1±13.6 at month 12 with dupilumab, while tralokinumab showed a continuous reduction from 9.4±12.1 at month 9 to 5.6±7.1 at month 12. Pruritus improved rapidly in the dupilumab group from 6.2±2.4 to 1.9±2.2 by month 9, with a slight increase to 2.4±2.4 at month 12, whereas pruritus scores in the tralokinumab group gradually decreased from 5.7±2.6 to 3.4±2.5 over the study period.

Conclusions
In this prospective real-world study, both dupilumab and tralokinumab demonstrated substantial clinical effectiveness in moderate-to-severe AD over 12 months. Dupilumab was associated with a more rapid initial improvement, whereas a slight worsening or plateau was observed in several parameters after month 9. In contrast, tralokinumab showed a slower but continuously improving response profile throughout the observation period. This distinct response kinetics

may be clinically relevant when selecting individualized biologic treatment strategies in AD.

Abstract N°: ID-649

Topic: Atopic dermatitis/ Eczema

A study of the predictors of disease duration of discoid eczema

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Introduction
The clinical course of discoid eczema is highly variable, ranging from self-limited episodes to persistent, treatment-resistant disease. Prognostic data are limited, yet understanding predictors of disease duration is essential for patient counselling and management. This study aimed to identify clinical factors associated with disease course duration in patients with discoid eczema.

Materials and Methods
A retrospective review was conducted using a private dermatology practice database of patients diagnosed with discoid (annular) eczema by a consultant dermatologist, with or without histopathological confirmation. Data collected included patient demographics, clinical features, investigations, treatments, and outcomes. The primary endpoint was time to clinical resolution, categorised as ≤6 months or >6 months. Ethics approval was sought and waived by the local human research ethics committee. Statistical analysis was performed using chi-square testing and logistic regression, with a significance threshold of $p < 0.05$.

Results
Of 472 eligible cases, 25 (5.3%) were excluded due to incomplete data. The mean patient age was 52 years, and 259 patients (55%) were female. Patients aged over 50 years were more likely to be male ($p < 0.01$). A shorter disease course was significantly associated with documentation of a specific disease trigger ($p < 0.01$) and treatment with oral prednisone ($p = 0.016$). More extensive body surface involvement was associated with a prolonged disease course ($p = 0.012$). Age, sex, employment status, atopy, histological diagnosis, and oral antibiotic use were not associated with prognosis. On multivariate analysis, the presence of a specific trigger ($p = 0.032$) and extensive involvement ($p = 0.041$) remained independent predictors of disease duration.

Conclusions
In this large retrospective cohort, approximately half of patients with discoid eczema experienced disease persistence beyond six months. Extensive skin involvement predicted a protracted disease course, whereas identification of a specific trigger and use of oral prednisone were associated with shorter disease duration. These findings highlight the heterogeneity of discoid eczema and identify clinically relevant predictors that may assist in prognostication and management. Prospective studies are warranted to validate these associations.

Abstract N°: ID-651

Topic: Atopic dermatitis/ Eczema

Lifestyle Factors and Metabolic Comorbidities of Severe Adult Atopic Dermatitis: A Nationwide Population-based Study

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Introduction
Since 2021, a government-funded co-payment reduction programme for severe atopic dermatitis (AD) has been implemented in South Korea, introducing new diagnostic codes that classify disease severity. Previous population-based studies have frequently relied on prescribed medications as surrogate markers of AD severity, leading to inherent inaccuracies. These severity-specific codes enable more precise stratification of AD severity in large population-based studies. This study aimed to investigate the associations of AD severity with lifestyle factors and metabolic comorbidities.

Materials and Methods
National Health Insurance Service claims data and national health examination data from 2021 to 2023 were analysed. Adults with a primary diagnosis of AD were identified and classified into severity groups based on diagnostic codes. Controls were adults with no lifetime diagnosis of AD or eczema and no dermatology visits during the study period. Metabolic comorbidities were defined as ≥3 outpatient visits or ≥1 hospitalisation for the relevant condition, or abnormal blood pressure, fasting blood glucose, or total cholesterol levels identified during health examinations. Associations of AD severity with lifestyle factors and metabolic comorbidities were evaluated using multivariable logistic regression analyses.

Results
A total of 2,786,742 patients were analysed, comprising 1,197,538 patients with AD and 1,589,204 controls. Among 9,727 patients with severe AD, 60.1% were male and 62.5% were aged 30-49 years. Across all severity groups, patients with AD were less likely to consume alcohol ≥2 times per week or to be current smokers compared with controls. Abdominal obesity was significantly associated only with severe AD (odds ratio [OR] 1.09, 95% confidence interval [CI] 1.01-1.17). Mild (OR 0.76, 95% CI 0.74-0.78) and moderate AD (OR 0.75, 95% CI 0.69-0.84) were associated with a lower likelihood of obesity, whereas no significant associatio was observed for severe AD (OR 1.08, 95% CI 0.92-1.26). Mild and moderate AD were associated with lower odds of hypertension (mild: OR 0.81, 95% CI 0.79-0.83; moderate: OR 0.83, 95% CI 0.76-0.90) and diabetes (mild: OR 0.87, 95% CI 0.85-0.88; moderate: OR 0.80, 95% CI 0.76-0.85), whereas no significant associations were observed for severe AD (hypertension: OR 1.08, 95% CI 0.92-1.26; diabetes: OR 0.91, 95% CI 0.81-1.01). Severe AD was associated with an increased risk of hypercholesterolemia (OR 1.31, 95% CI 1.22-1.40).

Conclusions
Although patients with severe AD appear to engage in more health-conscious lifestyle behaviours, they remain at

increased risk of abdominal obesity and hypercholesterolaemia. These findings underscore the importance of metabolic monitoring and targeted counselling in patients with severe AD.

Abstract N°: ID-654

Topic: Atopic dermatitis/ Eczema

Kwashiorkor misdiagnosed as atopic dermatitis

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Introduction
Severe atopic dermatitis (AD) in children may mimic or coexist with systemic conditions that significantly affect clinical presentation and therapeutic decisions, including eligibility for biological treatment.

Materials and Methods
We report the case of a 4-year-old boy referred from a district Pediatric Department for qualification for dupilumab therapy due to severe atopic dermatitis. He was born by cesarean section because of oligohydramnios, with a normal birth weight and an uncomplicated perinatal period. Motor development was normal; autism spectrum disorder was diagnosed at the age of 2 years. Since infancy, cow's milk protein allergy had been suspected, and a dairy-free diet was introduced.
Until the age of 2 years, growth was normal; subsequently, a significant decline in weight and height percentiles occurred (current body weight <3rd percentile, height 3rd–10th percentile). Due to autism, the child developed extreme food selectivity, consuming only one type of fruit purée with cereal, minimal fluids, and no solid foods for approximately one year. He received multiple dietary supplements under dietitian supervision.
The first AD lesions appeared after antibiotic treatment for a urinary tract infection (Escherichia coli) at the age of 3 years. The patient was hospitalized for AD exacerbation with severe pruritus and edema of the feet and ankles. Laboratory tests revealed hypoalbuminemia, low total protein levels, and elevated GGTP, while allergy testing was negative. Clinical improvement was achieved after systemic corticosteroids, antibiotics, and antihistamines, and the patient was referred to our Dermatology Department.
On admission, the child was agitated, nonverbal, and uncooperative, with severe pruritus. Dermatological examination revealed pale skin with decreased elasticity, diffuse erythematous–erosive lesions, brittle depigmented hair, and wrist joint hypermobility. Topical therapy, phototherapy (TL-01), and protein supplementation were administered, resulting in only slight improvement in the skin condition. Due to an unclear clinical presentation, the patient was not qualified for biological therapy and was referred for further diagnostic evaluation.
Further diagnostics and outcome:
In the Pediatric Gastroenterology Unit, investigations demonstrated severe hypoproteinemia and hypoalbuminemia, iron metabolism disturbances, elevated liver enzymes, bile acids, and CPK, as well as low amino acid concentrations. Imaging revealed hepatomegaly with hepatic steatosis. Endoscopy showed a cardia polyp, esophageal erosion, and gastritis; celiac disease was excluded. The final diagnosis was severe protein–energy malnutrition (kwashiorkor). Due to growth arrest and advanced liver involvement, nasogastric tube feeding was initiated along with non-coercive feeding therapy aimed at expanding food tolerance.

Results

The skin lesions were not caused by atopic dermatitis but were a manifestation of kwashiorkor.

Conclusions
This case underscores the importance of comprehensive nutritional and systemic evaluation in children with suspected severe atopic dermatitis, particularly in patients with neurodevelopmental disorders and restrictive eating behaviors,

before initiating biological therapy.

Abstract N°: ID-661

Topic: Atopic dermatitis/ Eczema

Atopic dermatitis in adults: the role of epidermal barrier dysfunction and skin microbiome imbalance.

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Introduction

Atopic dermatitis (AD) is a chronic inflammatory skin disorder that frequently affects adults, either as a continuation of childhood disease or with onset in later life. Adult AD is increasingly recognized as a heterogeneous condition associated with substantial physical, psychological, and social burden. Recent advances in dermatological and immunological research have shifted the understanding of adult AD toward a multifactorial disease driven by long-term interactions between epidermal barrier impairment, immune dysregulation, and alterations in the skin microbiome.

Materials and Methods

A structured review of peer-reviewed publications focusing on adult atopic dermatitis was performed. The analysis included studies addressing epidermal differentiation, lipid composition of the stratum corneum, transepidermal water loss, immune signaling pathways, microbial diversity, and emerging therapeutic concepts. Data were synthesized to identify mechanisms relevant to adult disease expression and long-term disease control.

Results

Available evidence indicates that impairment of the epidermal barrier represents a central pathogenic factor in adult AD. Structural and functional abnormalities of the stratum corneum increase transepidermal water loss and facilitate penetration of allergens, irritants, and microbial products, thereby promoting sustained immune activation. In parallel, adult AD is consistently associated with significant alterations in the skin microbiome, characterized by reduced microbial diversity and predominance of pro-inflammatory microorganisms, particularly Staphylococcus aureus. Microbial dysbiosis further aggravates inflammation through the release of toxins and enzymes that disrupt keratinocyte function and amplify immune responses. Recent studies suggest that epigenetic regulation, cumulative environmental exposure, and age-related skin changes may contribute to barrier vulnerability and microbiome instability in adult patients.

Conclusions

In conclusion, adult atopic dermatitis is best understood as a complex disorder arising from the interconnected dysfunction of the epidermal barrier, immune system, and skin microbiome. Recognition of these interdependent mechanisms supports the need for integrated management strategies that combine anti-inflammatory treatment with barrier restoration and support of microbial homeostasis to improve long-term disease outcomes in adults.

Abstract N°: ID-669

Topic: Atopic dermatitis/ Eczema

Mycosis Fungoides and atopic dermatitis: What's the link?

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Introduction
The risk of cutaneous lymphoma in patients with severe atopic dermatitis (AD) is still debated.

Materials and Methods
Herein, we report the case of folliculotropic mycosis fungoides (F-MF) in a patient with a long history of severe atopic dermatitis.

Results
A 47-year-old man presented to our dermatology department with generalized infiltrated nodules and plaques evolving for 7 months. He had been followed for 8 years for severe atopic dermatitis, initially diagnosed based on the Hanifin and Rajka criteria. His atopic dermatitis had been partially controlled for several years without the need for systemic therapy. In the current episode, he presents with a new symptomatology. Physical examination revealed generalized infiltrated plaques and erosive nodules associated with alopecic patches on the face, a leonine facial appearance associated with axillary and inguinal lymphadenopathy. The laboratory results revealed peripheral blood eosinophilia ($2.6\ 10^9$ /L) and elevated serum immunoglobulin E level (11700 IU/mL). Biopsy and immunohistochemical analysis confirmed the diagnosis of folliculotropic mycosis fungoides (FMF) with follicular mucinosis and neoplastic infiltrate strongly positive for CD3, CD4 and negative for CD8 with rare positive cells (10%) for CD30. After staging assessment, the patient was diagnosed with FMF stage T3N1M0B0, clinical stage IIB and was treated with chemotherapy (CHOEP). Atopic dermatitis has been significantly associated with an increased risk of cutaneous lymphoma, supporting the hypothesis that MF may arise on chronic AD lesions rather than merely mimicking them. Factors common to both diseases include the crucial role of CD4+ T cells, the background of cytokines, the potential role of anti-immunoglobulin E antibodies and bacteria superantigens. Several reports describe MF emerging in patients with severe, persistent AD, including cases in which disease progression became evident during anti–Th2 therapy such as tralokinumab or dupilumab. Immunopathologic studies have shown that AD and MF share a distinct Th2-skewed T-cell subset with autonomous proliferative potential.

Conclusions
Overall, the association between severe AD and MF likely reflects chronic lymphocyte stimulation leading to the expansion of a dominant clone, potentially aggravated by prolonged immunosuppressive therapy in some patients.

Abstract N°: ID-682

Topic: Atopic dermatitis/ Eczema

A Novel Simplified Assessment Scale for Atopic Dermatitis: Reliability, Validity, and Application in Treat-to-Target Therapy.

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Introduction

Existing clinical scales for atopic dermatitis (AD), such as SCORAD and EASI, are complex and time-consuming, and are not routinely utilized in frontline clinical practice, particularly in county-level primary healthcare centers. In these settings, clinicians often rely on subjective judgment for patient evaluation, which may result in inaccurate assessment of treatment needs and delay the initiation of systemic therapy for patients with moderate-to-severe (M2S) AD. Therefore, there is a clinical need for a simplified, standardized tool. The Simplified Assessment Scale has been developed, with the item set and content finalized (PADDLE Project[1]). This study aims to (1) derive scoring weights, (2) validate psychometric properties, and (3) develop a Treat-to-Target (T2T) tool for Chinese patients with AD.

Materials and Methods

Patients with AD were recruited from 15 representative hospitals across China using convenience sampling. Total scores were calculated using three weighting strategies: pairwise-priority ranking (stand-alone and combined) and the Analytic Hierarchy Process (AHP). Internal consistency was assessed with Cronbach's α; 2-week test–retest reliability with Intraclass Correlation Coefficients (ICC); and criterion validity with Spearman's ρ versus SCORAD. T2T performance of the Simplified Assessment Scale in M2S AD was benchmarked against SCORAD at baseline (T0), week 4 (T1), and week 8 (T2) using receiver operating characteristic (ROC) curve area under the curve (AUC), change in total score (post – baseline), and absolute score. As the visit at week 2 assesses pruritus only, the week 12 and subsequent visits mirror the week 8 assessment; thus, three time-points were prespecified: week 0, week 4, and week 8.

Results

Among 3 weighting methods evaluated, AHP was selected to compute the total score of the Simplified Assessment Scale; each item is rated 0–3, yielding a total of 0–15. For severity stratification, SCORAD thresholds are 0–24, 25–50, and 50 for mild, moderate, and severe; the corresponding cut-offs for the Simplified Assessment Scale are 0–5, 6–10, and 11–15. At baseline (T0), 230 patients with AD were enrolled from 15 hospitals (145 males, 63.0%; age 18–65). Cronbach's α was 0.839; test–retest ICC (n=104) 0.882; and Spearman's ρ versus SCORAD 0.774. In T2T analyses, AUCs at weeks 4 and 8 were 0.776 and 0.868, respectively; The Simplified Assessment Scale is recommended for use within the T2T framework, with a decrease in score of ≥ 3 points at week 4 and an absolute score of ≤ 5 points at week 8.

Conclusions

The Simplified Assessment Scale demonstrates good reliability and validity in Chinese AD patients. Its application within the T2T framework shows clear clinical utility and is expected to enhance the practicality of clinical AD evaluation.

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Abstract N°: ID-691

Topic: Atopic dermatitis/ Eczema

A randomized assessor-blinded triple arm pilot study to compare the efficacy of mometasone furoate 0.1% ointment versus crisaborole 2% ointment versus tofacitinib 2% ointment twice daily in patients with mild to moderate atopic dermatitis.

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Introduction
Atopic dermatitis (AD) is a chronic relapsing inflammatory dermatosis with significant therapeutic challenges. While topical corticosteroids remain first-line therapy, emerging nonsteroidal agents like crisaborole (PDE4 inhibitor) and tofacitinib (JAK inhibitor) offer steroid-sparing alternatives.

Materials and Methods
Objective:
To compare the efficacy and safety of mometasone furoate 0.1% ointment, crisaborole 2% ointment, and tofacitinib 2% ointment in mild-to-moderate AD.

Methods:
A randomized, assessor-blinded, triple-arm pilot study was conducted on 45 patients (15 per group) over 12 weeks. Patients received one of the three topical treatments twice daily along with emollients and oral antihistamines. Primary outcome was percentage reduction in Eczema Area and Severity Index (EASI) at 12 weeks; secondary outcomes included changes in pruritus (NRS), body surface area (BSA) involvement, satisfaction, and adverse events.

Results
EASI reduction at the end of 3 months was 84%, 55%, and 92% in mometasone, crisaborole, and tofacitinib group, respectively but the difference was not statistically significant ($p > 0.05$). Within-group statistically significant improvement was noted in all the groups; with $p < 0.01$ for mometasone and tofacitinib and $p < 0.05$ for crisaborole. Pruritus improvement and patient satisfaction were greatest with tofacitinib and mometasone. Adverse events were mild and transient, including hypopigmentation and application-site burning.

Conclusions
Topical tofacitinib 2% and mometasone 0.1% are highly effective and well-tolerated for mild-to-moderate AD, whereas crisaborole shows moderate benefit. Tofacitinib and crisaborole offers a promising steroid-sparing therapeutic alternative.

Abstract N°: ID-697

Topic: Atopic dermatitis/ Eczema

Lebrikizumab provides clinically meaningful response in face and hands in adults and adolescents with moderate-to-severe atopic dermatitis: ADhope1 study

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Introduction

Most patients with atopic dermatitis (AD) have face and/or hands involvement, posing a major psychological burden, including stigmatisation and impact on quality of life due to the visibility.[1] There is a need to generate data with new endpoints specifically measuring efficacy in these impactful and clinically meaningful areas. Lebrikizumab (LEB) is a monoclonal antibody that selectively targets the cytokine interleukin-13 with high affinity, blocking its downstream signalling; LEB is approved for moderate-to-severe AD and has previously demonstrated efficacy and a favourable safety profile.[2–4] Here, we report LEB efficacy in face and hands using data from the ADhope1 study (NCT05990725).

Materials and Methods

ADhope1 was a 24-Week(W), interventional, single-arm, open-label study in adults and adolescents (≥12 to <18 years, ≥40 kg) with an Eczema Area and Severity Index (EASI) ≥12, Investigator's Global Assessment (IGA) ≥3, ≥10% body surface area of uncontrolled AD and who were not adequately controlled with topical therapies. Prior dupilumab use was allowed. Patients received 500 mg dose at baseline and W2, then 250 mg every 2 weeks (Q2W) until W16, followed by 250 mg Q4W until W24, regardless of response. Topical corticosteroid use was allowed. Response in the face was defined as Face IGA 0/1 with ≥2-point improvement from baseline, in patients with Face IGA ≥2 at baseline; Face IGA ≥1-point improvement from baseline in the same population is also reported. Percent change from baseline in modified Total Lesion Symptom Score (mTLSS) assessed response in hands. 13 patients from one site had to be excluded due to quality issues and data are reported in the modified Full Analysis Set (mFAS). Treatment discontinuation due to lack of efficacy was considered as non-response, while treatment discontinuations due to any other reason, as well as any other missing data, were handled through multiple imputation. Data collected after use of prohibited medication were included in the analysis.

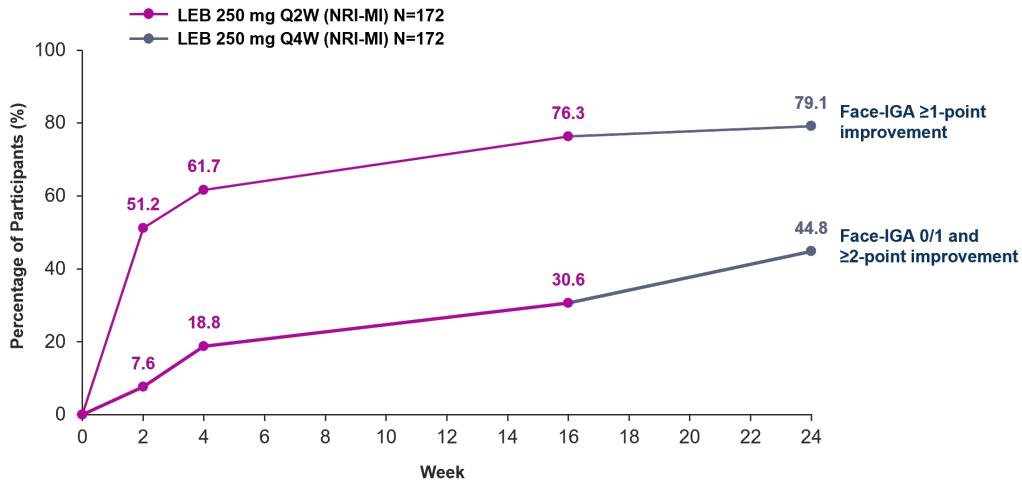
Results

A total of 260 patients were enrolled. Efficacy was assessed in 247 patients from the mFAS. At baseline, the mean age (standard deviation [SD]) of patients was 32.8 (14.1) years, 61.1% were male and 8.5% had previous dupilumab exposure. Mean (SD) EASI score was 23.1 (9.0), mean (SD) Pruritus Numerical Rating Scale was 6.7 (1.6) and IGA scores of 3 (moderate) and 4 (severe) were reported in 74.1% and 25.9% of patients, respectively. 69.6% of patients had Face IGA

≥2 at baseline (15.8% Face IGA=2, mild; 42.5% Face IGA=3, moderate; 11.3% Face IGA=4, severe) and 64.0% had AD in their hands (mean [SD] baseline mTLSS was 9.7 [4.1]).

79.1% of the patients with Face IGA ≥2 at baseline achieved Face IGA ≥1-point improvement at W24; 61.7% achieved this endpoint by W4 and 76.3% achieved it at W16 (**Figure 1**). 44.8% of the patients with Face IGA ≥2 at baseline, achieved Face IGA 0/1 with ≥2-point improvement at W24; 18.8% achieved this endpoint by W4 and 30.6% achieved it at W16. The response in the face correlated well with the overall response in the body, with 11.0%, 32.3% and 41.3% of patients reporting IGA 0/1 at W4, W16 and W24, respectively. For the patients with AD in the hands at baseline (n=158; 64.0%), the mean percent change from baseline in mTLSS progressively increased over time, from −37.9% at W4, to −62.1% at W16 and −66.3% at W24.

Figure 1. Face IGA 0/1 with ≥2-point improvement and Face IGA ≥1-point improvement through W24 in patients with Face IGA ≥2 at baseline, mFAS, NRI-MI



Restricted to patients with Face IGA ≥2 at baseline. Treatment discontinuation due to lack of efficacy was considered as non-response, while treatment discontinuations due to any other reason, as well as any other missing data, were handled through multiple imputation. Data collected after use of prohibited medication was included in the analysis. LEB: lebrikizumab; mFAS: modified full analysis set; MI: multiple imputation; NRI: non-responder imputation; QXW: every X weeks; W: Week.

Conclusions

LEB provided improvements in facial AD in the majority of patients with a rapid onset of action. Almost half of the population achieved clear or almost clear skin on the face within 24 weeks of treatment. The response in the face was aligned with the response seen in the rest of the body. Patients with hand AD achieved meaningful overall improvement. These findings indicate that lebrikizumab is an effective treatment option for patients with moderate-to-severe AD, including those with facial and hand involvement.

Abstract N°: ID-714

Topic: Atopic dermatitis/ Eczema

Barrier-Restorative Efficacy of a Biomimetic Ceramide-Based Lipid Blend in In Vitro and Ex Vivo Models of Epidermal Lipid Disruption

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Introduction

The epidermal lipid matrix plays a central role in maintaining cutaneous barrier integrity by regulating transepidermal water loss and providing frontline defense against environmental and chemical stressors. Disruptions in ceramide composition and lipid organization-whether driven by intrinsic aging, extrinsic environmental exposure, or surfactant-induced barrier injury-are recognized contributors to barrier dysfunction and the pathogenesis of inflammatory dermatoses. Contemporary dermocosmetic skincare strategies increasingly incorporate biomimetic lipid technologies aimed at restoring the physiological lipid architecture of the stratum corneum. This study investigates the barrier-protective and restorative efficacy of a novel ceramide-based biomimetic lipid blend, formulated with ceramide NP and ceramide EOP in a skin-relevant 20:1 ratio alongside cholesterol. Using complementary in vitro and ex vivo skin models simulating stressed and barrier-impaired conditions, we evaluated its potential to normalize barrier function and support stratum corneum repair.

Materials and Methods

Barrier efficacy was assessed using reconstructed human epidermal models and an ex vivo porcine skin barrier-recovery model. In vitro, reconstructed epidermal tissues were exposed to sodium dodecyl sulfate (SDS) to induce controlled lipid disruption and treated topically with 0.2%, 0.5%, or 1.0% of the biomimetic ceramide-based lipid blend. Barrier-related endpoints included metabolic activity (MTT), membrane integrity (LDH release), IL-1α gene and protein expression (qRT-PCR/ELISA), and expression of a broad panel of genes involved in ceramide, cholesterol, and fatty-acid synthesis, as well as markers of epidermal cohesion and barrier integrity.

In parallel, ex vivo porcine skin was delipidized using chloroform/methanol to model severe stratum corneum lipid depletion. Barrier recovery was evaluated following topical application of 2% or 5% lipid blend by measuring permeation of the lipophilic model compound indomethacin.

Results

In vitro SDS challenge resulted in substantial reductions in metabolic activity, increased LDH release, and marked induction of lipid-synthesis and inflammatory genes. Treatment with the biomimetic lipid blend significantly restored metabolic activity and reduced membrane damage across all tested concentrations, with efficacy evident even at 0.2%. SDS-induced upregulation of enzymes involved in ceramide, cholesterol, and fatty-acid synthesis was attenuated following treatment, suggesting protection against excessive stress-driven lipid dysregulation. Expression of markers associated with epidermal barrier integrity shifted toward baseline values, consistent with restoration of epidermal homeostasis. Both IL-1α gene and protein levels were reduced, indicating mitigation of surfactant-induced inflammatory responses.

In the ex vivo porcine model, lipid depletion increased indomethacin permeation more than fortyfold relative to intact

skin. Application of the ceramide-based lipid blend reduced indomethacin flux by 43% at 2% and 66% at 5%, demonstrating substantial barrier restoration. Combined ceramide NP and EOP provided greater efficacy at lower concentrations than either ceramide alone.

Conclusions

Across in vitro and ex vivo models, the biomimetic ceramide-based lipid blend effectively protected and restored epidermal barrier function under lipid-depleting stress conditions. Its physiologically based ceramide composition supported both structural reconstruction of the stratum corneum and biological normalization of barrier-related and inflammatory pathways. These findings underscore the relevance of advanced biomimetic ceramide systems as innovative dermatologic skincare ingredients capable of maintaining and restoring barrier integrity, particularly in sensitive or barrier-compromised skin.

Abstract N°: ID-717

Topic: Atopic dermatitis/ Eczema

Topical targeted therapy of dysbiosis in Atopic Dermatitis

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Introduction

Atopic dermatitis (AD) is the most common chronic inflammatory skin disease (Boothe et a., 2017) resulting from skin barrier dysfunction and skin microbiome dysbiosis (Byrd et al., 2017). This imbalance is characterized by an overgrowth of *Staphylococcus aureus*, a key contributor to the pathogenesis of AD (Koh et al., 2022). *S. aureus* disrupts skin microbial homeostasis by producing various virulence factors, including α-toxin and δ-toxin, which degrade AMPs secreted by commensal bacteria, weakening the skin's innate defenses (Belkaid et al., 2016). The resulting microbial dysbiosis perpetuates inflammation, compromises the skin barrier, and promotes disease progression. Since, approximately 70% of AD cases are associated with extensive colonisation of *S. aureus*, targeted antimicrobial therapy that can eliminate this pathogen without disrupting the commensal microflora, would be highly beneficial for AD patients.

In our project we are investigating AuresineR (AurR) enzybiotic, a specific antistaphylococcal agent, developed based on bacteriolytic enzyme, which preferentially eliminates *S. aureus*, and is safe for both, the natural microflora and eucaryotic cells.
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Patent PL243304B1, WIPO (PCT) WO2023282776A1

Materials and Methods

Auresine R enzybiotic antibacterial activity has been tested *in vitro* using bacterial cell survival assay and biofilm eradication assays. Its lack of toxicity, both cytotoxicity and genotoxicity was examined using MTT and AMES tests, respectively). *Ex vivo* studies on efficiency fo AurR were performed by exposure of AD patients' skin microbiota to the enzybiotic. In order to confirm AurR *in vivo* efficacy, the AD mice model was used to test its antimicrobial activity.

Results

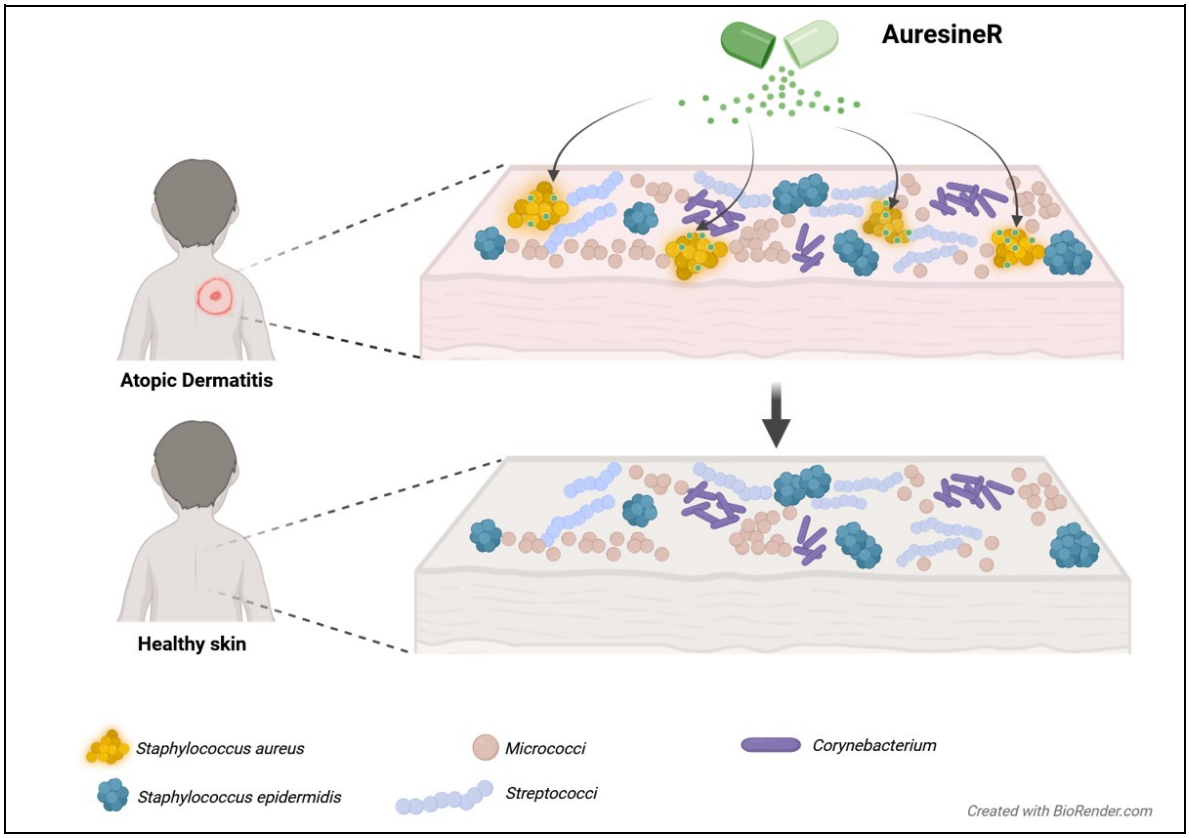
The high selectivity of AurR has been demonstrated *in vitro* using variaus reference strains and clinical isolates from AD patients. The enzybiotic preferentially eliminates pathogenic staphylococci, but not natural skin microflora. The prototype of cream formulation has been developed to enable AurR application on the skin and long term storage. Skin swabs from healthy volountiers and AD patients have been collected to assess microbiome susceptibility to AurR in *ex vivo* assays. Isolated bacterial strains were identified and their susceptibility to AurR was tested. Overall microbiota content before and after AurR exposure was confirmed by 16S rRNA sequencing. Safety of Auresine R enzybiotic was proven in MTT cytotoxicity assays. The antistaphylococcal efficacy was confirmed *in vivo* using a mice model of *S. aureus*

skin colonisation.

Conclusions

The proven efficacy of AurR in restoring the normal skin microbiota through selective elimination of the target pathogen will enable development of new therapies for Atopic Dermatitis, but also for other skin diseases characterized by extensive *S. aureus* colonization (Fig. 1). Such antimicrobial treatment might be combined with anti-inflammatory therapies, e.g., application of antibodies targeting interleukins, or being an additional active component of daily emolients or topical anti-inflammatory creams. Moreover, as a non-antibiotic agent AurR will not contribute to the further rise of global antimicrobial resistance.

The research was supported by: Medical Research Agency grant: KPO, KPOD.07.07-IW.07-0030/24.



Abstract N°: ID-764

Topic: Atopic dermatitis/ Eczema

Observational Study on the Efficacy of Ceramide-Based Moisturizing Cream for Dry to Very Dry Atopic Skin: Insights from the Egyptian Cohort

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Introduction
Atopic dermatitis (AD) is a chronic inflammatory skin condition characterized by dryness and skin irritation. It has a major negative influence on patients' quality of life. One of the primary objectives of managing AD is to repair the skin barrier. Hence, using moisturizers containing skin-identical ceramides (Ceramides AP, EOP, and NP) is important, as they enhance hydration, restore the barrier's integrity, and reduce symptoms. The objective of this study was to evaluate the practical efficacy, tolerability, and patient experience of Ceramide-Based Moisturizing Cream in patients with dry to very dry atopic skin in an Egyptian cohort.

Materials and Methods
In this observational Prospective study, 138 people with mild to severe atopic dermatitis used a moisturizing cream based on skin-identical ceramides twice a day for 28 days. The Physician Global Assessment (PGA), the degree of skin involvement, and assessments of dryness and erythema were used for clinical evaluations at baseline and on Day 28. Changes in quality of life, satisfaction, cosmetic acceptability, treatment tolerance, and sensory complaints, including pain, tingling, burning, and itching, were among the outcomes that patients reported.

Results
A total of 134 patients completed the study (mean age: 32.4 ± 13.8 years), of whom 76.9% were female. At baseline, 62% of our patients had active AD lesions. All physician-rated outcomes showed significant improvements after 28 days of treatment. The percentage of patients with moderate and severe AD fell from 60.6% to 27.2% and 16.1% to 1.5%, respectively. The proportion of patients with no evident disease increased from 0.7% to 8.8%. The proportion of patients with <10% affected body surface area increased from 19.1% to 61.0% ($P < 0.001$). With the removal of severe erythema ($P < 0.001$), mild or no skin dryness increased from 17.5% to 92.6% ($P = 0.01$), mild desquamation from 29.2% to 66.2% ($P = 0.027$), and mild erythema from 25.5% to 66.9%. "No itching" increased from 1.5% to 26.7%, "no burning" from 2.9% to 42.6%, "no pain" from 8.1% to 33.3%, and "no tingling" from 9.6% to 38.5% (all $P < 0.001$). Emotional, social, occupational, and physical quality-of-life assessments all showed significant improvements, with reports of high stress falling from 59.7% to 5.3% and social interference from 53.3% to 3.1%. No major adverse effects were reported, and 75.0% of patients and 77.9% of dermatologists rated treatment tolerance as “excellent” with high cosmetic acceptability.

Conclusions

Adults with atopic dermatitis, who used skin-identical ceramides (Ceramides AP, NP, and EOP) twice daily for 28 days, showed significant clinical improvement and improved quality of life. Its application as a successful adjuvant in standard AD management is supported by its good tolerability and high patient satisfaction. More controlled trials are required to validate these results.

Abstract N°: ID-766

Topic: Atopic dermatitis/ Eczema

Early-Onset Severe Atopic Dermatitis With Hyper-IgE Features: A Challenging Pediatric Case

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Introduction

Early-onset severe atopic dermatitis represents a heterogeneous clinical spectrum, in which underlying immune dysregulation may complicate diagnosis and management. However, not all cases follow a straightforward clinical course, and in selected patients—particularly in the context of underlying genetic or immunologic abnormalities—standard therapeutic approaches, including biologic agents, may prove insufficient, highlighting the need for individualized evaluation and management.

Materials and Methods

We report the case of a 4-year-old girl with very early-onset, severe atopic dermatitis, evolving from infancy with a prolonged and difficult disease course. Cutaneous manifestations first appeared at the age of 8 months and progressed to a chronic, relapsing condition with extensive skin involvement and limited response to conventional topical therapies. From early childhood, the disease was dominated by persistent pruritus, leading to significant sleep disturbance and early impairment of quality of life.

During the first years of life, the patient developed multiple food allergies, confirmed by specific IgE testing, together with persistent immunoallergic abnormalities, including marked eosinophilia and very high total IgE levels, several-fold above the normal range. The disease course was complicated by recurrent cutaneous infections, including impetiginized eczema, nail fold infections, as well as a history of MRSA sepsis with cutaneous origin, complicated by hematogenous dissemination. Episodes of intestinal parasitosis were documented and treated during early childhood.

Results

The overall clinical picture prompted repeated consideration of an underlying hyper-IgE syndrome. However, the absence of recurrent lower respiratory tract infections, pneumonias, skeletal abnormalities, or characteristic facies, together with the patient's young age, did not allow confirmation of this diagnosis, and genetic testing was not available. The presentation therefore remained situated between primary immunodeficiency and a severe atopic dermatitis phenotype with hyper-IgE features.

At the time of treatment escalation, the disease burden was high, with severe, continuous pruritus, causing night-time awakenings lasting 1–2 hours every night and marked impact on daily functioning and family life. Laboratory evaluation at that time showed markedly elevated total IgE levels and eosinophil counts more than double the upper limit of normal, consistent with ongoing type 2 immune activation.

Despite optimized topical therapy and systemic antihistamines, disease control remained insufficient, and dupilumab was initiated. In the months following treatment initiation, cutaneous inflammation gradually decreased, with improvement in objective disease severity and quality-of-life measures and total IgE levels showed a clear downward trend, supporting a systemic immunologic response to treatment. In contrast, eosinophilia only partially

decreased over time. Notably, persistent hypereosinophilia had been present throughout childhood despite multiple antiparasitic courses, including mebendazole and metronidazole, arguing against a purely parasitic explanation. No clinical signs of hypereosinophilic organ involvement were observed.

Although the overall cutaneous disease improved under biologic therapy, pruritus persisted, remaining clinically relevant and continuing to affect sleep and daily comfort.

Conclusions

This case describes a severe early-onset atopic dermatitis phenotype, associated with hyper-IgE features, recurrent infections, persistent eosinophilia, and discordant clinical and immunologic responses to targeted therapy. Such presentations raise questions regarding disease heterogeneity in young children and whether patients at this extreme end of the spectrum may require adapted monitoring strategies and optimized, symptom-focused treatment approaches beyond standard severity-based management.

Abstract N°: ID-802

Topic: Atopic dermatitis/ Eczema

Antimicrobial Peptides as Biomarkers for Predicting Treatment Response in Moderate to Severe Atopic Dermatitis: A Prospective Cohort Study

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Introduction
Identifying biomarkers in atopic dermatitis (AD) is crucial for advancing personalized medicine. Antimicrobial peptides (AMPs) represent first line of defense against pathogens in the skin, and both innate and adaptive immune system influences their expression in the host. This study evaluates whether certain change in AMP expressions can be used as a predictor of therapeutic response in patients with moderate to severe AD.

To assess the potential of dermcidin, human β-defensin-2 (HBD-2), and human β-defensin-3 (HBD-3) obtained non-invasively from tape strips as prognostic biomarkers for treatment response in AD.

Materials and Methods
Tape strips were collected from lesional and non-lesional skin at baseline and after 16 weeks of treatment in patients with moderate to severe AD receiving targeted treatment to IL-4-receptor antagonist (dupilumab), IL-13 inhibition (tralokinumab) and JAK inhibitor upadacitinib. For additional comparison, samples were obtained also from healthy controls. Levels of dermcidin, HBD-2 and HBD-3 were quantified using ELISA. Clinical scores (SCORAD, EASI, POEM, RECAP) were recorded at both time points and correlated with AMP concentrations. Paired t-tests, Pearsons or Spearmans correlation and binominal logistic regression were used for statistical analysis. A p-value <0.05 was considered statistically significant. Treatment response is defined as EASI-75 (≥75% improvement of baseline EASI score).

Results
A total of 25 AD patients and 18 healthy controls were included in the prospective cohort study, with 48.0% and 61.1% female, 52.0% and 39.9% male participants, respectively. The mean age was 39.4 in AD patients and 41.1 years in healthy controls. After 16 weeks, all clinical scores significantly improved in AD patients. AMP levels were significantly higher in lesional versus non-lesional skin and elevated in AD patients compared to healthy controls. 16 weeks of targeted treatment with dupilumab), Tralokinumab or upadacitinib led to a significant reduction in HBD-2 and dermcidin levels, with dermcidin reaching levels comparable to healthy controls, while HBD-3 remained unchanged. No consistent correlation was observed between these AMP concentrations and clinical scores. AMP levels were not significantly associated with therapy response (EASI-75) in binomial logistic regression analyses.

Conclusions
These results indicate that tape strip-derived dermcidin, HBD-2, and HBD-3 may be useful for monitoring disease progression therapeutic response. However, they do not reliably correlate with objective or subjective disease activity and did not demonstrate prognostic value for predicting treatment response in moderate to severe AD.

Abstract N°: ID-803

Topic: Atopic dermatitis/ Eczema

Efficacy of Different types of Moisturizers in Atopic dermatitis across the severity spectrum

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Introduction
Atopic dermatitis (AD) is a chronic, relapsing inflammatory skin disorder often associated with elevated serum IgE levels, eosinophilia, and impaired skin barrier function. Optimizing moisturizer therapy is central to management, yet patient perception of efficacy may differ from objective outcomes.
Objective: To evaluate the association between disease severity and the effectiveness of different moisturizers on skin hydration in AD patients.

Materials and Methods
Thirty-eight patients with clinically diagnosed AD (mild to severe) were enrolled. Demographic and clinical characteristics, serum IgE, and AEC were documented. Spearman's and Pearson correlation analyses were used to determine associations. Hydration effects of five moisturizers (Occlusive, Ceramide-based, Emollient-based, Humectant-based, and Avenanthramide-based) were tested using moisturometer readings at baseline, 1 hour, and 24 hours.

Results
The percentage change from baseline was evaluated at 1 hour and 24 hours across five topical intervention groups, stratified by disease severity (mild, moderate, and severe). Data are expressed as median percentage change with corresponding median differences from baseline.

Mild Severity

At 1 hour, a numerically greater improvement from baseline was observed with avenanthramide (median change 42.42%) compared to emollient and ceramide (30.30% each), humectant (24.24%), and occlusive therapy (21.22%).

At 24 hours, avenanthramide continued to demonstrate the highest sustained improvement (36.36%). Occlusive therapy showed a delayed but notable effect (27.28%), while ceramide and humectant demonstrated comparable moderate improvements (15.15% each). Emollients showed the least sustained response at 24 hours (12.12%).

Moderate Severity

In the moderate severity group, avenanthramide demonstrated the greatest numerical improvement at both time points. At 1 hour, the median percentage change was highest with avenanthramide (69.23%), followed by humectant (60.87%), emollient (48.00%), ceramide (46.15%), and occlusive therapy (40.00%).

At 24 hours, avenanthramide maintained superior efficacy (61.54%), while humectant showed a stable response with no reduction from the 1-hour value (60.87%). Emollient and occlusive therapies demonstrated comparable effects (40.00%), whereas ceramide showed a relatively lower sustained improvement (30.77%).

Severe Severity

In patients with severe disease, avenanthramide exhibited a markedly higher magnitude of response compared to all other interventions. At 1 hour, the median percentage change from baseline exceeded 100% (102.27%), indicating a

pronounced early response. This effect was sustained and slightly increased at 24 hours (104.54%).

Among the remaining interventions, emollients showed the next highest improvement at both 1 hour (57.44%) and 24 hours (53.19%). Ceramide and humectant therapies demonstrated moderate improvements, while occlusive therapy consistently showed the lowest numerical response in the severe subgroup.

Conclusions

Avenanthramide demonstrated the greatest and most consistent numerical improvement from baseline across all severity grades and time points, suggesting a robust and sustained treatment effect compared to conventional topical formulations. The magnitude of response was particularly pronounced in moderate and severe disease, where improvements exceeded those observed with emollient, humectant, ceramide, and occlusive therapies. Emollients showed relatively better efficacy in moderate-to-severe disease, while occlusives demonstrated modest but sustained effects, especially in mild disease at 24 hours. Overall, these findings indicate that avenanthramide may offer superior short-term and sustained benefits across varying disease severities, warranting further controlled studies to confirm statistical significance and long-term clinical relevance.

Abstract N°: ID-860

Topic: Atopic dermatitis/ Eczema

An unusual case of atopic dermatitis

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Introduction

Atopic dermatitis (AD) is a chronic inflammatory skin disorder with heterogeneous clinical presentations.[1] Although classically characterised by eczematous plaques, atypical morphologies can occur and may mimic other inflammatory dermatoses, particularly in individuals with skin of colour.[1] Hypertrophic or lichen planus–like presentations of AD are uncommon and pose a diagnostic challenge, increasing the risk of misdiagnosis and delayed appropriate treatment.[1] We report a paediatric case of hypertrophic atopic dermatitis clinically resembling lichen planus, highlighting the importance of clinicopathological correlation.

Materials and Methods

A single case report, with retrospective chart review and key learning points identified.

Results

A 4-year-old girl with Fitzpatrick skin type IV presented with a 12-month history of intensely pruritic, well-demarcated, violaceous hypertrophic nodules with scattered scale, symmetrically involving the trunk and extremities. There was no involvement of the scalp, nails, or mucous membranes. Although there was no documented personal or family history of atopy, a remote history of mild facial and flexural erythema responsive to emollients was retrospectively elicited.

Initial treatment with potent topical corticosteroid therapy (mometasone ointment) was ineffective. Based on the hypertrophic morphology and violaceous appearance of the lesions, lichen planus was suspected clinically.

Skin biopsy revealed a superficial perivascular psoriasiform dermatitis with regular acanthosis, parakeratosis, and a predominantly chronic inflammatory infiltrate. Neutrophils were largely confined to areas of excoriation. There was no evidence of interface dermatitis, basal vacuolar degeneration, or Civatte bodies, arguing against a diagnosis of lichen planus. Overall, the histopathological findings were most consistent with localised hypertrophic atopic dermatitis with secondary excoriation.

Despite adherence to topical therapy, disease activity persisted, with ongoing severe pruritus, sleep disturbance, and significant impairment of quality of life. Following multidisciplinary discussion, systemic ciclosporin was initiated, resulting in marked flattening of lesions and no further lesion development to date.

Conclusions

This case highlights an uncommon hypertrophic presentation of atopic dermatitis that closely mimicked lichen planus clinically. Previous reports have described lichen planus–like atopic dermatitis, which is more common in people with skin of colour, emphasising the risk of misdiagnosis when relying on morphology alone.[1] Clinicopathological correlation is therefore pivotal; lichen planus is defined histologically by lichenoid interface dermatitis, and its absence argues strongly against the diagnosis despite convincing clinical features.[2]

Early diagnostic clarification is especially important in children, where prolonged uncontrolled inflammation and pruritus can adversely affect sleep, behaviour, and neurodevelopment. Recognition of atypical severe atopic dermatitis

is vital to allow early escalation to systemic therapy to mitigate long-term physical and psychosocial impact.

Abstract N°: ID-868

Topic: Atopic dermatitis/ Eczema

Exploring pathogenic features and putative origins of *Staphylococcus aureus* lineages in atopic dermatitis

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Introduction

Staphylococcus aureus is a major trigger of atopic dermatitis (AD), but the molecular basis of this interaction remains unclear[1]. It is unknown whether AD-associated strains simply reflect community colonizers or represent specific lineages adapted to AD skin. To address this, we have characterized the genetic lineages, antibiotic resistance profiles and virulence potential of *S. aureus* isolates from AD patients in a tertiary hospital in Portugal.

Materials and Methods

Microbiota samples were collected using cotton swabs pre-wetted with saline serum from the nares, lesional and non-lesional skin of each AD patient and from the nares and non-lesional skin of four healthcare workers in close contact with patients, at the outpatient Dermatology Department (April 2024-2025). Clinical and demographic parameters (age, sex, AD disease duration, severity, and current treatments) were recorded. *S. aureus* was isolated using a selective chromogenic medium and characterised by *spa*-typing, from which sequence types (STs) and clonal complexes (CCs) were inferred[2,3]. Isolates were classified as methicillin-susceptible (MSSA) or -resistant (MRSA) through polymerase chain reaction (PCR) detection of the *mecA/mecC* genes. CC398 isolates were assigned a human or animal origin using a PCR-based detection of the immune evasion cluster (IEC). Biofilm formation, hemolysins and urease production were determined by phenotypic assays. Antimicrobial susceptibility testing was performed by disk diffusion[4].

Results

Fifty-seven AD patients (median age, 30 years; 28 males and 29 females), with a wide range of disease severity (Eczema Area and Severity Index: 0–50, median 10; Worst Itch Numerical Rating Scale: 0–10, median 5.5) were included. *S. aureus* isolates were predominantly MSSA (98%, n = 89/91), with only two MRSA isolates, both from nasal samples and assigned to CC5. Clonal distribution revealed an evident predominance of CC398 across all samples (47%) and sampled sites (nares: 44%; non-lesional skin: 53%; lesion: 46%). All CC398 isolates were MSSA belonging to ST398 and carried the IEC, which is consistent with MSSA-ST398 human-adapted *S. aureus* lineage[5]. This lineage was previously observed in Portugal both colonizing socially vulnerable populations in the community setting[6] and causing serious infections in hospitalized patients[7]. However, none of the healthcare workers sampled carried MSSA-ST398 strains, suggesting a non-hospital associated origin. Analysis of antibiotic susceptibility revealed that resistance was most frequent to penicillin (52%, 47/91) and erythromycin (40%, 36/91), the latter largely driven by MSSA-ST398 and accounting for 83% (30/36) of resistant isolates. Analysis of virulence traits showed that different *S. aureus* lineages display distinct pathogenic profiles: significantly reduced biofilm formation in ST398 isolates compared with other clonal complexes (p = 0.003), but high hemolytic activity, with nearly 80% classified as strong producers, and high levels of urease production in more than 78% of ST398 isolates (**Figure 1**).

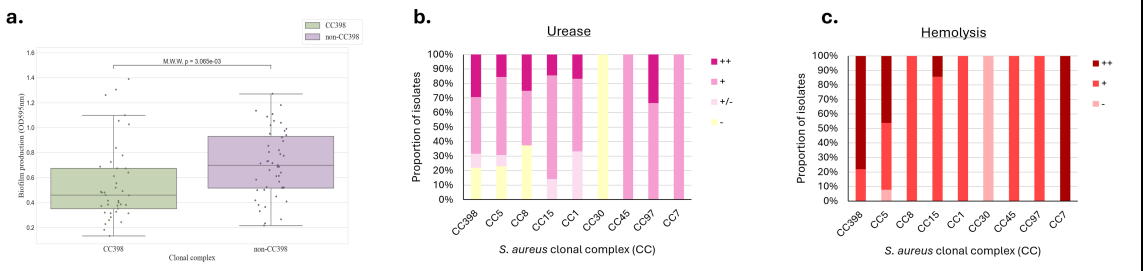

Figure 1 Virulence traits of *Staphylococcus aureus* isolates collected from atopic dermatitis (AD) patients. (a) Biofilm production by *S. aureus* isolates, expressed as optical density at 595 nm, comparing CC398 and non-CC398 lineages. Group differences were assessed using the Mann–Whitney U test, with the p-value shown. (b) Urease production across different clonal complexes, classified as non-producer (–), weak (+/–), moderate (+), or strong (++), based on the degree of color change from yellow to pink on Christensen's urea agar. (c) Hemolysin production across clonal complexes, assessed on sheep blood agar and classified as no hemolysis (–, halo 0 mm), moderate production (+; halo 10–14 mm), or strong production (++; halo ≥15 mm).

Conclusions

S. aureus colonization in AD reflects both local molecular epidemiology and disease-specific selective pressures imposed by the AD host skin microenvironment. In Portugal, this has led to a higher prevalence of MSSA-ST398 lineage in AD patients compared with other countries[8,9]. The success of this lineage is associated with a distinctive virulence profile - high hemolysin and urease activity coupled with reduced biofilm formation - which likely enhances skin barrier disruption, inflammation, bacterial dissemination, and persistent colonization. These findings highlight the need to integrate clonal background with virulence traits to better elucidate the role of *S. aureus* in AD and to guide targeted strategies aimed at limiting colonization and disease exacerbation.

Abstract N°: ID-904

Topic: Atopic dermatitis/ Eczema

Natural microbial diversity in lotion prevents winter-related worsening of atopic dermatitis: a randomized, placebo-controlled, double-blind clinical trial

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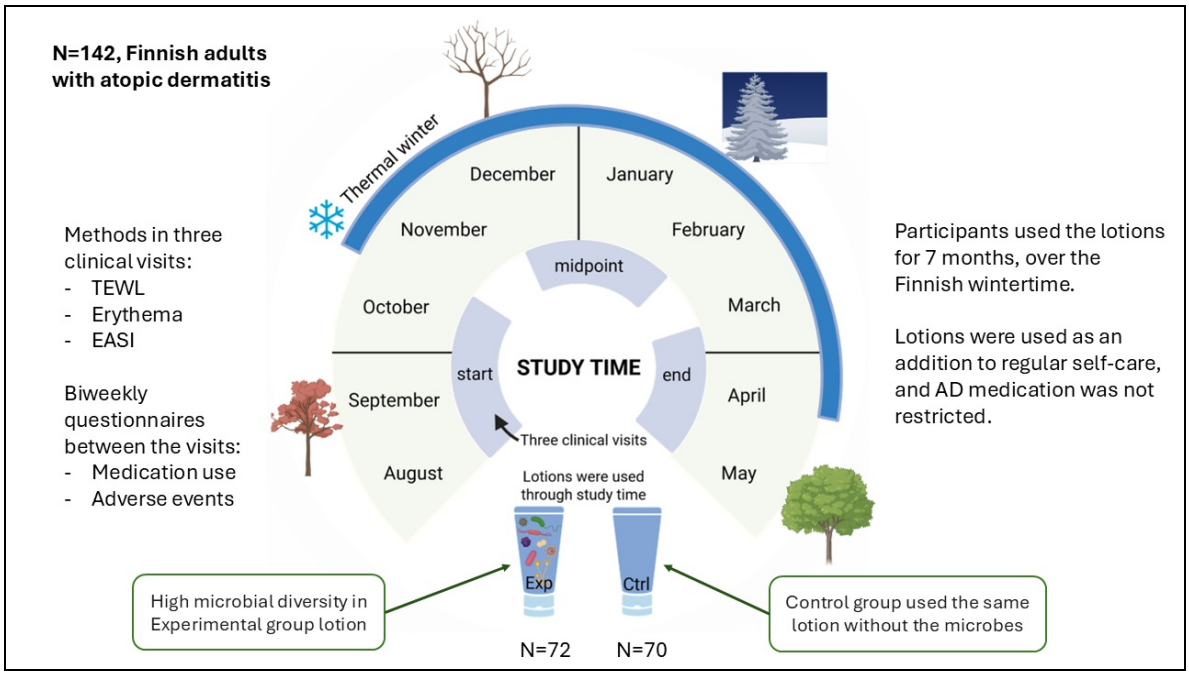
Introduction

Current microbe-based therapies for atopic dermatitis (AD) target the skin microbiome. However, it is well established that exposure to natural microbial diversity during childhood is a protective factor against AD. Growing up on a farm reduces the risk of developing atopic diseases, while urban living is associated with an increased risk. According to the biodiversity hypothesis, exposure to microbial diversity activates the innate immune system, increases immunological regulation and tolerance, supports mucosal homeostasis, strengthens epithelial barriers, and promotes anti-inflammatory responses. It is not yet known whether exposure to natural microbial diversity is beneficial after onset of an immune-mediated disease such as AD. The present study was the first randomized, double-blind, placebo-controlled clinical trial to evaluate the effects of natural microbial exposure on AD symptoms.

Materials and Methods

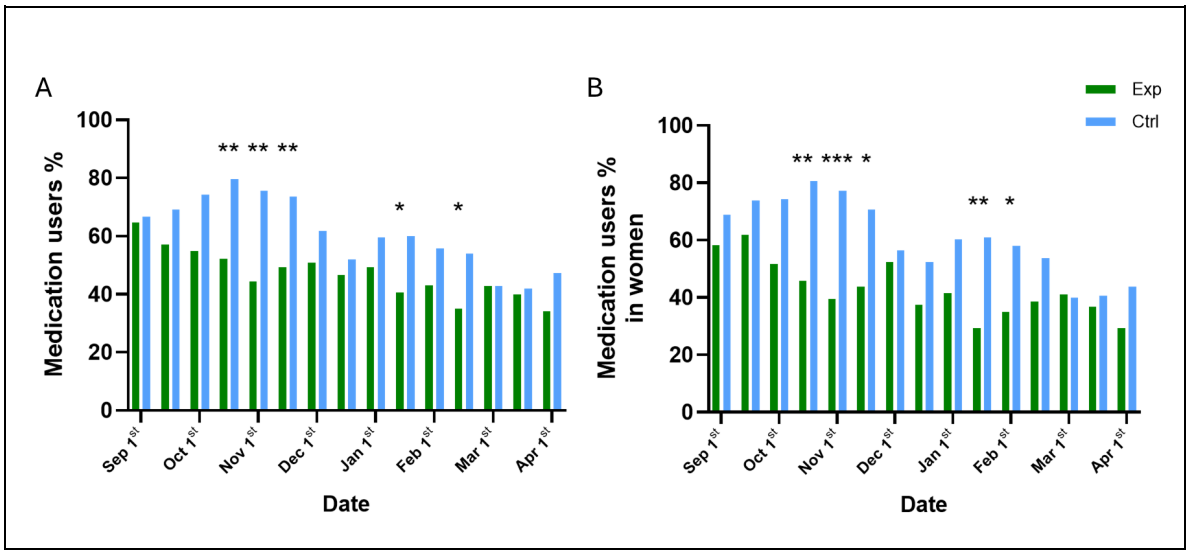
A total of 142 adult participants with mild-to-severe AD were randomized into two groups: an experimental group that used a lotion containing inactivated microbial extract as the biodiversity component, and a control group that used an identical lotion without the extract. Participants used the lotions regularly over the Finnish winter period for a total of seven months. This timeframe was selected to evaluate the biodiversity intervention during a season when cold, dry weather typically increases AD flare incidence and when natural environmental microbial exposure is at its lowest. The lotions were part of participants' self-care routine as moisturizers, and they were allowed to use AD medication as needed. The primary outcome was skin barrier function, assessed by transepidermal water loss (TEWL). Secondary outcomes included erythema index measurement and the Eczema Area and Severity Index (EASI), assessed during three clinical visits. Use of AD medications and skin-related adverse events were recorded bi-weekly through participant questionnaires.



Study protocol.

Results

The experimental group did not experience the winter-related decline in skin barrier function or the increase in erythema that were observed in the control group. The experimental group also had fewer participants using medication (Nov 1st OR 0.26 95% CI [0.59, 0.11]) and fewer medication days (Nov 1st effect size r=0.297) compared with the control group. Because medication use was one of the study outcomes, it potentially has influenced the EASI scores; therefore, EASI results should be interpreted in the context of medication use. There were no statistically significant differences in EASI scores between the groups when all participants were analyzed together. However, among female participants, there were reduction of EASI in the experimental group from start (autumn) to midpoint (winter) (effect size r=0.379, p=0.009) even though this group used less medication (effect size r=0.252, p=0.022) during this period. The difference in EASI scores between the groups among female participants during the winter was significant (effect size r=0.186, p=0.069) without difference at baseline. There were no differences in skin related adverse events between the study groups.



AD medication users during the study. The proportion of atopy medication users among (A) all participants and (B) female participants in the experimental (Exp) and control (Ctrl) groups. * p ≤ 0.05, ** p ≤ 0.01, *** p ≤ 0.001.

Conclusions

This study is the first to demonstrate the importance of natural microbial contact for individuals who already have an immune-mediated disease. Delivering an inactivated microbial extract through a lotion proved to be a feasible way to provide microbial exposure for people who require regular moisturization. The intervention prevented the typical winter-related worsening of skin barrier function and the increase in erythema, and it reduced reliance on AD medication. The effect was stronger among female participants, whose EASI scores were also lower during the winter in the experimental group compared with the control group. Exposure to natural microbial diversity should be regarded as a complementary approach to existing treatments for AD.

Abstract N°: ID-941

Topic: Atopic dermatitis/ Eczema

Development of a DNCB-Induced Atopic Dermatitis Like-Model in Inbred Rats and Validation of Infrared Thermography for Inflammation Assessment

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Introduction

Atopic dermatitis (AD) is a relapsing inflammatory skin condition in which epidermal barrier impairment and immune activation reinforce one another. It affects approximately 10-20% of children and 1-3% of adults, and despite multiple treatment options, many patients continue to experience inadequate disease control. Therefore, reproducible in vivo models that reflect the clinical and histopathological features of AD remain essential for researching the pathogenic mechanisms and evaluating new therapeutic strategies. The use of 2,4-dinitrochlorobenzene (DNCB) to induce human-like atopic dermatitis in rats provides a controlled and repeatable approach for model development and disease characterization. Beyond routine clinical scoring and histological assessment, there is also a growing interest in objective, non-invasive methods for measuring inflammatory response in vivo. Infrared thermography is a promising tool, as inflammatory reactions are associated with increased perfusion and enhanced heat emission. In this study, thermography was used as an additional validation method in DNCB-induced AD model.

Materials and Methods

An inbred rat model of human-like atopic dermatitis was induced by topical application of DNCB. Prior to the main experiment dorsal fur from rats (n=8) was removed and the back was divided into two symmetrical regions along the midline. Dermatitis was induced by nine applications of 60 µl 1.5% DNCB in 70% ethanol over 3 weeks (3 times per week). To enable within-animal comparisons, the right side was treated with DNCB, while the left side received ethanol only, and served as control. After each application, pruritus-related behavior was assessed following 5 min adaptation by counting scratching episodes for 10 min, separately for each side. Infrared thermography was performed using a FLIR A325sc camera at a fixed distance of 30 cm under constant environmental conditions. Thermal images were collected repeatedly pre- and post-treatment, and maximum, mean, and minimum temperatures were extracted from regions of interest (ROI). Histopathological evaluation of skin samples from treated and control sites was performed to confirm dermatitis-associated changes.

Results

DNCB produced a localized dermatitis phenotype on the treated side. Histopathology of DNCB-treated right skin showed epidermal hyperplasia with hyperkeratosis and a lympho-histiocytic inflammatory infiltrate, consistent with eczema/contact dermatitis–like inflammation. The ethanol-treated control side displayed normal skin architecture without pronounced inflammation. Behavioral assessment demonstrated increased pruritus, with more scratching episodes directed toward the DNCB side. Thermography confirmed treatment-dependent asymmetry, across all rats mean temperature increased on the DNCB side, showing a significant right–left difference (ΔRight–ΔLeft = +0.20°C; $p < 0.001$). Distribution-based analysis revealed a shift of the DNCB-treated side toward higher temperatures, with greater temperature uniformity compared with the ethanol control, supporting inflammation-related heating rather than random variability.

Conclusions

Topical DNCB reliably induced a human-like atopic dermatitis in inbred rats, supported by dermatitis-consistent histopathological changes and increased pruritus. Infrared thermography provided an objective, non-invasive measure of inflammation, detecting a significant right–left thermal asymmetry between DNCB-treated and ethanol-treated control skin. Together, this combined behavioral, histopathological, and thermographic approach enhances the translational utility of the DNCB-induced AD model. This methodology may facilitate more reliable preclinical evaluation of emerging therapeutic interventions and improve their predictive value for clinical outcomes in human atopic dermatitis.

Abstract N°: ID-999

Topic: Atopic dermatitis/ Eczema

Sleep disorders and pediatric atopic dermatitis: Correlation between lesion severity and sleep quality

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Introduction

Atopic dermatitis is often associated with intense itching that can significantly impair sleep quality in children. The exact impact of the severity of skin lesions on sleep remains poorly quantified.

The objective of this study is to evaluate the relationship between the severity of AD and sleep quality in a pediatric population.

Materials and Methods

A cross-sectional study including 112 children followed for atopic dermatitis. The severity of the lesions was assessed using the SCORAD score, and sleep quality was evaluated using the Children's Sleep Habits Questionnaire (CSHQ).

Results

The mean age was 6.8 ± 3.2 years, with 58.9% boys. The average duration of atopic dermatitis was 3.5 ± 2.1 years, and 47.3% of the children had a family history of atopy: asthma (21.4%) and allergic rhinitis (18.7%). Eczematous lesions predominated (92%), with intense itching in 88% and superinfections in 21%. Regarding environmental exposure, 34.8% lived in a household exposed to parental smoking, 41.9% in areas with high pollution, 27.7% had pets, and 18.8% were exposed to mold. Flare-ups were worsened by climate variations in 63%, and had a seasonal influence in 56%. Severity according to SCORAD was mild (<25) in 38%, moderate (25–50) in 44%, and severe (>50) in 18%. Poor sleep quality (CSHQ ≥41) was found in 61% of patients, with disturbances mainly related to nocturnal awakenings (58%), difficulty falling asleep (42%), and daytime sleepiness (35%). A significant positive correlation was observed between SCORAD and CSHQ score ($r = 0.63$; $p < 0.001$), indicating that the more severe the AD, the more impaired the sleep quality. Winter exacerbations and intense itching were strongly associated with increased nocturnal disturbances ($p < 0.01$). Environmental exposure (smoking, pets, pollution) showed no significant effect on sleep.

Conclusions

In children, the severity of atopic dermatitis directly influences sleep quality. Management should include an evaluation of sleep and a targeted strategy to reduce nocturnal itching and improve rest.

Abstract N°: ID-1016

Topic: Atopic dermatitis/ Eczema

Benefits of an anti-relapse gel-cream intended for very dry, irritated to atopic sensitive skin: Results from clinical study in babies, children and teenagers in India and Argentina

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Introduction

Atopic dermatitis (AD) is chronic, relapsing inflammatory dermatosis characterized by eczematous flares, xerosis, and pruritus. Affecting 15-30% of young children in industrialized countries, it significantly impairs family quality of life, thereby justifying the integration of adapted dermocosmetic strategies providing intensive anti-pruritic, lipid-replenishing, and nourishing effects. The objective of this clinical study was to evaluate the effectiveness and tolerance of an emollient with active ingredients in a light, gel-cream texture to prevent recurrent acute flares of eczema in patients with AD in warm and humid environments.

Materials and Methods

This intra-individual study, conducted in Argentina and India under dermatological control, included 46 subjects aged 6 months to 15 years with moderate AD and active eruptions. Subjects received topical treatment at inclusion (D0) and had to apply the study cream over their entire body for 120 days, using a standardised "3–6–9" method, adjusted for age and body surface area. Clinical and biometrological assessments were performed at baseline (D0) and during the follow-up visits (D30, D60 and D120) and included the Eczema Area and Severity Index (EASI), Investigator's Global Assessment (IGA), stratum corneum hydration and transepidermal water loss (TEWL). Subjective assessments included pruritus, sleep disturbances (insomnia) and quality of life questionnaires [Infants' Dermatitis Quality of Life Index (IDQOL), Children's Dermatitis Life Quality Index (CDLQI, over 4 years), or Teenager's Quality of Life Index (T-QOL, over 12 years) and Family Dermatology Life Quality Index (FDLQI)]. Tolerance and overall product evaluation were assessed by both investigators and subjects.

Results

After 120 days, investigator-assessed clinical severity significantly improved. The mean EASI score decreased by 83.3% (from 5.88 to 0.98), and the IGA score decreased by 77.9% (from 2.26 to 0.5) (both $p < 0.05$; Wilcoxon signed-rank test). The mean number of relapses was reduced by 89.2% compared with the 4 months preceding inclusion ($p < 0,05$; Wilcoxon signed-rank test). Patient-reported outcomes also improved significantly, with a 70.5% reduction in pruritus and an 83.6% reduction in insomnia scores ($p < 0.05$; Wilcoxon signed-rank test). Biometrological measurements confirmed a significant improvement in skin barrier function, with increased stratum corneum hydration (+22.3%), and reduced transepidermal water loss (–20.5%)(all $p < 0.05$; Wilcoxon signed-rank test). Quality-of-life scores decreased significantly for infants, children, and families (IDQOL, CDLQI, FDLQI; $p < 0.05$), but changes in teenagers (T-QOL) were not significant, likely due to a small sample size. Subjective efficacy was rated very positively, with 97.6% to 100% of subjects reporting benefits across all evaluated parameters. The product was very well tolerated.

Conclusions

This study conducted in hot and humid regions indicates that the tested gel-cream texture emollient is well tolerated and clinically effective in alleviating AD signs among infants, children, and adolescents. Notable improvements were observed across clinical indicators, patient-reported symptoms, skin barrier integrity, and overall quality of life, along with a marked decrease in relapse frequency. The product's favourable tolerability profile and high satisfaction rates suggest its appropriateness for daily application in warm environments, supporting its position as a reliable option for sustained AD management.

Abstract N°: ID-1047

Topic: Atopic dermatitis/ Eczema

A retrospective cohort study of dupilumab dose extension in atopic dermatitis

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Introduction
Dupilumab is an effective treatment for moderate-to-severe atopic dermatitis (AD); however, optimal long-term dosing is unclear. Treatment withdrawal risks relapse, but emerging real-world data suggest that extended dosing intervals may be feasible. This study aims to evaluate the effectiveness of dupilumab dose extension in a real-world Australian cohort.

Materials and Methods
We conducted a single-centre retrospective cohort study of adults with AD treated with dupilumab from January 2020 to December 2025 who underwent dose extension. The primary outcome was change in eczema area and severity index (EASI) from baseline; secondary outcomes included characteristics linked with successful extension (EASI90 at months 6 and 12). EASI scores were analysed using linear mixed-effects models, from which estimated marginal means (EMMs) and pairwise contrasts were derived.

Results
Of 254 patients treated with dupilumab for AD, 49 (19.3%) underwent dose extension. The most common protocol was 300mg Q3W (73.5%) and 300mg Q4W (24.5%). In the Q3W group, EMM EASI scores remained low and stable from baseline to 18 months, ranging from 1.18 (95% CI 0.04–2.39) to 1.37 (95% CI 0.45–2.30). In contrast, the Q4W group demonstrated higher EMM EASI scores, peaking at 12 months (3.57, 95% CI 2.00–5.15). Patients who extended dosing for good disease control had higher EASI90 rates at month 6 and 12 compared with those extending for adverse events or patient preference. Disease severity prior to dupilumab commence didn't affect EASI90 rate at month 6 or 12. The impact of age and therapy duration is unclear.

Conclusions
Dupilumab dose extension to Q3W or Q4W appears effective with Q3W dosing showing slightly more favourable disease stability. Characteristics leading to successful extension remain uncertain, though extension for good clinical response rather than other reasons shows higher EASI90 rates.

Abstract N°: ID-1115

Topic: Atopic dermatitis/ Eczema

Targeting the trigger: Response to itraconazole in a case of severe refractory Atopic Dermatitis

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Introduction

Atopic Dermatitis (AD) is a chronic inflammatory cutaneous disease commonly appearing as an erythematous exanthem of age-dependent distribution, severe pruritus and skin dryness. AD is usually triggered in childhood by allergenic or irritant agents and microbes. One of the principally implicated pathogens is Malassezia spp, a commensal fungus associated with the induction of an AD phenotype featuring head and neck dermatitis and often showing poor response to conventional treatments. Malassezia spp lies within the action spectrum of itraconazole, an antifungal triazole that inhibits lanosterol 14α-demethylase and thereby halts ergosterol biosynthesis, resulting in fungal cell membrane disruption and, eventually, cell death.
We report a case of excellent response to itraconazole in the extraordinary setting of a severely exacerbated and refractory to multiple modalities AD.

Materials and Methods

A 25-year-old male patient presented to our clinic with a history of frequent flares of AD on limbs and torso since the age of three. The patient reported a constant disease burden including intense pruritus, significant sleep loss and quality of life impairment. After years of intermittent therapies with topical and oral corticosteroids, an upadacitinib protocol was initiated, achieving great clinical improvement and extended periods of clearance for over three years. However, due to recurrent herpes and staphylococcal infections, allergic rhinitis, conjunctivitis, exanthem relapse, asthma and an acneiform eruption 3 months earlier, we decided on a therapeutic switch to dupilumab with concurrent introduction of cyclosporine as a treatment bridge.
Clinical examination, 8 weeks after the switch, revealed pruritic, scaly, erythematous plaques and papules in the axillar, scrotal, antecubital, popliteal, nuchal, facial, neck and upper chest area. The diagnostic element of head and neck distribution, combined with resistance to both dupilumab and cyclosporine pointed towards the diagnostic possibility of the Malassezia-induced AD phenotype. The patient received a combination of 100 mg twice daily oral itraconazole and twice daily topical application of isoconazole nitrate/diflucortolone valerate cream. Both treatments were prescribed for 2 weeks.

Results

On a 6-week follow-up examination of the patient, almost complete clearance had been achieved in all previously involved areas, with a mild erythema on the face and posterior thighs, allegedly attributed to contact with dust particles. Dupilumab and cyclosporine administration continued without changes. A second clinical re-evaluation showed that the response remained unaltered in antecubital, popliteal, facial and nuchal areas for an additional 6-week period, whereas a mild exanthem appeared in the abdominal area and conjunctivitis re-emerged and was treated with three times per day application of hydrocortisone ocular solution.

Conclusions

The aim of this brief narrative description is to stress the importance of keeping in mind and, when necessary, targeting pathogens that have been established as putative triggers of AD per se or hyper-reactive cutaneous states on an atopic background. This kind of individualisation in management strategy may prove critical for clinical outcomes, especially when first-line immunosuppressive or immunomodulatory therapeutic choices seem to fail to gain control of the disease.

Abstract N°: ID-1150

Topic: Atopic dermatitis/ Eczema

Is osteoporosis in patients with atopic dermatitis a predisposition or coincidence?

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Introduction
Atopic dermatitis (AD) is a chronic inflammatory skin disease increasingly recognized as a systemic condition. Persistent inflammation, altered cytokine profiles, reduced physical activity, nutritional factors, and exposure to topical or systemic corticosteroids may negatively affect bone metabolism. While osteoporosis and fracture risk are well established in other chronic inflammatory diseases, the association between AD and bone health remains underrecognized in clinical practice. This work aims to consolidate current knowledge and provide a clearer foundation for clinical decision-making

Materials and Methods
A narrative synthesis of evidence from systematic reviews, meta-analyses, and large observational studies evaluating bone mineral density, osteoporosis, osteopenia, and fracture outcomes in patients with AD was performed. The authors conducted research in PubMed database, Cochrane Library and Embase databases on AD treatment; searching was as broad as possible from the inception of the database until 6.02.2026, including EMTREE and MESH approaches, conducted according to the PRISMA guidelines and registered in PROSPERO.

Inclusion criteria: adult population with AD, work published in English.

There were no search date restrictions.

Results
Recent evidence suggests that atopic dermatitis (AD) is associated with an increased risk of bone metabolism disorders. Meta-analyses and large cohort studies demonstrate a higher prevalence of reduced bone mineral density, osteopenia, osteoporosis, and fractures in patients with AD compared to the general population. The risk of osteoporosis is increased by approximately 50–90%, while fracture risk, particularly involving the spine and hip, rises with disease severity. Chronic systemic inflammation and immune dysregulation, including altered RANKL/OPG signaling, may contribute to impaired bone homeostasis in AD.

Conclusions
Current evidence indicates that AD is associated with increased risk of low bone mineral density, osteopenia, osteoporosis, and fractures, particularly in patients with severe or long-standing disease. These findings support considering bone health assessment and preventive strategies in selected AD patients.

Abstract N°: ID-1162

Topic: Atopic dermatitis/ Eczema

The OX40-OX40L Axis in Atopic Dermatitis: Mechanism and TherapeuticPotential.

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Introduction
Atopic dermatitis (AD) is a chronic inflammatory disease with a relapsing course, in which the effectiveness of conventional therapies is often limited and persistent immune activation contributes to recurrence. The OX40-OX40L pathway plays an important role in adaptive immune regulation, particularly in T-cell activation, proliferation, and survival, and is implicated in the immunopathogenesis of AD. In recent years, this axis has attracted increasing interest as a therapeutic target under active clinical investigation. The aim of this study was to summarize current evidence on the role and mechanisms of OX40-OX40L signaling in AD and to outline its therapeutic relevance.

Materials and Methods
The authors conducted a systematic search of the PubMed, Embase, and Cochrane CENTRAL databases on the OX40-OX40L signaling pathway in AD. The search was performed as broadly as possible from the inception of the databases until January 2026 using MeSH terms, EMTREE terms, and relevant keywords. The review was conducted in accordance with PRISMA guidelines. After screening and applying the predefined inclusion and exclusion criteria, 10 studies were included in the final analysis. Included studies comprised clinical trials and mechanistic/immunological evidence relevant to OX40-OX40L signaling in AD.

Results
The reviewed literature indicates that the OX40-OX40L signaling pathway contributes to the maintenance of chronic inflammation in AD. OX40-OX40L functions as a costimulatory pathway between antigen-presenting cells and activated T cells after antigen recognition, promoting pathogenic T-cell proliferation and survival. Increased OX40 expression on activated T lymphocytes is associated with prolonged T-cell survival and predominantly Th2-skewed immune activity, with features consistent with relapse-prone memory responses. Under inflammatory

conditions, OX40L upregulation on antigen-presenting cells may enhance antigen-specific T-cell responses and pro-inflammatory cytokine secretion. Modulation of OX40 signaling may attenuate inflammatory activity by targeting mechanisms involved in disease persistence rather than only downstream inflammatory mediators, supporting OX40 as a relevant therapeutic target in AD. Clinical trial reports indicate clinical improvement in AD, including reductions in Eczema Area and

Severity Index (EASI) scores. Evidence also points to involvement of broader immune programs relevant to AD heterogeneity, including Th2, Th1, Th17, and Th22 signatures.

Conclusions

The OX40-OX40L signaling pathway is an important mechanism contributing to persistent immune dysregulation in AD. Modulating this axis may support more durable disease control rather than only symptomatic relief, although its direct effect on memory T-cell populations associated with disease relapse remains incompletely defined. Current clinical data suggest an acceptable safety profile for OX40-OX40L-targeted therapies; however, longer-term follow-up is needed to better characterize safety and durability of response. Further studies should clarify whether early intervention can limit immune memory imprinting and, together with improved understanding of disease heterogeneity and immunogenetic determinants, help guide therapeutic decision-making in clinical practice.

Abstract N°: ID-1167

Topic: Atopic dermatitis/ Eczema

An atypical pediatric presentation of Kaposi–Juliusberg syndrome mimicking contact eczema: a case report

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Introduction

Kaposi–Juliusberg syndrome, also known as eczema herpeticum, is a severe acute viral skin infection, most often secondary to Herpes simplex virus type 1, occurring on a background of preexisting dermatosis, primarily atopic dermatitis. It is a dermatologic emergency that can be life-threatening if not managed promptly, due to the risk of systemic dissemination, bacterial superinfection, and visceral complications.

This condition preferentially affects atopic children, but remains rare and often underrecognized, with a clinical polymorphism that can be mistaken for other infectious or inflammatory dermatoses. Diagnostic delays are common, particularly in cases with atypical presentation or a complex background.

Materials and Methods

We report here the case of a 7-year-old girl with a history of atopic dermatitis, hospitalized for extensive vesiculopustular lesions suggestive of Kaposi–Juliusberg syndrome, and we discuss the clinical, diagnostic, and therapeutic aspects of this entity.

Results

This is a 7-year-old girl with a history of atopic dermatitis since the age of 4, who was hospitalized for an acute febrile vesiculopustular skin eruption.

The history of the illness dated back a few weeks, initially marked by the appearance of pruritic erythematous papular plaques on the buttocks and posterior thighs, treated with unspecified topical therapies, without improvement. The evolution was rapidly marked by the development of vesicular and pustular lesions that became erosive and crusted, associated with unquantified fever and general deterioration.

Dermatological examination revealed multiple erythematous plaques covered with small vesicles and pustules, associated with meliceric and hemorrhagic erosions and crusts, located on the buttocks, thighs, legs, and the dorsal surface of the left hand. The mucous membranes were intact.

Biological workup showed a systemic inflammatory response with leukocytosis predominantly of neutrophils and elevated C-reactive protein. Bacteriological and mycological cultures were negative. Immunological testing revealed isolated elevation of IgE levels.

Given the suggestive clinical presentation and the atopic background, a diagnosis of Kaposi–Juliusberg syndrome was made. Treatment with intravenous acyclovir, combined with local care, was initiated, resulting in marked clinical improvement within the first week, with regression of the vesiculopustular lesions.

Conclusions

Kaposi–Juliusberg syndrome represents a pediatric dermatologic emergency, particularly in atopic children. This case highlights the importance of early clinical recognition, even in the absence of immediate virological confirmation, in order to promptly initiate appropriate antiviral treatment.

Dermatologists and pediatricians should keep this entity in mind in any acute, febrile exacerbation of atopic dermatitis, to prevent complications and improve prognosis.

Abstract N°: ID-1222

Topic: Atopic dermatitis/ Eczema

Composite Inflammatory Biomarkers as Predictors of Disease Severity and Multimorbidity in Older Patients With Atopic Dermatitis: A Retrospective Cohort Study

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Introduction

Atopic dermatitis (AD) in older adults is increasingly recognized as a chronic systemic inflammatory condition occurring in a population with multimorbidity, frailty, and elevated mortality risk. Despite advances in immune and molecular stratification, there remains no simple, routinely available blood biomarker to support severity and prognostic stratification in elderly AD. The C-reactive protein–to–albumin ratio (CAR) integrates inflammatory burden (CRP) and nutritional/inflammatory reserve (albumin) and has shown prognostic utility across geriatric and chronic inflammatory settings, yet has not been systematically evaluated in elderly AD. This study assessed associations between CAR and other composite inflammatory indices (neutrophil-to-lymphocyte ratio [NLR]) and AD severity and symptom burden (SCORAD and itch) in patients aged ≥60 years treated at Hamad Medical Corporation (HMC), Qatar.

Materials and Methods

This retrospective observational cohort study was conducted at the Department of Dermatology, Hamad Medical Corporation (HMC), Qatar. Electronic medical records (Cerner) from **January 2020 to January 2026** were reviewed to identify patients **≥60 years** with dermatologist-diagnosed AD. Patients were included if SCORAD (including itch score) and routine laboratory data were available (serum CRP, serum albumin, and complete blood count with neutrophil and lymphocyte counts). Patients with documented acute systemic infection/sepsis at the time of laboratory testing or missing key variables were excluded. CAR was calculated as CRP/albumin, and NLR as neutrophils/lymphocytes; laboratory values closest to the SCORAD assessment were used. AD severity was categorized using standard SCORAD cut-offs. Analyses summarized continuous variables using mean (SD) or median, as appropriate.

Results

Overall, the cohort had a mean age of **75.38 (SD 6.60)** years and **53.3%** were female. Median **SCORAD** was **5**, and median **itch (0–10)** was **2**. Median **CRP/albumin ratio** was **0.1118**, median **NLR** was **1.75**, median **CRP** was **3.8 mg/L**, and median **albumin** was **37 g/L**. In the **moderate AD** subgroup (**n=4**), mean age was **78.50 (SD 11.09)** years and **100%**were female; median **SCORAD** was **40** and median **itch** was **10**. Median **CRP/albumin ratio** was **0.1052**, median **NLR**was **2.5536**, median **CRP** was **3.15 mg/L**, and median **albumin** was **30.5 g/L**.

Conclusions

In this elderly AD cohort, disease activity was generally low by SCORAD with modest systemic inflammatory indices overall, while the moderate-severity subgroup showed markedly higher symptom burden (itch) and lower albumin with higher NLR. These findings support further adequately powered analyses to define whether composite inflammatory indices—particularly CAR and NLR—track AD severity independently of age and comorbidity burden, and whether they can serve as pragmatic, routinely available adjuncts for clinical stratification in older adults.

Figure 1A. Neutrophil-to-lymphocyte ratio (NLR) by severity (Age ≥60). Box-and-whisker plot comparing NLR across severity categories

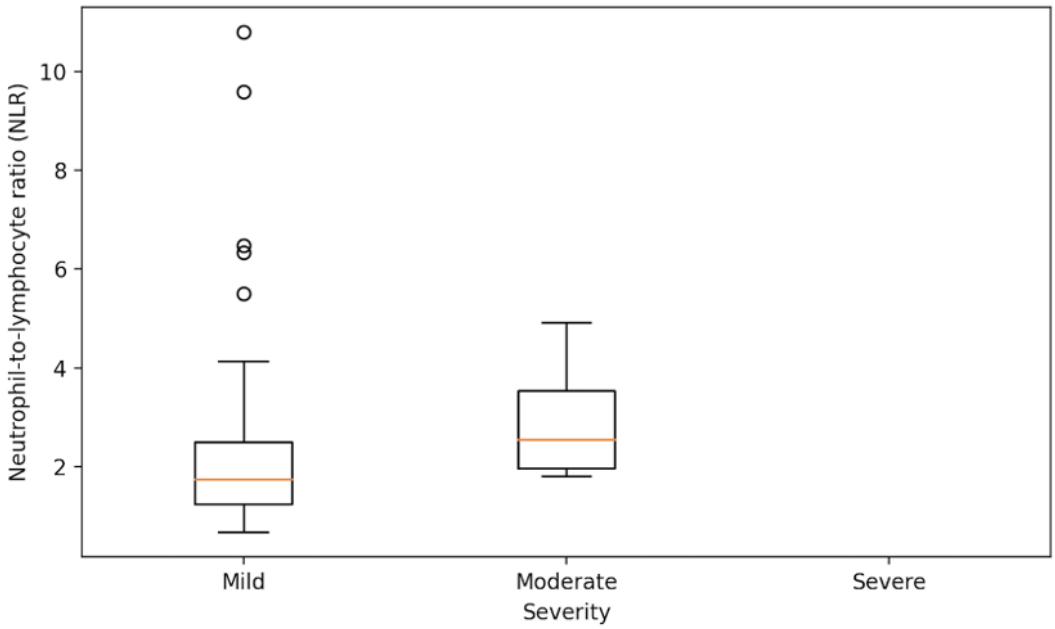


Figure 1B. CRP/Albumin ratio by severity (Age ≥60). Box-and-whisker plot comparing CRP/albumin ratio across severity categories.

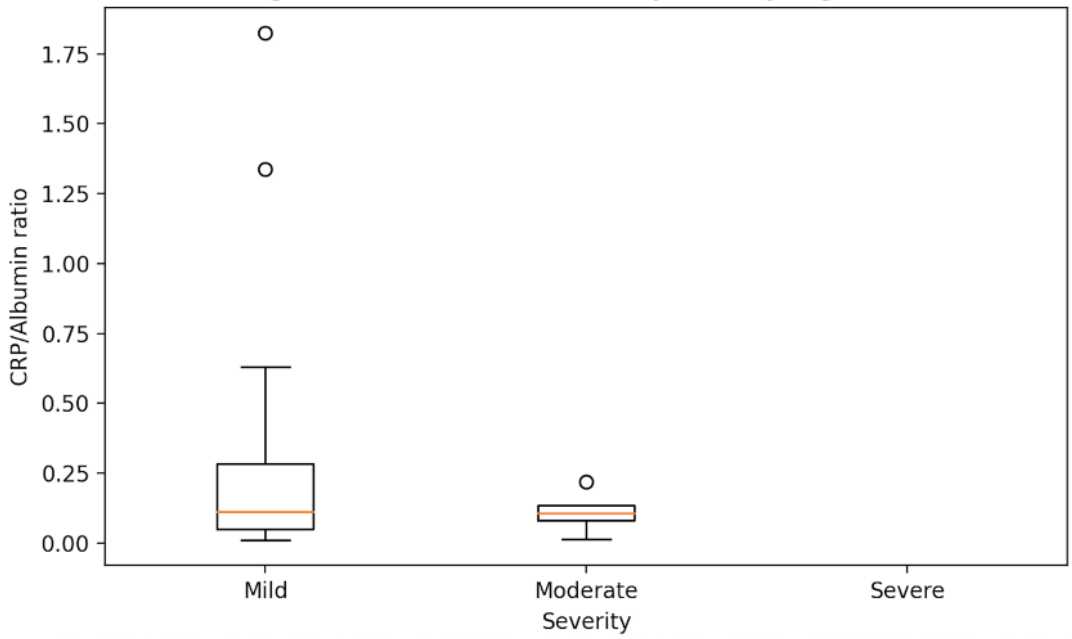
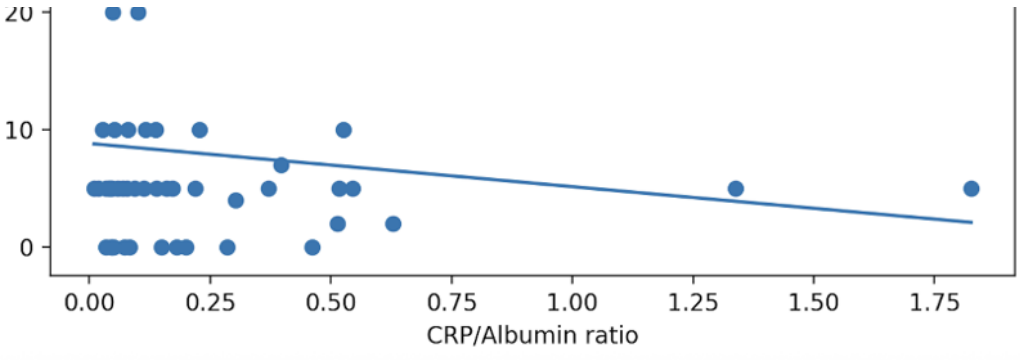


Figure 2. Association between CRP/Albumin ratio and SCORAD (Age ≥60).


20
10
0
0.00
0.25
0.50
0.75
1.00
1.25
1.50
1.75
CRP/Albumin ratio

Abstract N°: ID-1261

Topic: Atopic dermatitis/ Eczema

ENS-002 in atopic dermatitis, a microbiome-safe live biotherapeutic product that suppresses S. aureus growth and virulence

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Introduction

Virulence factors regulated by the agr quorum sensing system in *Staphylococcus aureus*, especially the PSMα toxin and V8 protease, exacerbate atopic dermatitis (AD). PSMα can cause inflammation while V8 protease can induce pruritus. Though *S. aureus* appears in 60–93% of AD patients, the *S. aureus* component of AD's etiology has proven difficult to address. Notably, broad-spectrum antibiotics leave the ecological niche open, enabling rapid recolonization of *S. aureus*. Moreover, antibiotics diminish natural *S. aureus*-subduing mechanisms in other skin commensals. Here we introduce ENS-002, an investigational new product to inhibit *S. aureus* proliferation, quorum sensing by agr, and downstream effectors of agr (e.g. PSMα)—without disrupting the native microbiome. A live biotherapeutic product (LBP), ENS-002 comprises three skin-derived bacterial strains that act in tandem to robustly achieve these therapeutic effects. We hypothesized that topical *in vivo* application of ENS-002 would inhibit *S. aureus* growth and virulence without affecting microbial diversity, thereby facilitating skin recovery.

Materials and Methods

kChip, a powerful coculture screening platform, generated over 5 million microbial combinations each consisting of a *S. aureus* gene expression reporter and either two, three, or seven additional skin bacterial strains. From these cocultures, we identified a three-strain combination optimally suited to specifically inhibit *S. aureus* virulence (*agr*, *psmα*, *saeR*, *ccpA*), stress (*sigB*), and proliferation (*gmk*) in a manner that was robust to any additional strain or nutrient present. Designating this combination ENS-002 ("Ensemble No.2"), we validated the inhibition of *S. aureus* on an *in vitro* epidermis model. ENS-002 subsequently underwent a first-in-human dose escalation study. Eight participants (pts) with mild to moderate AD (EASI 5–21) enrolled into two cohorts. Dosing escalated from QD for seven days at 1x10^7 CFUs applied to a single lesion in Cohort 1, to QD for 14 days at 1x10^8 CFUs applied to all lesions in Cohort 2. Microbiome, eczema severity, and QOL were tracked during the application period and for 28 days after the last dose.

Results

ENS-002 potently suppressed *S. aureus* on the kChip coculture screening system: Virulence genes *agr*, *psmα*, and *saeR* were inhibited by 99.3%, 99.5%, and 91.5%, respectively and growth, as measured by *gmk,* by 97.0%. ENS-002 effects on *S. aureus* were robust to the presence of additional microbial communities (suppressive effects in 95% of additional communities tested were as strong as ENS-002 alone). ENS-002 activity was validated on an *in vitro* human epidermis model where *S. aureus* growth (*gmk*) was suppressed by 96% and virulence (*agr*) by 91%.

In pts with AD, ENS-002 proved safe with no drug related AEs of any grade reported. On 4/4 pts with *S. aureus*-positive lesional skin at baseline, *S. aureus* abundance dropped—and to nearly 0% in 3 of these (See figure 1)—without

compromising microbiome diversity. Encouraging trends were observed in clinical measurements despite the short treatment window, especially in Cohort 2: EASI score improved in 4/4 pts (by 41% on average); peak pruritus (PPNRS) in 4/4 pts (by 1.5 points on average); and IGA in 2/4 pts. In addition, pts consistently reported improvements in daily diary metrics (general eczema feeling, dryness, itchiness, rash, and scaliness).

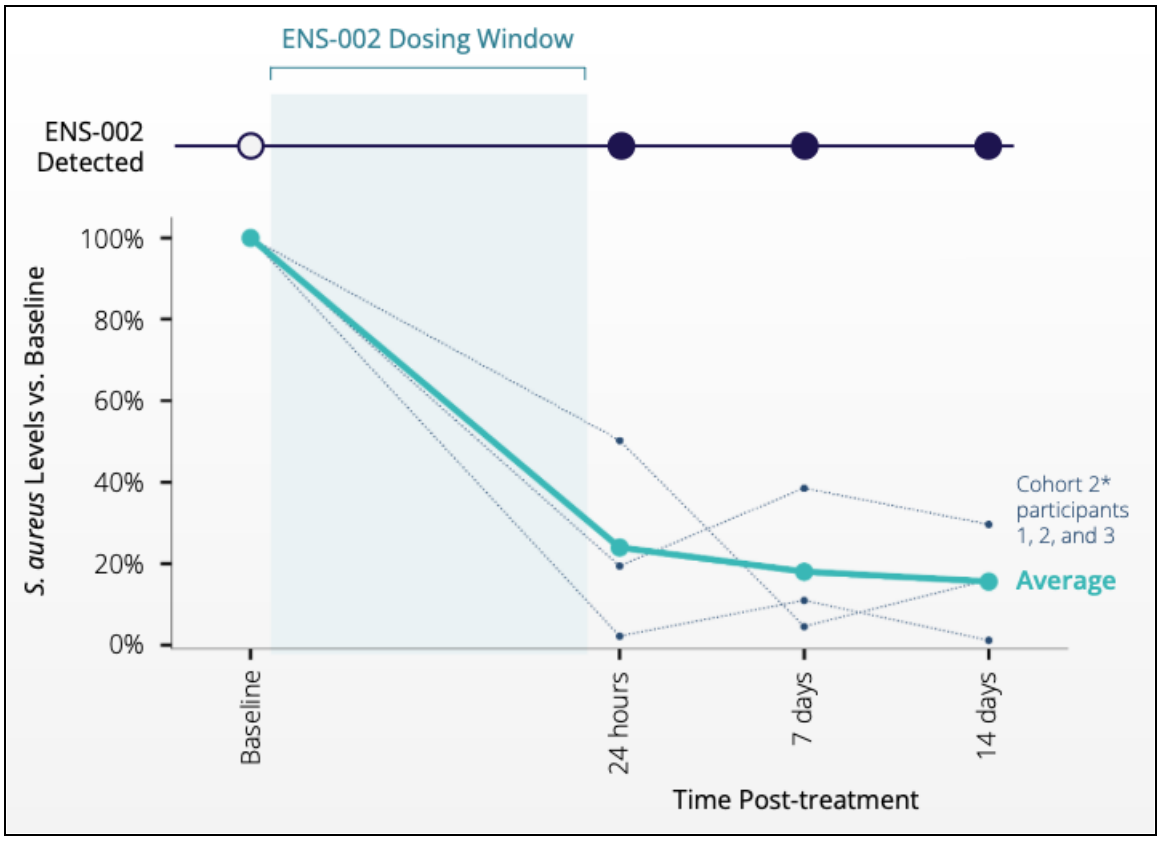

Figure 1: S. aureus levels dropped in cohort 2 participants and remained low for two weeks after dosing of ENS-002 stopped. ENS-002 was detectable for at least 14 days after the last dose.

Conclusions

Our data demonstrate the potential of ENS-002 to counteract *S. aureus* virulence without collateral damage to the skin microbiome. A modality missing from our therapeutic armamentarium, ENS-002 would complement existing approaches to address the complex etiology of AD. The safety profile and clinical improvements observed in the ENS-002 first-in-human study support initiation of a Phase 2a study.

Abstract N°: ID-1274

Topic: Atopic dermatitis/ Eczema

Power Happy AD – Empowerment and Happiness for Patients with Atopic Dermatitis

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Introduction
Atopic dermatitis (AD) is a chronic inflammatory skin disease associated with a substantial psychosocial burden, including reduced emotional well-being, happiness, and quality of life. Digital positive psychology interventions (PPIs) may represent a scalable adjunct to dermatological care; however, evidence from randomized controlled trials in AD remains limited.

Materials and Methods
Power-Happy AD is a randomized, parallel-group online study evaluating a brief digital positive psychology intervention based on the PERMA model (Positive Emotions, Engagement, Relationships, Meaning, Accomplishment) in adults with physician-diagnosed AD. Participants with sufficient German language skills and internet access were randomized to either a five-day online happiness training program or an active control condition involving neutral childhood memory writing. Emotional well-being assessed with the Scale of Positive and Negative Experience (SPANE) was the primary outcome. Secondary outcomes included happiness, life satisfaction (Satisfaction With Life Scale, SWLS), emotional consequences of atopic eczema (Atopic Eczema Score of Emotional Consequences, AESEC), medication adherence (Medication Adherence Report Scale, MARS-D), dermatology-related quality of life (DLQI), and subjective disease severity (POEM). Assessments were conducted at baseline, post-intervention (T1), and one-month follow-up (T2). Continued engagement during follow-up was optional and self-directed.

Results
A total of 148 participants completed baseline assessments (57.4% women; mean age 39.3 ± 13.6 years), reporting mild to moderate subjective disease burden (POEM 12.7 ± 8.1) and moderate emotional well-being (SPANE 4.7 ± 8.3). 92 participants completed post-intervention and 82 completed follow-up assessments. Between-group effects were examined using baseline-adjusted models. Baseline-adjusted SPANE scores at T1 were 7.73 (SE 0.86) in the intervention group and 6.36 (SE 0.84) in the control group, with no statistically significant between-group difference ($p = 0.261$). At T2, adjusted SPANE scores remained comparable between groups ($p = 0.655$). Happiness showed a small post-intervention signal favoring the intervention ($p = 0.061$), which was not sustained at follow-up. Life satisfaction (SWLS) improved modestly over time in both groups without significant between-group differences. Emotional consequences (AESEC) and therapy adherence (MARS-D) were strongly predicted by baseline levels, with no evidence of differential group effects at post-intervention or follow-up. Disease severity (POEM) and dermatology-related quality of life (DLQI) showed small overall improvements with comparable trajectories across groups. Across outcomes, effects were largely driven by baseline levels. Exploratory associations were assessed using Spearman correlation, indicating a moderate inverse association between emotional well-being and disease severity (SPANE–POEM: $\rho = -0.32$, $p < .001$).

Conclusions
A brief digital positive psychology intervention in adults with atopic dermatitis was associated with improvements in emotional well-being and happiness over time but did not demonstrate statistically significant advantages over an active control condition. The findings suggest that structured self-reflection and engagement with well-being–focused content may confer general psychosocial benefits and support the potential of positive psychology. Longer, more intensive, or more personalized interventions may be required to achieve sustained or differential effects beyond those observed with active control participation.

Abstract N°: ID-1316

Topic: Atopic dermatitis/ Eczema

Severe Widespread "Red Face" Variant of Head and Neck Dermatitis Triggered by Topical Corticosteroid Withdrawal: Successful Corticosteroid-Free Strategy with Tacrolimus, Fluconazole, and Methotrexate

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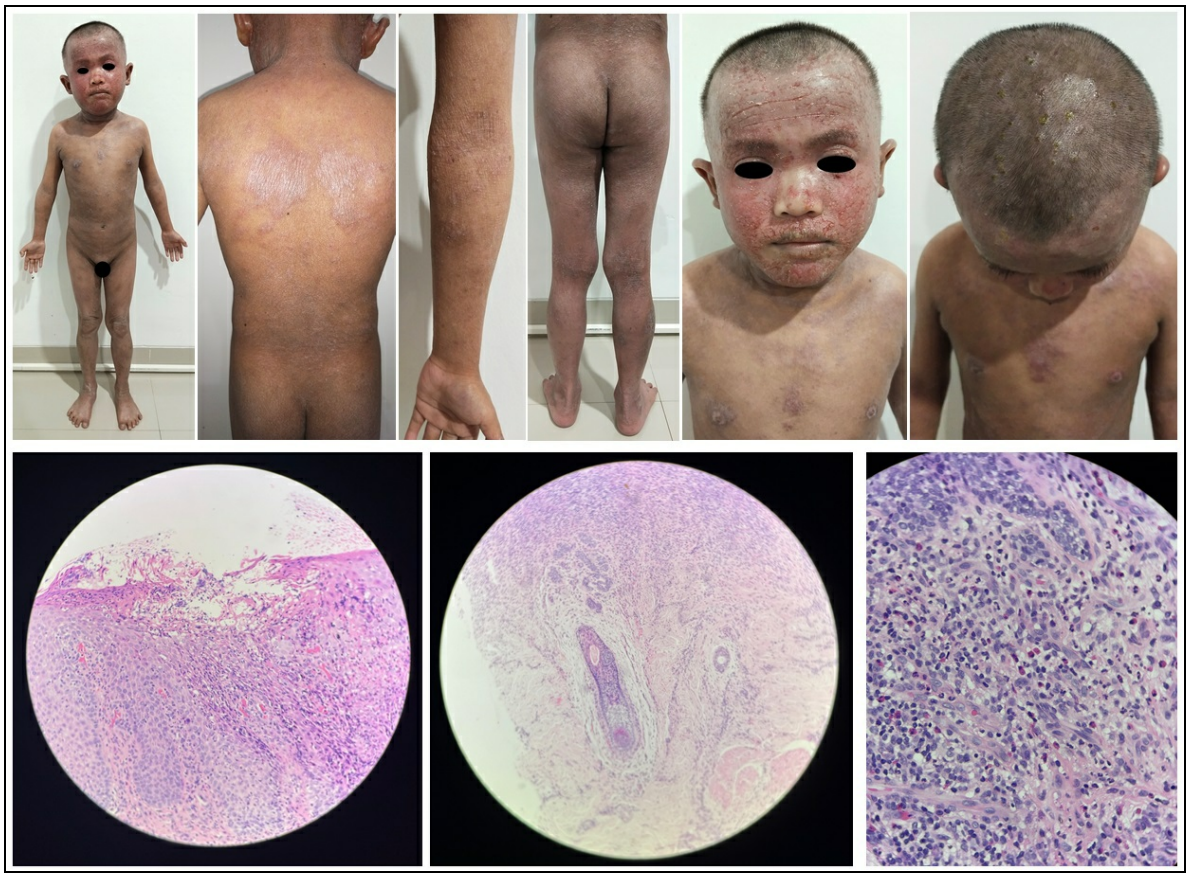
Introduction

Head and neck dermatitis (HND) may represent a severe atopic dermatitis (AD) phenotype precipitated by withdrawal reactions following prolonged overuse of potent facial topical corticosteroids (TCS). Discontinuation can trigger paradoxical erythema, burning sensation, and diffuse “red face” involvement extending beyond the head and neck. Continued corticosteroid exposure may further perpetuate inflammation, creating therapeutic challenges. Corticosteroid-free strategies combining topical tacrolimus, oral fluconazole, and methotrexate may offer a rational alternative. We report a pediatric case of widespread “red face” HND successfully controlled using this combination approach.

Materials and Methods

An 8-year-old boy presented with severe widespread “red face” HND following chronic potent facial TCS use. Clinical findings included confluent facial erythema with headlight sign, scalp scaling with hair thinning, and generalized xerotic, fissured plaques involving trunk and flexures. Baseline SCORAD index was 67.2, corresponded to severe AD. Two 6-mm punch biopsies from the cubital fossa and scalp–forehead border were analyzed using hematoxylin–eosin staining. Histopathology showed psoriasiform hyperplasia, parakeratosis, spongiosis, dense mononuclear lymphocytic and eosinophilic infiltrates, epidermal erosion, and perivascular plasma cells, confirming this severe AD phenotype.

A corticosteroid-free strategy was initiated: topical 0.1% tacrolimus, weekly oral 15 mg methotrexate with folic acid supplementation, and oral clindamycin for secondary infection. Saline wet compresses and topical mupirocin were used initially. Given suspected *Malassezia sp*. contribution to HND, weekly oral 150 mg fluconazole was added, and methotrexate was tapered progressively according to clinical response.



Results

Within one week, exudation ceased and fissures resolved, with marked reduction in erythema and plaque thickness. After withdrawal of antibiotics and compresses, inflammatory signs continued to decline. By week two, facial involvement had substantially improved. Following addition of weekly fluconazole pulses, complete resolution of lesions and pruritus was achieved by week six. Hair density improved in parallel with scalp inflammation control. At one-year follow-up, disease remained stable with only infrequent mild flares responsive to short courses of medium-potency TCS, without recurrence of TCS withdrawal features or widespread erythema.

Conclusions

Severe “red face” HND triggered by TCS withdrawal can be rapidly controlled using a rational corticosteroid-free combination of tacrolimus, methotrexate, and fluconazole. Early recognition of withdrawal phenomena enables targeted intervention and avoids perpetuation of steroid-driven inflammation.

Abstract N°: ID-1323

Topic: Atopic dermatitis/ Eczema

Evaluation of the effects of natural topical treatments on pediatric atopic dermatitis

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Introduction

Atopic dermatitis (AD) in children is frequently associated with intense pruritus and recurrent flares. Parents often use natural topical treatments, particularly vegetable oils, to moisturize or soothe lesions; however, their clinical effectiveness and the risk of skin sensitization remain poorly documented. This study aimed to evaluate the effects of natural topical treatments on AD severity and to identify a potential risk of cutaneous sensitization.

Materials and Methods

A retrospective observational study including 112 children followed for atopic dermatitis was conducted. Data regarding topical treatments used, family history, disease severity assessed by the SCORAD index, and cutaneous manifestations suggestive of sensitization were collected from medical records and a parental questionnaire.

Results

The mean age was 6.8 ± 3.2 years, with 58.9% boys. The mean duration of AD was 3.5 ± 2.1 years, and a family history of atopy was present in 47.3% of cases. Disease severity according to SCORAD was mild (<25) in 38% of patients, moderate (25–50) in 44%, and severe (>50) in 18%.

Forty-two percent of children used vegetable oils, mainly jojoba (40%), calendula (35%), and sweet almond oil (25%). Among these users, 72% experienced a mild improvement in pruritus and skin hydration, with a mean reduction in SCORAD of 7 points over the following three months. However, 6% developed a localized, pruritic, erythematous eruption compatible with cutaneous sensitization. No cases of systemic reactions were reported.

Environmental exposure (tobacco smoke, pets, pollution) did not significantly modify the effect of natural treatments on SCORAD. Topical corticosteroids and standard emollient therapy were maintained as needed.

Conclusions

Natural topical treatments may improve skin hydration and slightly reduce SCORAD in children with atopic dermatitis; however, a low risk of cutaneous sensitization exists. Careful monitoring is therefore recommended, particularly in children with highly reactive skin.

Abstract N°: ID-1336

Topic: Atopic dermatitis/ Eczema

Patient-Derived Skin Organoids for Mechanistic Stratification in Atopic Dermatitis

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Introduction

Atopic dermatitis (AD) is a chronic inflammatory skin disease characterized by epidermal barrier dysfunction, type-2–skewed inflammation, and marked clinical heterogeneity (Langan et al., 2020; Guttman-Yassky & Krueger, 2017). Despite major advances in targeted therapies, variable patient responses highlight the need for improved human-relevant models capable of capturing disease-associated skin biology and supporting mechanistic patient stratification (Silverberg, 2019; Brunner & Guttman-Yassky, 2019). Current in vitro systems remain limited in their ability to reproduce complex epidermal architecture and inflammatory signaling, while access to primary patient biopsies is constrained by scalability and sourcing challenges (Avila Cobos et al., 2020; Ezendam et al., 2021).
Patient-derived skin organoids offer a promising approach to model AD-relevant epidermal pathology in a controlled environment and to investigate skin-intrinsic inflammatory programs (Takeo et al., 2021), Here, we report the establishment of patient-derived AD skin organoids and a functional biomarker pipeline designed to characterize epidermal barrier alterations and inflammatory mediator responses.

Materials and Methods

Hair follcile cells (ORS) were obtained through collaborations with specialized clinical centers as part of a patient-derived cohort of 35 donors. The present study includes organoids generated from 8 selected donors. Epidermal progenitor cells were isolated and expanded, then reprogrammed into induced pluripotent stem cells (iPSCs), followed by directed differentiation into skin organoids.
Organoids were analyzed using a multimodal readout strategy. Epidermal stratification and barrier-related differentiation were evaluated by immunostaining for KRT14, KRT10, and FLG. Proliferation and tight junction integrity were assessed using Ki-67 and CLDN1, while epithelial cohesion was monitored via CDH1 and DSG1.
Inflammatory responses were profiled through quantification of secreted cytokines and chemokines, including alarmins (TSLP, IL-33), pro-inflammatory mediators (IL-1β, TNF, IL-6), and the type-2–associated chemokine CCL17/TARC. Transcriptomic profiling was incorporated to enable global comparison of inflammatory and barrier-related gene expression programs.

Results

Patient-derived skin organoids were successfully generated and maintained under standardized culture conditions, providing a reproducible human-based model of epidermal tissue organization. A comprehensive biomarker panel was implemented to assess key AD-relevant features, including epidermal differentiation, barrier integrity, proliferation, and cell–cell cohesion.
In parallel, a cytokine and chemokine secretion framework was established to capture keratinocyte-associated alarmin responses and downstream inflammatory mediators relevant to AD pathophysiology. These integrated functional readouts provide a basis for the systematic characterization of inflammatory signaling in patient-derived skin organoids.
Together, this platform enables combined structural, secreted, and transcriptomic assessment for future comparative and translational studies.

Conclusions

We establish patient-derived AD skin organoids as a scalable and biologically relevant platform to investigate epidermal dysfunction and inflammatory signaling in a human tissue context. By integrating structural markers, secreted immune mediators, and transcriptomic profiling, this approach provides a robust framework to interrogate disease-relevant pathways and capture patient-specific variability.
This organoid-based system supports future applications in dermatology research, including inflammatory endotyping, biomarker identification, and functional evaluation of therapeutic candidates. Ultimately, such patient-derived models may contribute to improved stratification strategies and accelerate early-stage decision-making in dermatology drug development.

Abstract N°: ID-1352

Topic: Atopic dermatitis/ Eczema

Evaluation of the Effect of Botulinum Toxin Injection in Aggravating or Improving Seborrheic Dermatitis Symptoms: A Prospective, Single-Arm Clinical Trial

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Introduction
Seborrheic dermatitis is a chronic, relapsing inflammatory skin condition often characterized by erythematous patches and scaling, commonly affecting areas rich in sebaceous glands. Despite multiple therapeutic approaches, the role of botulinum toxin (Botox) in treating seborrheic dermatitis remains unclear, with conflicting hypotheses regarding its impact on symptoms. This study aims to assess the effect of botulinum toxin injection on sebum production and its potential to either improve or exacerbate seborrheic dermatitis symptoms.

Materials and Methods
This prospective, single-arm clinical trial involved 20 patients, aged between 26 and 67 years, diagnosed with seborrheic dermatitis on the scalp or face. All patients received botulinum toxin injections primarily intended for facial wrinkles, with concurrent seborrheic dermatitis. The severity of symptoms was assessed using the Seborrheic Dermatitis Area and Severity Index (SDASI), including measures for erythema, scaling, and sebum production, both at baseline and one month after treatment.

Results
The results indicated that, despite a decrease in the average scores of all assessed criteria, including skin erythema, skin sebum, and scaling, no statistically significant improvement was observed in the symptoms of seborrheic dermatitis ($p > 0.05$). The overall severity of symptoms decreased from 7.7 (±7.15) to 6.6 (±6.76) on the scalp and from 4.05 (±4.55) to 3.45 (±4.55) on the facial skin; however, these differences were not statistically significant ($p = 0.528$ and $p = 0.088$, respectively).

Conclusions
The study found no statistically significant improvement in seborrheic dermatitis symptoms following botulinum toxin injection, despite a mild reduction in symptom severity. The findings suggest that botulinum toxin is not an effective therapeutic modality for improving seborrheic dermatitis and emphasize the need for further studies with standardized injection techniques and follow-up intervals to clarify the relationship between botulinum toxin injection and seborrheic dermatitis symptoms.

Abstract N°: ID-1382

Topic: Atopic dermatitis/ Eczema

WHEN STOMA COMPLICATES THE SKIN: PEDIATRIC EROSIVE PAPULO-NODULAR DERMATITIS

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Introduction

Erosive papulo-nodular dermatitis is a rare and poorly recognized clinical entity, considered a variant of irritant contact dermatitis that develops in areas exposed to chronic moisture in the presence of irritant agents, particularly urine or feces. A well-established clinical setting is peristomal skin surrounding urostomies, ileostomies, and colostomies.
We report a rare case of erosive papulo-nodular dermatitis occurring in a child.

Results

This concerns a 3-year-old girl born to consanguineous parents, followed for spina bifida and congenital uropathy, for which she underwent surgery at the age of 15 days with the creation of a urostomy. She presented to the dermatology emergency department with a pruritic papulo-nodular eruption evolving for two weeks in the peristomal area.
Clinical examination revealed firm papulo-nodular lesions, confluent in some areas, with a flat and smooth surface, flesh-colored with focal erosions, hyperpigmented borders, measuring between 0.5 and 1 cm in diameter. The lesions were located in the peristomal hypogastric region.
Dermoscopy showed a pinkish-white background with scattered hemorrhagic dots and a pseudo-verrucous appearance.
The diagnosis of erosive papulo-nodular dermatitis was established. Treatment with topical corticosteroids was initiated, with favorable clinical outcome.

Conclusions

This case illustrates an exceptional and often underrecognized clinical entity, rarely reported in the pediatric population, occurring in the peristomal region on skin that is constantly occluded and subjected to significant maceration.
It highlights the importance for clinicians to consider this rare diagnosis in such a clinical context.

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Abstract N°: ID-1385

Topic: Atopic dermatitis/ Eczema

A Machine Learning Study of Environmental and Socioeconomic Factors Predicting the Risk of Atopic Dermatitis Risk Using Canadian Population-Based Data

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Introduction

Atopic dermatitis (AD) is a chronic inflammatory skin disease with a well-documented sensitivity to environmental conditions, particularly climate and air quality. Although genetic predisposition and early-life factors are important, broader environmental and socioeconomic exposures may also contribute to the risk of AD. Here we assessed whether environmental and social determinants of health (SDOH) factors predict diagnosis of AD using linked population-based and geospatial data.

Materials and Methods

The study design was a matched case–control study using data (2009-2015) from the Canadian Partnership for Tomorrow's Health (CanPath), a nationwide prospective cohort of adults aged 30–74 years. Patients with a self-reported diagnosis of AD were matched 1:1 to control patients; matching variables included age and sex. A six-character residential postal codes of patients were linked to neighbourhood-level environmental exposures curated by the Canadian Urban Environmental Health Research Consortium (CANUE). Environment exposures included climate indicators, air pollutants, greenness, built environment features, nighttime light, and area-level socioeconomic indices. Patient-level variables included demographics, smoking, alcohol consumption, and education. Extreme Gradient Boosting (XGBoost) models were trained using a 70/30 train–test split. Sensitivity analyses incorporated family history of skin disease and comorbidities.

Results

A total of 32,087 patients with AD were matched to controls for a total sample of 64,174 patients. The age distribution was as follows 30-39: 18.8%, 40-49: 28.6%, 50-59: 30.9%, 60-69: 19.8%, and 70+: 1.8%; 74.7% were female. Most commonly reported comorbidities included hypertension, asthma, and arthritis. The initial model containing only environmental and SDOH factors demonstrated very modest discrimination of AD status (AUC: 0.61). Key predictors clustered around climatic conditions, residential context, and socioeconomic factors where cold-related exposures—including lower minimum temperatures, increased snowfall days, and a greater number of cool events—ranked among the most influential predictors, consistent with established epidemiologic evidence linking cold, dry environments to AD exacerbation. Measures reflecting environmental moisture balance, such as soil moisture and annual water deficit, also predicted risk of AD.

Heat-event metrics defined using both average and minimum temperature appeared as protective predicting lower risk of AD. Socioeconomic indicators, including educational attainment and neighbourhood instability, were also predictive of risk of AD, though with less consistent directionality.

In sensitivity analyses, addition of family history and comorbidities substantially improved model performance (AUC: 0.79), driven primarily by coexisting allergic and inflammatory conditions; however, core environmental predictors remained among top predictors.

Conclusions

Although environmental and socioeconomic conditions predicted risk of AD beyond individual clinical factors, we found that family history and comorbidity have strengthened the predictions substantially. Climatic exposures related to cold, moisture balance, and seasonal variation emerged as key predictors, with air pollution playing a secondary role. While the directionality of some predictions warrants cautious interpretation, the overall pattern aligns with known pathophysiologic mechanisms linking environmental stressors to skin barrier dysfunction and inflammation. These findings support a broader conceptualization of AD as a disease shaped by environmental and social context and highlight the potential value of prevention strategies targeting modifiable upstream exposures.

Abstract N°: ID-1413

Topic: Atopic dermatitis/ Eczema

Dupilumab for the treatment of severe atopic dermatitis: Real-world data from the Czech BIOREP registry

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Introduction

Atopic dermatitis (AD) is a chronic inflammatory skin disease associated with severe pruritus, sleep disturbance and a substantial impairment of quality of life. Long-term disease control with conventional systemic therapies remains limited in patients with severe AD. Dupilumab, a fully human monoclonal antibody targeting the interleukin-4 receptor alpha and inhibiting IL-4 and IL-13 signalling, was the first biologic approved for moderate-to-severe AD and has demonstrated sustained efficacy and safety in clinical trials and real-world studies (1-3).

The Czech national registry BIOREP, established in 2005, has been collecting real-world data on biologic therapies, including dupilumab since 2018 (4). The aim of this study was to evaluate the long-term effectiveness of dupilumab in patients with severe AD treated in routine clinical practice.

Materials and Methods

This multicenter, retrospective observational study analysed data from adult patients with severe AD treated with dupilumab and recorded in the Czech BIOREP registry. Disease severity was assessed using the Eczema Area and Severity Index (EASI). Pruritus intensity and sleep disturbance were evaluated using a 10-point Numeric Rating Scale (NRS), a validated patient-reported outcome in AD. Assessments were performed at baseline and during follow-up visits according to routine clinical practice. Treatment effectiveness was evaluated as the proportion of patients achieving EASI50, EASI75, EASI90 and EASI100 responses and as changes in NRS pruritus and sleep scores.

Patients were followed for up to 84 months, with robust patient numbers available for analyses up to 78 months of treatment.

Results

By February 2026, a total of 1,931 patients with severe AD treated with dupilumab were included in the BIOREP registry. Dupilumab led to a rapid and sustained improvement in disease severity. After 4 months of treatment, 73.1% of patients achieved EASI75 and 36.3% achieved EASI90. At 12 months, treatment responses further improved, with 90.9% of patients reaching EASI75 and 61.7% achieving EASI90.

High levels of effectiveness were maintained during long-term follow-up. At 72 months, 94.6% of patients achieved EASI75 and 87.0% achieved EASI90. At 78 months, 100.0% of patients achieved EASI75 and 94.3% achieved EASI90 among patients with available data.

Sustained improvements were also observed in patient-reported outcomes. Median pruritus NRS decreased from 8 at baseline to 1 during long-term follow-up. Median sleep disturbance NRS improved from 7 at baseline to 0, indicating near-complete resolution of sleep impairment in long-term treated patients.

Dupilumab also showed high long-term treatment persistence, with survival probabilities of 93.3% at 6 months, 87.0% at 12 months and 58.9% at 78–84 months.

Conclusions

Real-world data from the Czech BIOREP registry confirm that dupilumab provides robust, rapid and sustained effectiveness in patients with severe atopic dermatitis treated in routine clinical practice. High proportions of patients achieved EASI75 and EASI90 responses, accompanied by clinically meaningful and durable improvements in pruritus and sleep disturbance. Importantly, treatment effectiveness was maintained during long-term follow-up of up to 78–84 months, supporting the long-term benefit of dupilumab beyond controlled clinical trials and high long-term treatment persistence, supporting durable long-term disease control.

Abstract N°: ID-1519

Topic: Atopic dermatitis/ Eczema

Real-world effectiveness and safety of biologics and Janus kinase inhibitors in White vs. non-White patients with moderate-to-severe atopic dermatitis

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Introduction
Advanced treatments have transformed management in atopic dermatitis (AD). However, non-White patients remain under-represented in AD trials and real-world studies. These are limited data suggesting that differences in clinical picture, presence of morbidities, as well as treatment response and tolerability may exist between patients with various skin types. We aimed to compare the efficacy, safety and treatment patterns with all EMA-approved advanced treatments in White vs. non-White patients with moderate-to-severe atopic dermatitis.

Materials and Methods
We conducted a retrospective single-centre study in patients with moderate-to-severe atopic dermatitis in a tertiary dermatology service (Feb–Dec 2025), receiving either of these therapies: dupilumab, tralokinumab, lebrikizumab, baricitinib, abrocitinib and upadacitinib. Patients were stratified by Fitzpatrick phototype into White (I-II) and non-White (IV-VI) cohorts. All patients were established on advanced systemic therapy at baseline. Demographics, comorbidities, and prior systemic treatments were obtained from electronic records. Data were retrospectively extracted and analysed using SPSS. Outcomes included percentage EASI improvement (mean±SD), DLQI change (mean ±SD), EASI≤1 and DLQI≤1, adverse events, infection risk, residual disease distribution and treatment switching patterns.

Results
100 patients were included (White n=50, non-White n=50). Mean age was 36.2 years and 53% were male. Treatment distribution was similar (80% biologics, 20% JAK inhibitors). The most common ethnicities were White-British (42%), followed by Asian/Asian British (31%). Most patients were treatment-refractory with prior ciclosporin exposure (76% White vs. 72% non-White) and methotrexate (60% vs. 60%), as per local UK treatment pathway.

Substantial clinical improvement was observed in both cohorts. Mean percentage EASI improvement was 89.7±19.7 in White patients and 86.3±47.6 in non-White patients. Mean DLQI improvement was 16.6±7.8 versus 12.9 ±7.3. EASI≤1 was achieved in 62% and 56%, and DLQI≤1 in 46% and 36%, respectively. Response variability was greater in non-White patients due to true outliers and occasional negative responses.

Adverse events were common but comparable between groups. At least one adverse event occurred in 42% of White and 48% of non-White patients. Ocular events were the most frequent (32% vs. 36%), with conjunctivitis in 16% and 18%. Infection rates were similar (10% vs. 12%), although eczema herpeticum was more frequent in non-White patients (12% vs. 6%). No serious infections or permanent discontinuations occurred.

Comorbidity burden was high in both groups. Atopic comorbidities affected 72% of White and 80% of non-White patients, while cardiometabolic disease was more frequent in White patients (34% vs. 20%), whereas prior eczema herpeticum and ocular atopy were more common in non-White patients. Multimorbidity affected 66% and 64% respectively.

Residual disease commonly involved face/neck and hands in both cohorts (50-62.5%). Treatment switching occurred more frequently in non-White patients (24% vs. 14%), reflecting refractory disease, prior biologic exposure and ocular adverse events.

Conclusions

Advanced systemic therapies were effective and well tolerated across both White and non-White patients with moderate-to-severe AD. However, distinct real-world patterns emerged, with non-White patients demonstrating greater response variability, higher rates of eczema herpeticum and ocular atopy, and more frequent treatment switching. Differences in comorbidity profiles and treatment sequencing suggest that real-world treatment pathways may vary across skin types and are not fully represented in clinical trials. Limitations include the retrospective single-centre design and modest sample size. Larger prospective studies in diverse skin types are needed to better define efficacy, safety and optimal treatment strategies in AD.

Abstract N°: ID-1533

Topic: Atopic dermatitis/ Eczema

Atopic dermatitis in children: Epidemiological, clinical, environmental, and therapeutic profile

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Introduction

Atopic dermatitis is a common inflammatory skin disease in children, characterized by recurrent pruritic flares. Environmental factors and therapeutic strategies play a key role in the frequency and severity of exacerbations. This study aimed to describe the epidemiological, clinical, environmental, and therapeutic profile of pediatric atopic dermatitis.

Materials and Methods

A retrospective descriptive study was conducted including 112 children followed for atopic dermatitis between January 2020 and October 2025.

Results

Among the 112 children with atopic dermatitis, the mean age was 6.8 ± 3.2 years, with a male predominance (58.9%). The mean disease duration was 3.5 ± 2.1 years. A family history of atopy was present in 47.3% of patients, mainly asthma (21.4%) and allergic rhinitis (18.7%). Eczematous lesions were predominant (92%), associated with intense pruritus in 88% of cases and secondary skin infections in 21%. According to the SCORAD index, disease severity was mild (<25) in 38.4% of patients, moderate (25–50) in 44.6%, and severe (>50) in 17%. The mean number of flares was 3.2 ± 1.1 per year, with a winter peak observed in 56% of children.

Regarding environmental exposure, 34.8% lived in households with parental smoking, 41.9% in highly polluted areas, 27.7% had domestic pets, and 18.8% were exposed to mold. In addition, 63% experienced worsening during climatic changes and 56% showed a marked seasonal influence. Treatment was based on daily emollient use in all children (100%), topical corticosteroids during flares (76%), and oral antihistamines in 15% of cases to control pruritus. Complete resolution was observed in 88% of patients, while 12% required prolonged follow-up with therapeutic adjustment.

Conclusions

Pediatric atopic dermatitis is strongly influenced by modifiable environmental factors. Appropriate management, including regular emollient use, topical treatments, and preventive measures, helps reduce flare frequency and severity and improves clinical outcomes.

Abstract N°: ID-1557

Topic: Atopic dermatitis/ Eczema

Dupilumab in JAK-Inhibitor Non-Responders: A Case Report in Severe Atopic Dermatitis

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Introduction

Janus kinase (JAK) inhibitors such as Abrocitinib and Upadacitinib have demonstrated efficacy by inhibiting multiple cytokine signaling pathways; however, a subset of patients fails to achieve sustained disease control. This highlights the heterogeneity of AD pathophysiology and the need for individualized, pathway-targeted therapeutic strategies. Dupilumab, a monoclonal antibody targeting the interleukin-4 receptor α (IL-4Rα), blocks IL-4 and IL-13 signaling—key drivers of Th2 polarization, IgE class switching, and epidermal barrier impairment—representing a pathway-specific therapeutic approach.

Materials and Methods

We report a 45-year-old male with a 30-year history of severe atopic dermatitis, a positive family history in first-degree relatives, and frequent disease exacerbations. Previous therapies including emollients, topical and systemic corticosteroids, and phototherapy were ineffective. Initial treatment with Abrocitinib 200 mg daily yielded a transient clinical improvement, followed by progressive disease worsening (EASI 12.2, BSA 19.5%, NRS-5 pruritus, IGA 3), consistent with secondary loss of response. Switching to Upadacitinib 30 mg daily resulted in only short-lived benefit with rapid recurrence of inflammatory activity. Given the refractory disease course, extended diagnostic evaluation was performed. Allergy testing revealed positive patch test reactions to PPD and Caine mix and a strong positive prick test to cat allergen, indicating concomitant allergic sensitization. Skin biopsy findings were consistent with the diagnosis of atopic dermatitis and excluded mycosis fungoides and other underlying inflammatory or lymphoproliferative dermatoses. Based on persistent disease activity and immunologic features, treatment with Dupilumab was initiated (600 mg loading dose followed by 300 mg biweekly).

Results

The patient demonstrated marked clinical improvement following Dupilumab initiation, with sustained disease control and significant symptom reduction approaching one year of therapy. The response was associated with stabilization of inflammatory activity and improved disease burden, indicating durable therapeutic efficacy. JAK inhibitors block intracellular kinase activity for multiple cytokines, but their effects can be limited by redundancy and compensation within the inflammatory network of AD. In contrast, Dupilumab directly antagonizes the IL-4Rα, reducing IL-4/IL-13 mediated signaling and downstream IgE class switching—potentially explaining its effectiveness in this JAK inhibitor non-responder.

Elevated total IgE and a severe cat allergy might contribute to persistent Th2 inflammation. Cat allergen (Fel d 1) exposure has been associated with sensitization and atopic disease even in indirect exposures, highlighting a possible extrinsic trigger for disease exacerbation.

Conclusions

This case illustrates the successful use of Dupilumab in a patient with severe AD unresponsive to JAK inhibition. It supports the concept that direct IL-4/IL-13 pathway blockade may provide superior disease control in selected patients, particularly in those with strong Th2 polarization, elevated IgE-mediated sensitization, and allergic comorbidities. Dupilumab may represent a biologically rational therapeutic alternative in JAK-inhibitor non-responders, emphasizing the importance of immunophenotype-guided treatment selection. Further studies are needed to delineate predictors of non-response to JAK inhibition and the role of allergen-mediated triggers in treatment outcomes.

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Topic: Atopic dermatitis/ Eczema

Sleep disturbances in pediatric atopic dermatitis: Correlation between lesion severity and sleep quality

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Introduction

Atopic dermatitis in children is frequently associated with intense pruritus, which can significantly disrupt sleep. The exact impact of lesion severity on sleep quality remains poorly quantified. This study aimed to evaluate the relationship between the severity of atopic dermatitis and sleep quality in a pediatric population.

Materials and Methods

A cross-sectional study was conducted including 112 children with atopic dermatitis. Lesion severity was assessed using the SCORAD score, and sleep quality was evaluated using the Children's Sleep Habits Questionnaire (CSHQ).

Results

The mean age was 6.8 ± 3.2 years, with 58.9 % boys. The mean disease duration was 3.5 ± 2.1 years, and 47.3 % had a family history of atopy, mainly asthma (21.4 %) and allergic rhinitis (18.7 %). Eczematous lesions predominated (92 %), with intense pruritus in 88 % and superinfections in 21 %. Environmental exposures included parental smoking (34.8 %), high pollution areas (41.9 %), domestic animals (27.7 %), and mold exposure (18.8 %). Poussées were exacerbated by climatic variations in 63 % and showed seasonal influence in 56 %.

SCORAD severity was mild (<25) in 38 %, moderate (25–50) in 44 %, and severe (>50) in 18 %. Poor sleep quality (CSHQ ≥41) was observed in 61 % of patients, mainly due to nighttime awakenings (58 %), difficulty falling asleep (42 %), and daytime sleepiness (35 %). A significant positive correlation was found between SCORAD and CSHQ scores ($r = 0.63$; $p < 0.001$), indicating that greater AD severity was associated with worse sleep quality. Winter exacerbations and intense pruritus were strongly linked to nocturnal disturbances ($p < 0.01$). Environmental exposures (smoking, pets, pollution) showed no significant effect on sleep.

Conclusions

In children, the severity of atopic dermatitis directly affects sleep quality. Management should include sleep assessment and targeted strategies to reduce nocturnal pruritus and improve rest.