



A Comprehensive Review on the Management of Eczema: Current Trends and Emerging Herbal Therapies

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Abstract

Eczema is a widespread, recurrent, chronic inflammatory skin condition affecting millions worldwide. It is most common in early childhood and is characterized by skin redness and irritation. Emollients are the cornerstone of treatment, and anti-inflammatory medications like topical corticosteroids should be used to prevent and cure the illness. The Best Emollients for Eczema (BEE) study found that all emollient groups showed improvement in eczema symptoms during the 16-week primary outcome period. Atopic eczema can have a significant financial impact and can affect people of all ages and races. The diagnosis of eczema is based on the increase in total or serum IgE levels specific to allergies, with the term "intrinsic" (non-IgE-associated) AE coined to differentiate it from "extrinsic" (IgE-associated) forms.

Keywords: Eczema; Inflammatory; IgE

Introduction

Millions of people throughout the world suffer with eczema, a widespread, recurrent, chronic inflammatory skin condition. About 20% of children experience onset, which often occurs in early childhood. Eczema has no known treatment, but it can be managed. on symptom management and reducing the severity of the illness. International recommendations state that emollients are the cornerstone of any treatment for eczema, and their liberal application is suggested.

In every condition even the most minor ones, anti-inflammatory in addition to emollients, medications such topical corticosteroids should be used to prevent and cure illness. Flares Because of their viscosity, 'leave-on' emollients come in four primary varieties This ambiguity may cause parents to feel abandoned and lead to noncompliance to deteriorating eczema and treatment plans.



Figure 1: Eczema.

The first direct comparison of the efficacy of lotion, cream, gel, and ointment forms of emollient was the Best Emollients for Eczema (BEE) study. All emollient groups saw an improvement in eczema symptoms during the 16-week primary outcome period, however there was no proof that one type of emollient improved scores more than another Primary care physicians frequently treat patients with atopic eczema, a persistent recurrent illness.

It is most common in early childhood and is characterized by skin redness and irritation. It is frequently dismissed by medical practitioners as a minor issue that will be resolved, and it may be obscured by other linked disorders like asthma.

Nonetheless, eczema symptoms can vary from a tiny, mildly itchy patch to a more extensive, painful rash that can be physically extrusive and last for years. Atopic eczema sufferers may have trouble interacting with others and being productive because of handicap or disfigurement in spite of the health experts' and care-takers' significant engagement.

Additionally, atopic eczema can have a significant financial impact. A number of criteria have been established for the diagnosis of AE. For the diagnosis of AE, there is no pathognomonic test biomarker because the most common characteristic, the increase in total or Serum IgE levels specific to allergies. The name "intrinsic (non-IgE-associated) AE" was coined to differentiate it from "extrinsic" (IgE-associated) forms of AE since not all individuals with AE exhibit the detection of IgE-mediated sensitization in the skin test.

This terminology dispute continues to this day and has real-world implications for particular avoidance tactics in management of this illness. Eczema is a prevalent skin ailment that plays a significant role in atopic disorders.

It impacts people of all ages and races, It typically starts early in infancy, even before other atopic disorders like hay fever or asthma. The hallmark scaly rash and intense itching are essential indicators of eczema.

Epidemiology

Epidemiology of Childhood Atopic Eczema: Prevalence and Incidence Atopic eczema (also known as atopic dermatitis) is a common skin condition in children, but estimating its prevalence and incidence is challenging due to methodological issues in many studies.

The difficulties arise from factors such as small sample sizes, lack of control groups, inconsistent diagnostic criteria, and the predominance of cross-sectional rather than longitudinal studies. Ad-

ditionally, differences in age ranges, diagnostic methods, and study designs make it hard to directly compare findings across studies. Despite these challenges, large-scale longitudinal studies, particularly from the UK, provide valuable insights into the epidemiology of childhood atopic eczema.

Prevalence

Population-based research suggests that the cumulative prevalence of atopic eczema in children ranges from 5% to 20% by the age of 11 in developed countries. This wide range is partly due to differences in study design and diagnostic approaches. Several significant studies have attempted to estimate the prevalence. Williams (UK): Estimated that the cumulative prevalence of atopic dermatitis is between 5% and 20% by age 11, based on available population data. Ninan and Russel (Scotland): Their longitudinal study of Scottish schoolchildren aged 8-13 years found an increase in eczema prevalence from 5.3% in 1964 to 12% in 1989. Schultz, *et al.* (Denmark): A study of Danish atopic twins revealed a rise in prevalence from 3% in the 1960-64 birth cohort to 10% in the 1970-74 cohort for children aged 0-7 years. Taylor, *et al.* (UK): Using data from three national British birth cohorts (1946, 1958, and 1970), this study showed an increase in prevalence from 5.1% in 1946 to 12.2% in 1970, although the methods varied slightly across the cohorts. Despite these increases, some studies in countries like Finland report lower prevalence rates compared to those in the UK and Denmark.

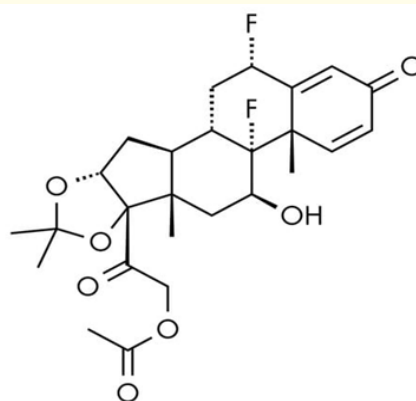


Figure 2

Incidence and trends over time

There has been a noticeable increase in the prevalence of childhood atopic eczema over the past few decades. This trend is consistent across several studies, although the extent of the increase varies. The rise in prevalence is likely due to a combination of factors, including changes in diagnostic criteria, increased awareness, and potentially environmental and lifestyle changes.

Social and demographic patterning

Atopic eczema also exhibits social patterning, meaning that its prevalence may vary according to socioeconomic and environmental factors, though the specifics of these patterns are still under investigation. Studies have indicated that children from higher socioeconomic backgrounds in some countries might show higher rates of atopic eczema, possibly due to factors like urban living, increased hygiene, and exposure to allergens.

Overall, while the exact prevalence and incidence of childhood atopic eczema vary by region and study design, there is clear evi-

dence of an increasing trend in developed countries over the last few decades. The condition remains a significant public health issue, particularly in early childhood. The UK 1958 National Child Development Study found that among the 8279 children followed up at years 7, 11, and 10, eczema was nearly twice as common in children in high socioeconomic categories.

Recent studies have revealed sex differences, albeit results have not always been consistent. Factors in atopic dermatitis In the British birth cohort of 1958, for instance, 3.9% of girls and 2.4% of males had eczema at age 16, while in the British cohort of 1970, 2.8% of females and 4.9% of men had the condition. Additionally, studies indicate that atopic eczema incidence differs with age. According to data from the National Child Development Study in the UK, which was based on the 1958 birth cohort.

Statics of eczema

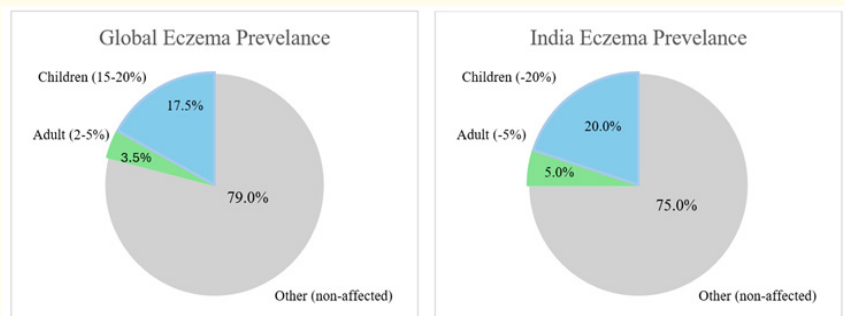


Figure 3

- Children (15-20%):** This category could represent a specific group of individuals in a study or population affected by a particular factor, condition, or behavior (e.g., a health issue, behavior pattern, or demographic feature). The percentage (20%) indicates that one-fifth of the total population is children.
 - Adults (-5%):** The negative sign in front of “5%” is unusual and could suggest a decrease in adult numbers or a decrease in a specific variable related to adults. For example, it might imply a reduction in the adult population due to a certain factor, or it could indicate a net loss or decline (such as mortality, migration, or some form of impact specific to adults).
 - Other (Non-affected):** This group likely refers to individuals who are unaffected by the condition, event, or variable under study.
- If this is part of a theoretical model, the negative percentage could be used to illustrate a shift or imbalance in the population.
- These individuals make up the remainder of the population (presumably 75% if the total must sum to 100%). This group might serve as a baseline or control group in a study, showing how the affected individuals (children and adults) compare to those who are not affected.

Dosage forms

S. No	API Drug	Brand Name	Types	Dose
1.	Dupilumab	Dupixent	Injection	300mg/2ml
2.	Mometasone Furoate	matoson	Cream	15g
3.	Clobetasol	Tenvoate	cream	30g
4.	Desonide	Desowen	Cream	10g
5.	Triamcinolone	Trianex	Cream/ointment	454g
6.	Cyclosporine	Sandimmun	Injection	50g/ml
7.	Locoid	Locoid, lipocream	Lotion/cream	30ml
8.	Flucinonide	FluocinonideE	Cream/gel	60g
9.	Prednisone	Rayos	Tablet	5mg
10.	Pimercolimus	ELIdE1	Cream	30g
11.	Dexamethasone	Decadron	Tablet	0.5mg
12.	Halobetasol Propionate	Bryhali Lexette	Cream/lotion	30g
13.	Kenalog	Cinolar, oralone	Injection	10ml
14.	Clobetasol	Cloderm	Cream	15g
15.	Clobetasol Propionate	Cutivate	Cream	30g
16.	Dexamethasone	Dextowin	Injection	4mg/ml
17.	Flurandrenoide	Cordron	Cream	120g
18.	diflorasone	Apexicone	Cream	60g
19.	Hydrocorteseone	Itch x lotion	Lotion	50ml
20.	Doxepin hydrochloride	Sinequan	Capsule	75mg

Table 1: Dosage forms Available in market.

Patents

S. No.	Authors	Title	Patent	Submission Date	Publication Date
1.	Yakun wu	Traditional Chinese Medicine composition for treating urticaria, eczema and allergic Constitution	US20240325480A1	2024-06-07	2024-10-03
2.	Ashish.bansal, jingdong chao	Methods for treating hand and foot dermatitis by administrating anil-4r Antagonist	WO2024097714A1	2023-11-01	2024-05-10
3.	Astuo.tanimoto, yoshifumi Ueda,yukai,kimoto, watru amano	Skin barrier function improving agent	US20240075037A1	2023-02-01	2024-03-07
4.	Tamas Biro, colin stott, vincezo, Di marzo	Use of cannabinoids in the treatment of inflammatory skin disease	US11413266B2	2016-09-29	2022-08-16
5.	Lada Rasochova, Michelle kEm	Composition and method for treating eczema	US20220273595A1	2022-05-17	2022-09-01
6.	Gunther Birziniaks, christod p, miheal H.	Improved treatment of atopic dermatitis with tradipitant	AU2021227900A1	2021-02-24	2022-09-15
7.	Kyoki Endo	Method for treating dermatitis and improving skin texture using B-type natriuretic peptides	US10946072B2	2021-03-16	2021-03-16
8.	Gene colice, Rene van Der merwe	Methods for treating atopic dermatitis and related disorders	CA309745A1	2020-10-30	2021-09-23
9.	Allen radin, neil Graham, Bolane Akinlade, Gianluca pirozzi	Methods for treating severe atopic dermatitis by administrating 1L-4R inhibitor	US10485844B2	2016-11-26	2019-11-26
10.	Michael E. Silver	Method of treating eczema	US10111851B2	2017-06-27	2017-10-12

Table 2

Conclusion

Implications Professional Practice in Health Policy and The limitations of community-based research on the effects of eczema on children's and caregivers' physical, mental, and social health have been brought to light in this work. Nonetheless, the highlighted research indicates that these effects are more substantial than people who create public health and provide health and social care in primary and secondary settings frequently recognize. Policy. The reviewed study has also emphasized the importance of family and lay care in managing childhood atopic eczema. It also highlights how caretakers' decisions on management techniques are reliant [1-26].

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