



A Review on Eczema and its Impact on Quality of Life: Psychological and Social Dimensions

Kamini¹, Dhatri Sahu², Tanu Engle², Sangeeta Manjhi², Pratibha Kanwar², Harish Sharma³ and Gyanesh Kumar Sahu^{2*}

¹Rungta Institute of Pharmaceutical Sciences, Kohka, Kurud, Bhilai, India

²Rungta Institute of Pharmaceutical Sciences and Research, Kohka, Kurud, Bhilai, India

³School of Pharmacy, Anjaneya University, Raipur, India

***Corresponding Author:** Dr. Gyanesh Kumar Sahu, Professor and Dean, Rungta Institute of Pharmaceutical Sciences and Research, Kohka, Kurud, Bhilai, India.

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Gyanesh Kumar Sahu., *et al.*

Abstract

Eczema, also known as atopic dermatitis, is a chronic inflammatory skin disorder characterized by dry, itchy, and inflamed skin. It affects individuals of all ages, with a significant prevalence in children, and is often associated with a history of allergies or asthma. The pathophysiology of eczema involves a complex interplay of genetic, environmental, and immune factors, including skin barrier dysfunction and an overactive immune response. This review provides a comprehensive overview of eczema, exploring its causes, clinical presentations, and diagnostic approaches. It also delves into current treatment options, ranging from topical therapies such as corticosteroids and calcineurin inhibitors to newer systemic biologic treatments. Additionally, the impact of eczema on patients' quality of life, including psychological and social aspects, is discussed. We also explore emerging therapeutic strategies, such as the role of probiotics and the microbiome, as well as innovative drug delivery systems aimed at improving treatment outcomes. With a focus on personalized medicine and the latest advancements in eczema care, this review highlights the ongoing research and future directions in understanding and managing eczema effectively.

Keywords: Eczema; Causes; Skin Barrier

Introduction

Eczema is a skin disorder that often affects the inside of joints but in extreme situation it can spread throughout the body. Up to one in five people have eczema, which can begin at any age [1,2]. The most prevalent inflammatory skin condition is eczema a kind of dermatitis. Because of an allergies or inflammatory response in the skin it produce itching, redness, swelling and scaling of the skin [3,4]. Eczema can be classified as atopic dermatitis atopic eczema or the chronic recurrent itchy skin problem syndrome. It result from a confluence of environmental and genetic factors. Although it can occur in adult as well it is most frequently observed in youngest [32,35]. This exercise examines the pathophysiology of eczema while recognizing the interdependent roles of environmental and genetic variable many people attempt to keep their hands dry by wearing rubber gloves since dermatitis and eczema are dry skin

disorders. Although the exact original of AE are unknown they most likely involve a complex interaction of genetic social and environmental variables [51].

The surge may be linked to a number of factors including small family size higher income education migration from rural to urban areas and an increase in antibiotic use. One of the most varied types of skin condition is eczema an inflammatory skin reaction that manifests as a variety of lesions including erythema papules vehicle crust and scales along with varied degrees of itching significant treatment resistance and a noticeable propensity to recur [8,9]. It represent a person's metal emotional and physical well in addition to covering and shielding the body skin also serves some metabolic and excretory purpose. Recognizing an external irritant as the source of eczema can be challenging but it become even more

challenging when the eczematous eruption is frequently caused by a poisonous substance produced by a bacterial or mycotic infection [37,38,48]. Pastes are a good way treat chronic lesions because they contain a high percentage of insoluble solid that are finely disseminated. Children solids that are finely disseminated. Children and teenagers are far more likely than adult to be affected by this illness. If neglected eczema also known as atopic dermatitis is a common chronic skin disorder that can result in recurring infections and a low quality of life. Eczema is characterized by dry itchy skin that is prone to infection and is known as the rash that appears when someone rubs or scratches their skin [6,5]. In a literal sense eczema is not a disease but instead a changed response of the skin to a range of internal and environmental stimuli von pirates proposed the term allergy in 1906 to refer to an altered capacity to react. It would seem from this that the term allergies is only appropriate to tissues that possess this altered capacity and that although individuals or sections of individuals may be allergic it is erroneous to refer to disease as such [7,10].

However worry that the latter sense of the word has almost been accepted by usage (or rather, abuse) and that it is frequently applied to eczema since the ailment known as eczema is basically an expression. Eczema includes skin conditions such as atopic dermatitis (AD) and allergic contact dermatitis. Allergy contact dermatitis or AD is a childhood condition [15-17]. The skin becomes inflamed and itchy when it comes into contact with unpleasant germs. Chaulmoogra oil (10%), neem oil (8%) and karanja oil (30%) are the ingredients used in the polyherbal formulation which is subsequently turned into an ointment [44-46]. After 30 days of the redness itching dryness and inflammation required for the basic treatment they are applying this ointment topically to the mice's skin. Using a polyherbal formulation this paper offers an alternative analysis of eczema AD and contact allergic dermatitis. Eczema also known as atopic dermatitis or eczema is a recurrent itchy skin disorder that is caused by a combination of environmental and genetic factors [24-26].

History

It was reported that the first Roman emperor Augustus was extremely itchy and had hard dried areas on his body that he would scratch off when taking a bath in early spring he was also said to have a runny nose and diaphragm discomfort [49]. This may be the first time that the connection between hay fever asthma and atopic dermatitis has been documented [14,19]. During the Islamic golden age the Persian scholar Avicenna listed a number of skin disorders that are similar to dry skin and eczema, additionally he connected excessive bathing to dry skin, after a bath we all know to put on our moisturizers the printing press was invented during the European Renaissance and the first dermatology [22,23].

Ancient reference

Texts from ancient Egypt and Greece provide early descriptions of skin disease that resemble eczema. Illness was frequently linked to irritants or allergies. Development in the 20th century eczema especially atopic dermatitis starts to be more precisely categorised as a separate illness in the early 1900s. Its connection to environmental and genetic variables was further investigated. Current knowledge eczema is now understood impacted by a confluence of environmental immunological and hereditary variables [11-13].

Disease

One type of dermatitis or inflammation of the epidermis is eczema. The terms 'dermatitis' and eczema can be used interchangeably to refer to the same histological condition and describes the conditions characteristic small blisters, while dermatitis means inflammatory of the skin both words are it is customary to refer to endogenous or constitutional forms as eczema and dermatitis a summary of some of the more prevalent kinds is provided. Eczema cannot be spread, no one else can catch it for you although the precise etiology of eczema is unknown scientists do know that a trigger and a combination of genes can cause eczema sufferers typically have an overreactive immune system that produces inflammation in response to external or internal stimuli [29,31].

The topical eczema symptoms of red itchy and painful skin are brought on by this inflammation. Additionally studies reveal that some eczema sufferers have a mutation in the gene that produces filaggrin. A protein called filaggrin aids in the maintenance of a healthy protective barrier. The National Association for Eczema barrier on the skin's outermost layer not having enough filaggrin to create a powerful [30,40].

Types of eczema

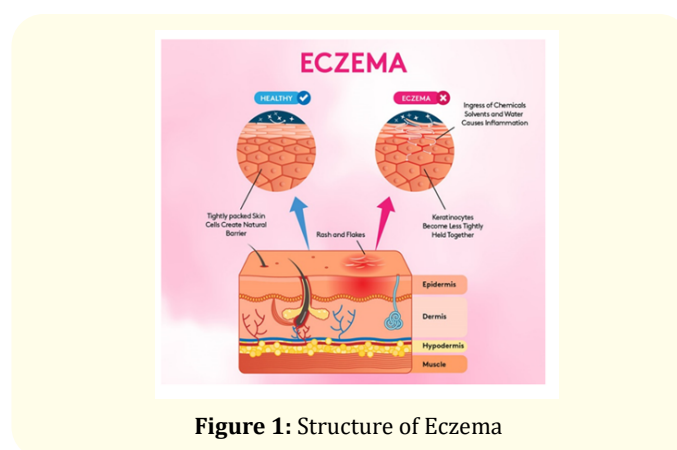


Figure 1: Structure of Eczema

- Atopic dermatitis
 - Contact dermatitis
 - Dyshidrotic dermatitis
 - Neurodermatitis
 - Nummular eczema
 - Seborrheic dermatitis
- **Atopic dermatitis:** The most prevalent type atopic dermatitis usually first appears in childhood and is characterized by dry itchy skin that flares up easily [18]
 - **Contact dermatitis:** This condition which result in localized irritation redness and itching is brought on by exposure of the skin to irritation or allergens [20]
 - **Dyshidrotic eczema:** Usually brought on by stress dampness or specific metals this causes tiny irritating blisters [21,41]
 - **Nummular eczema:** Usually brought on by dry skin or irritants this condition manifests as round coin shaped areas on the skin [27]
 - **Seborrheic dermatitis:** This condition which is frequently encountered on greasy areas like the face and scalp results in dandruff and red greasy spots [28,42].

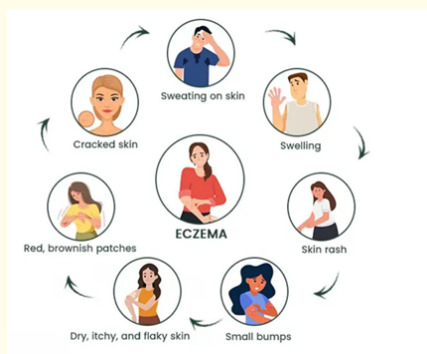


Figure 2: Types of Eczema.

Classification of eczema

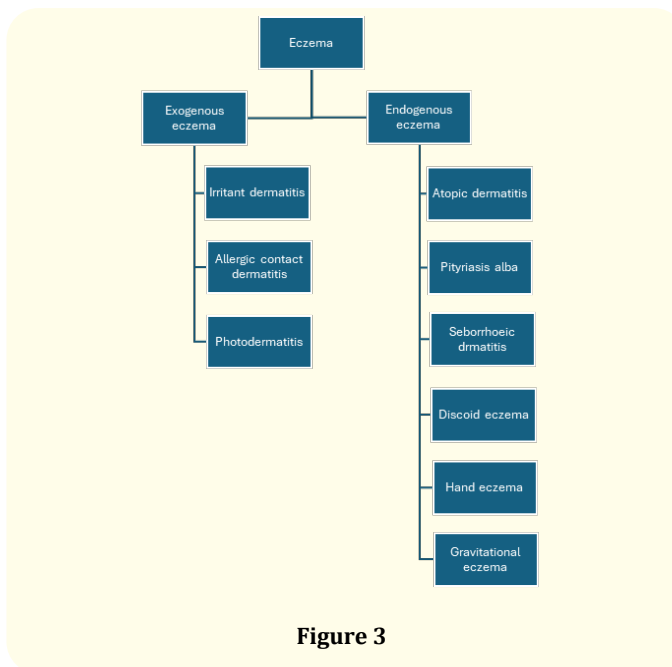


Figure 3

Dosage form

The study focuses on the formulation of a semi-solid dosage form—a Beclomethasone-loaded herbal paste. The paste is designed for topical application, recommended for use 1-2 times daily.

New drug

Innovative treatment for eczema have emerged including: -

- Abrocitinib
- Upadacitinib
- Filgotinib
- Gusacitinib
- Anti-IL-13 antibodies
- Anti-TSLP- antibodies
- CRISPR- Cas 9 gene editing

Patents of Eczema

S. no.	Authors	Title	Patent number	Submission	Publication	Reference
1.	Lada Rasochova, Michelle KEM	Composition and method for treating eczema	US20220273595A1	2022-05-17	2022-09-01	[33]
2.	Anthon W. Siadak, Janine M. Bilsborough, Shirley A. Rene	Method of treating Atopic dermatitis with IL-31 monoclonal antibodies	US9878038B2	2017-03-10	2018-01-30	[36]
3.	Korean	Mussel adhesive protein product and application there of in inhibition of skin inflammation	KR102468519B1	2015-17-20	2022-11-21	[39]
4.	Christoffers W., Coenraads P. Svensson, Diepgen T	Interventions for hand eczema	Christoffers., et al. 2019		2019	[43]
5.	Veien N	Systemic contact dermatitis	Veien 2019		2019	[47]
6	David R. Whitlock, Spiros Jamas, Larry Weiss	Ammonia oxidizing bacteria for treatment of eczema	US10017731B2	2017-07-13	2018-07-10	[50]
7.	Jayhong A. Chong, Christopherfanger, josh mandel Brehm, Colleen Mcnamara	TRPA1 inhibitors for treating pain	AU2013202367B2	2013-04-03	2016-09-15	
8.	Korean	Composition and methods for skin care	KR101715631B1	2009-03-24	2017-03-13	

Table 1

Conclusion

The formulation of a Beclomethasone-loaded herbal paste represents a promising approach to managing eczema symptoms. This study emphasizes the need for integrative treatments that combine traditional and modern therapeutic strategies to enhance patient care and improve quality of life for individuals suffering from this chronic condition. Further research is required to optimize formulations and assess their efficacy in clinical settings.

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