Abstract Highlights

The following highlights showcase late-breaking research presented at the European Academy of Dermatology and Venereology (EADV) Congress 2024. Topics covered ranged from the role of AI in detecting skin conditions such as psoriasis, multimorbidity, and the effect of eczema on both patients' mental health and quality of life. Additionally, emphasis was placed on the current status of treatments and diagnostic tools for atopic dermatitis.

AI Enhances Early Detection of Generalised Pustular Psoriasis

GENERALISED pustular psoriasis (GPP) is a rare but severe skin condition that is often underdiagnosed, leading to delayed treatment for many patients. However, timely and accurate diagnosis is crucial given that, when left untreated, GPP flares can become life-threatening.

AI has shown promise by analysing data from patient records to recognise complex patterns within large datasets, which can aid in the early identification of GPP.

This study, presented at the EADV Congress 2024, explored the use of AI to identify early indicators of GPP by analysing patient data from two large sources, the DataDerm clinical data registry and the OM1 Real-World Data Cloud. Patients with an eventual GPP diagnosis, particularly those with prior psoriasis diagnoses, were identified, and their health histories were examined. An AI tool was employed to analyse these records, focusing on treatment patterns as potential signals for early GPP identification.

The study examined a cohort of 10,988 patients with GPP, and the AI tool, when using all available patient data, achieved an area under the curve of 0.79 in identifying patients with GPP. Even when the AI tool was limited to evaluating coded medication histories alone, it maintained acceptable accuracy, with an area under the curve of 0.70. The AI's ability to distinguish potential GPP cases from other psoriasis types was linked to distinct patterns in specific psoriasis treatments that often preceded a GPP diagnosis.

These findings demonstrate the potential of AI to aid in the early identification of GPP by examining patient treatment histories. The AI tool's ability to detect unique treatment patterns highlights that patients who develop GPP are often managed differently from those with other forms of psoriasis, even before their GPP diagnosis, an insight that could improve early diagnosis and timely intervention for this patient group. With new treatment options now available, earlier diagnosis facilitated by AI could help alleviate patient suffering by ensuring they receive appropriate and effective treatment sooner.

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Long-Term Benefits of Dupilumab for Patients with Atopic Dermatitis

ONE of Europe's largest atopic dermatitis (AD) registries, the TREATgermany registry, has released promising new findings on the long-term efficacy of dupilumab in treating moderate-to-severe AD, presented at the EADV Congress 2024.

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The registry, established in 2016, enrolled 1,849 patients across 65 recruitment sites by July 2023. Of these, 294 patients who began dupilumab treatment during or after joining the registry were followed for 2 years, offering valuable insights into the therapy's sustained impact in real-world settings.

Patients in the study (mean age: 40.9 years; 42.2% female) had high disease activity at the start of treatment, with an average Eczema Area Severity Index (EASI) of 21.0 and significant impacts on quality of life, reflected by a Dermatology Life Quality Index (DLQI) score of 13.3. The majority had previously received systemic therapy for AD, including glucocorticoids (61.2%) and cyclosporine (36.1%).

Over the 2-year follow-up, dupilumab showed significant improvements in patient outcomes. By Month 24, the average EASI score dropped to 3.1, while DLQI decreased to 3.5, indicating a substantial improvement in patients' quality of life.

Additionally, the mean Patient-Oriented Eczema Measure (POEM) score, which tracks symptom frequency and severity, fell to 6.2. The study reported that 78.8% of patients achieved EASI 75 (a 75% improvement in EASI score), and 51.2% reached EASI 90, demonstrating high efficacy.

A sensitivity analysis that accounted for patients discontinuing dupilumab, treating them as non-responders, still showed strong results, with EASI 75 and EASI 90 rates of 65.6% and 42.7%, respectively. In terms of safety, 36.4% of patients reported ocular issues, with 29.9% experiencing conjunctivitis. While most cases were mild-to-moderate, 13 patients discontinued dupilumab due to these side effects.

Overall, these findings underscored dupilumab's long-term effectiveness in reducing disease severity and improving quality of life for patients with AD in routine care settings.

Hand Eczema Effects on Mental Health and Quality of Life

THE RESULTS of a systematic review and meta-analysis presented at the EADV Congress 2024 have revealed severe psychological and quality of life impacts experienced by patients with hand eczema (HE).

The study was conducted by researchers from Copenhagen University Hospital, Denmark, and analysed data from 81 studies, encompassing 17,835 patients with HE and 31,541 controls, to assess the extent of anxiety, depression, and quality of life impairments associated with the condition.
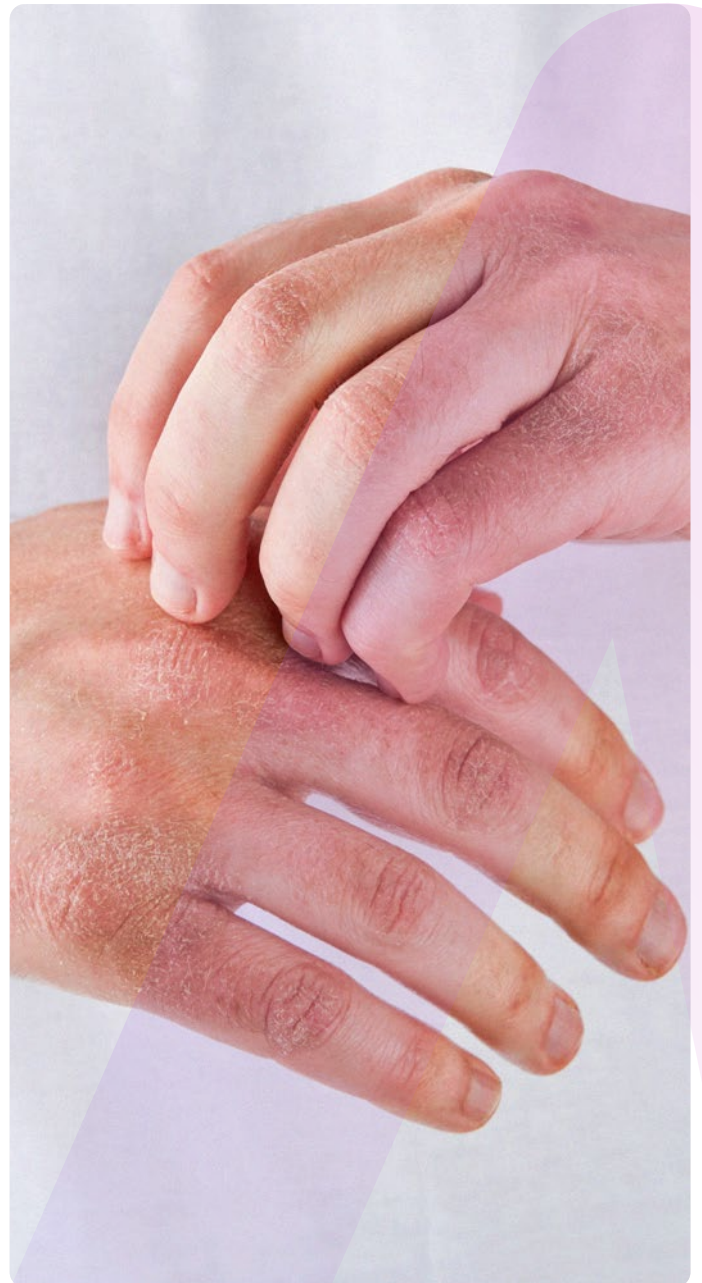
The results revealed that hand eczema has a moderate-to-severe effect on patients' quality of life, with a weighted mean Dermatology Life Quality Index (DLQI) score of 10.66, indicating a significant impact.

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A strong correlation was observed between the severity of HE (measured by the Hand Eczema Severity Index, or HECSI) and the deterioration in quality of life, with a Spearman's rank correlation of 0.76. Patients with HE also scored significantly lower on the EQ-5D-VAS, compared to controls (68.03 versus 80.63; p<0.00001).

The study also found that patients with HE had higher levels of anxiety, with a mean score of 7.4 on the Hospital Anxiety and Depression Scale (HADS), compared to 5.8 for controls (p=0.0008). Depression scores were not significantly different between the two groups. However, the study revealed that patients with HE have an increased risk of anxiety (odds ratio: 2.60) and depression (odds ratio: 4.00). Additionally, these patients faced a higher prevalence of suicidal ideation compared to healthy controls (14.2% versus 8.3%).

The researchers concluded that HE significantly affects quality of life and is associated with higher risks of anxiety, depression, and suicidal thoughts. They called for more extensive studies to better understand these associations and to develop targeted interventions for patients with HE.

Atopic Dermatitis Linked to Increased Multimorbidity

NEW RESEARCH presented at the EADV Congress 2024 has shown that participants with atopic dermatitis (AD), especially moderate-to-severe disease, are at higher risk for having multimorbidity (MM).

The study aimed to assess the prevalence of MM and its association with AD in the Dutch adult general population, as well as the impact of MM on health-related quality of life in those with AD. Conducted within the Lifelines cohort, this cross-sectional study included 37,193 participants, of whom 3,242 (8.7%) reported having AD.

Data were collected from questionnaires, medication records, and clinical assessments, focusing on the lifetime prevalence of 52 diseases grouped into 15 domains. AD was self-reported and physician-diagnosed, with severity measured using the Patient Oriented Eczema Measure (POEM). MM was defined as the presence of two or more diseases, excluding AD.

The prevalence of MM was found to be 64.9% in those with AD, compared to 52.4% in those without AD, with the rate increasing based on AD severity: 62.4% in mild cases and 68.4% in moderate-to-severe cases. The most common comorbidities in the AD group were atopic diseases (48.4%), haematologic diseases (25.5%), and respiratory diseases (21.2%). Individuals with AD had 1.95 times higher odds (95% CI: 1.81–2.11) of having MM than those without AD, with higher odds in moderate-to-severe cases (odds ratio: 2.49) compared to mild cases (odds ratio: 1.73). The odds increased with the number of comorbidities, reaching 4.08 for individuals with five or more additional conditions.

Health-related quality of life measures also showed significant differences in those with AD and MM, especially with regard to mental health. Multimorbid individuals with AD had a lower mental component score and lower self-reported health scores.

These findings suggest that individuals with AD, particularly those with severe disease, are at a higher risk of MM and poorer mental health outcomes, warranting further investigation into the role of systemic inflammation in AD.

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The Predictive Factors for Cardiovascular Disease in Dermatomyositis

RESEARCH presented at the EADV Congress 2024 has shown that Raynaud's phenomenon, longer disease duration, anti-Ro 52 antibodies, elevated erythrocyte sedimentation rate (ESR), and elevated lactate dehydrogenase (LDH) are significant predictors of dilated cardiomyopathy (DCM) and congestive heart failure (CHF) in patients with dermatomyositis.

Dermatomyositis is a rare autoimmune inflammatory myopathy that has been linked to an increased risk of cardiovascular diseases, although prior studies have not exclusively focused on patients with dermatomyositis. Therefore, researchers sought to investigate the predictive factors contributing to the development of cardiovascular disease in this patient population.

This retrospective study reviewed medical records of patients with adult-onset dermatomyositis from two tertiary care centres in Ontario, Canada, between January 2010–September 2023. The analysis included a total of 114 patients, with a median age of 58 years (range: 21–99), who were predominantly female (80%). Among the cohort, 16 patients (14%) developed DCM and/or CHF. Statistical analysis revealed that Raynaud's phenomenon, longer disease duration, anti-Ro 52 antibodies, and elevations in ESR and LDH were significantly associated with the development of DCM/CHF. Elevated ESR, a marker of systemic inflammation, and elevated LDH, indicative of tissue damage, emerged as key predictive biomarkers.

The results of the study highlight the need for clinicians to closely monitor patients with dermatomyositis for early signs of cardiovascular complications, especially those with the identified risk factors. Future studies should aim to elucidate the underlying mechanisms that link dermatomyositis to cardiovascular outcomes, and refine risk assessment models, ultimately improving patient care and outcomes in this patient population.

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