



To Study The Various Types Of Herbal Drugs Used In Treatment Of Eczema

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Abstract

Eczema, also known as atopic dermatitis is a state that compels your skin inflamed or irritated. Topical treatment is often the first-line remedy for mild to moderate eczema. Dermal formulations (Cream, ointment, gel etc.) are still the main therapeutic approach for the treatment of skin disorders. Present studies emphasize the types, etiology, symptoms, prevention and herbal therapeutic options for the management of eczema. Atopic eczema a chronic inflammatory skin disorder affecting 2-3% of world's population worldwide and is characterised by the appearance of rashes, itchiness and excessive dryness on the skin

Application of synthetic drugs suffers from the worst kind of side effects and long-term adverse reactions affecting the quality of life adversely. As per the literature available, medicinal plants possess compounds with varying chemical configuration including free fatty acids, phenolic compounds, sterols, terpenoids, alkaloids destined to modulate pathological conditions hence used

This review summarizes the published literature on four common medicinal plants, namely, Henna, oat (*Avena sativa*), *Rosmarinus officinalis* and chamomile (*Matricaria chamomilla*) used for the treatment of eczema. The mechanism of action, therapeutic indications and side effects of these plants are described. Key words: Medicinal plants, treatment, skin diseases, eczema.

Keywords: Eczema, Herabal drugs for eczema, Neurodermatitis, AD Pathogenesis.

Introduction

The symptoms of eczema include acute, intense itching, scaling, and edema. The symptoms of eczema, a dermal disorder, include skin that is excessively dry, itchy, and produces rashes. (3) Eczema is typically a persistent, non-communicable skin condition. This inflammatory disease's primary symptom is a very itchy rash. Atopic dermatitis or atopic eczema/dermatitis syndrome are other names for eczema.(2) This inflammatory reaction can be triggered by both external and endogenous sources. (1) Reddish-brownish patches of skin, dry, cracked or scaly skin, and itchy skin, especially at night, are among the signs and

symptoms of AD. Eczema typically manifests as little bumps on the cheeks in infants, although rashes on the knees, elbows, or scalp are common in older children and adults. These rashes are frequently seen in the creases of the joints. (4) Atopic dermatitis, also referred to as eczema, is a common chronic skin condition that relapses and is defined by immunoglobulin E-mediated sensitization to environmental and dietary allergens, itch, and impaired epidermal barrier function. The complicated condition known as atopic dermatitis is caused by interactions between the environment and genes.(19) One of the most frequent causes of consultation for senior citizens is eczema. It is necessary to rule out a number of differential diagnoses, such as mycosis fungoides, bullous pemphigoid, and scabies. (20) Eczema is a term used to designate a group of inflammatory skin conditions. It is a serious, non-infective, chronic inflammatory condition that involves erythema, scaling, and excruciating pruritus. Although it typically manifests in infancy or early childhood, the illness can affect anyone at any age.(22) Psoriasis has been treated in a variety of ways, the most common being topical therapy with corticosteroid creams. systemic therapy with medications such as mycophenolate, cyclosporine, and methotrexate. treatment using ultraviolet radiation. Although these medications work well, their long-term usage is not recommended due to possible serious adverse effects.

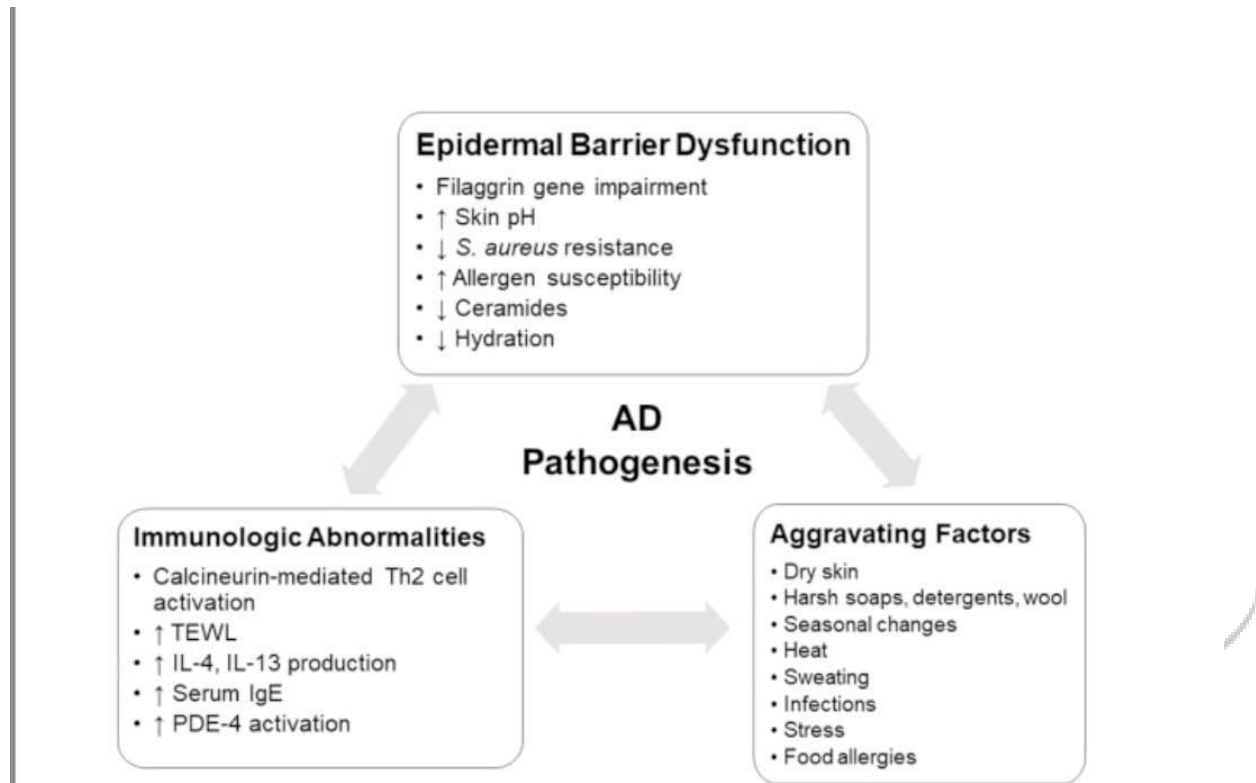
- In addition to these, various other natural treatments are frequently used to treat the illness.
- The potency of herbal treatments is superior to that of synthetic systems. Natural herbal medicines work just as well and are safer than manufactured medications.
- According to estimates from the World Health Organization (WHO), around 80% of people who live in underdeveloped nations heavily rely on traditional medicine for their basic medical needs.
- Numerous medicinal herbs are used to treat skin conditions including eczema. Many times, these illnesses are treated with certain wild plants and their parts.

Prevalence:

- The percentage of children and adolescents with present eczema symptoms was 6% on average, whereas the percentage of adolescents and children with severe eczema symptoms was 1.1% and 0.6%, respectively.(21)
- Atopic eczema: 2-3% of people worldwide suffer from an inflammatory skin condition, which can be persistent or recurrent. (3)
- Since 1997, the prevalence of AD in children has risen from 8% to 15%.4.10 An estimated 16.5 million adults in the US (7.3% of the population) have AD, with roughly 40% having moderate to severe illness. (3)
- Of the 638 adult Japanese patients with atopic dermatitis who were identified, 290 (45.5%) classified their condition as "moderate/severe" and 348 (54.5%) as "mild". Twelve68 matching controls and 634 patients with atopic dermatitis made up the analytic cohort. (5)



Pathophysiology: (18)



- The patient's genetic profile and environmental variables that impact the skin barrier can predict the likelihood of developing AD. Itching and scratching can be brought on by exogenous elements including wool, strong soaps, and detergents, which can damage the skin's protective layer and trigger a flare-up.


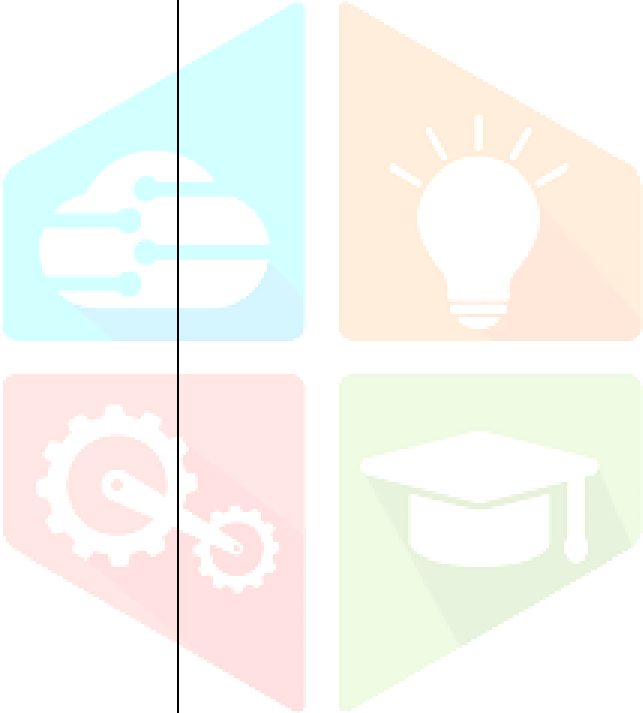


Complex pathophysiology of AD. AD, atopic dermatitis; PDE-4, phosphodiesterase-4; IgE, immunoglobulin E; IL, interleukin; TEWL, transepidermal water loss; Th2, T helper 2.

Types of eczema: (6)

Sr. No.	Types	Pictures	Symptoms	Reference
1.	Atopic Dermatitis		<p>Usually, the rash appears in the creases of your knees or elbows.</p> <ul style="list-style-type: none"> The skin in the rash's affected areas may become thicker, lighter, or darker. 	6,1 6
2.	Contact Dermatitis		<ul style="list-style-type: none"> Signs and symptoms include itching, redness, hyperpigmentation (pink or magenta), burns, and stings. You may develop hives, which are itchy pimples on your skin. 	6,1 6

3.	Dyshidrotic eczema		<ul style="list-style-type: none"> • Blisters packed with fluid develop on your palms, toes, fingers, and foot soles. These blisters could pain or irritate. Scale, crack, and flake might occur on your skin. 	6,1 6
4.	Seborrheic Dermatitis		<ul style="list-style-type: none"> • On top of oily skin, such as on your head, hairline, upper back, midchest, armpits, under breasts, or close to the groin, patches of flaky white or yellow scales appear. 	4,6
			<ul style="list-style-type: none"> • The skin may start to flake from the spots. It occurs more frequently on the scalp and face. 	
5.				6,1

Neurodermatitis	 	<ul style="list-style-type: none">o Thick, scaly patches form on your arms, legs, back of your neck, scalp, bottoms of your feet, backs of your hands, or genitals.o The patches can be very itchy, especially when you're relaxed or asleep.o The patches can bleed and get infected if you scratch them.	6
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6	Nummular eczema		Your skin will develop round, coinshaped lesions that may itch or turn scaly.	4,6
7	Stasis Dermatitis		<ul style="list-style-type: none"> Your legs may hurt or feel heavy. The lower portion of your legs may swell, especially if you've been walking during the day. 	6,1 6
8	Hand eczema		<ul style="list-style-type: none"> Your hands may develop blisters or cracks and become red, hyperpigmented, dry, and itching. 	6,1 6

Herbal Drug for eczema:

0	Pictures	Family	Part use	Refrance
Avena sativa		Poaceae	Ceral grain	(9)
Matricaria chamomilla		Asteraceae	Flower Head	(10),(11)
Henna	 Lawsonia inermis	Lythraceae.	Fresh or dried leaves	(12)
Rosmarinus officinalis	 Rosmarinus of officinalis	Lamiaceae	Fresh flowering tops	(12)
Centella asiatica		Apiaceae	A Clonal perennial herbaceous creeper	(17)

1. Avena sativa:**Synonym:** Genus Avena**Common name:** oat**Family:** Poaceae**Biological source:** Cereal grain from the Poaceae**Chemical constituents:**

- protein (glutelin and avenin), flavonoids, mucilage polysaccharides(β -glucan), oligosaccharides
- Oats have compounds called avenanthramides, which are powerful anti-inflammatory agents and also display anti-oxidant activity

**Uses:**

- Oats are commonly considered "healthy", or a health food, being advertised as nutritious.
- Used for inflammatory and seborrheic skin disease.
- Oats have anti-inflammatory and Antioxidant activity. (9)

2. Matricaria chamomilla:**Synonym:** Matricaria recutita**Common name:** Chamomile**Family:** Asteraceae**Biological source:** Matricaria chamomilla **Chemical constituents:**

- It contains essential oil are the terpene, bisabolol, famesene, chamazulene, flavonoids (including apigenin, quercetin and luteolin) and coumarin.

Uses:

- Used as inflammation, ulcer, wound, gastrointestinal disorders, stomach ache, rheumatic pain, pharyngitis.
- It is found to be effective in wound healing and skin inflammatory conditions, hence used in allergic conditions, atopic dermatitis and eczema.
- It has antibacterial, antifungal, anti-inflammatory and antiseptic properties. (10)



3.Henna:

Common name: Henna, mehndi, Lawsonia inermis

Biological source: Henna consists of fresh or dried leaves of the plant Lawsonia -inermis Lam. family Lythraceae.

Chemical constituents:

- The active constituent of the leaf is lawsone (0.5 1.0 per cent).
- Other constituents are 5-10 per cent gallic acid, white resin, sugars and tannin and xanthones are the other contents of the leaves.
- Lawsone, the main colouring constituent is said to be a degradation product of primary glycoside hennoside A, B and C.

Uses:

- It possesses antifungal and emollient action.
- Henna has antifungal, anti-inflammatory, analgesic and soothing properties. (12)



Lawsonia inermis

4. Rosmarinus officinalis

Common name: Rosemary

Biological Source: It is the volatile oil obtained from fresh flowering tops of the plant Rosmarinus officinalis Linn, belonging to family Lamiaceae

Chemical constituents:
 - The flowers contain about 1.0 per cent of volatile oil, resin, ursolic acid and bitter principle.
 While leaves, in addition to oil, also contain tannins.

- Volatile oil contains mainly 10-15 per cent of borneol, camphor, eucalyptol, pinene, dcamphene, cineol and 45 percent of terpenes.

Uses:

- Rosemary has therapeutic properties and has been used in the folk medicine, pharmaceutical, and mainly for its antioxidant and anti-inflammatory properties, which are attributed to the presence of carnosol/carnosic and unsolid acids.
- Rosemary has potential applications in cosmetic formulations and in the treatment of pathological and non-pathological conditions, such as cellulite, alopecia, ultraviolet damage, and aging. (12)



Rosmarinus of officinalis

5. Indian Penny Wort

Synonyms :

Biological Source: *Centella asiatica* (CA), a clonal, perennial herbaceous creeper

Family : Umbellifere (Apiceae)

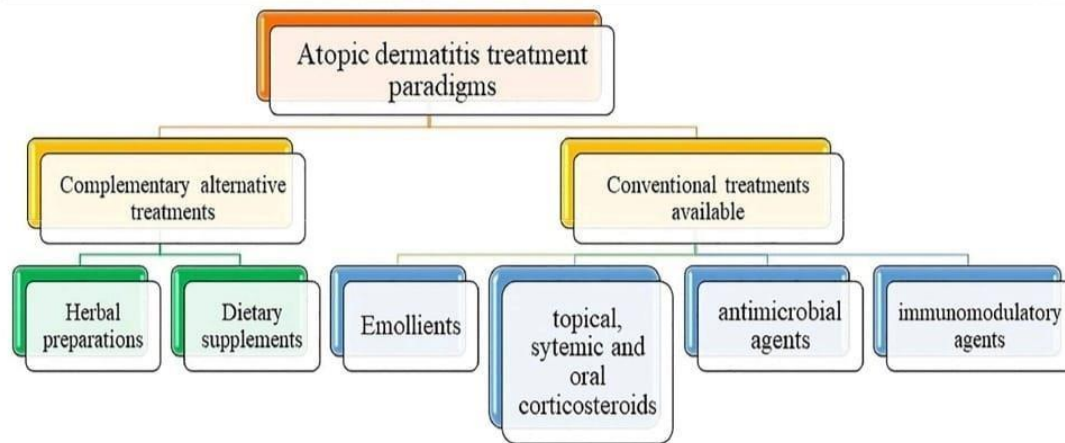
Chemical Constituents : The total extract contains plant sterols, flavonoids.

mucilages, resins, free aminoacids (alanine, serine, aminobutyrate, aspartate, glutamate, lysine and treonine), flavonoids (derivates of chercetin and kempferol), an alkaloid (hydrochotine), a bitter component (vallerine), fatty acids (linoleic acids, linolnelic, oleic, palmitic and stearic acids).

Uses :

- Used traditionally for wound healing and the research has been increasingly supportive for these claims.
- It has been traditionally used as a sedative agent.
- Use as anxiolytic and anticonvulsant.





Risk Factors:

- Residing in a chilly environment, a city, or a developed nation.
- Being born into an older (or later childbearing years) mother
- Coming from parents with more education or from a higher social level.
- Receiving a Cesarean birth.
- Experiencing secondhand smoke.
- Being born weighing a lot.
- Filaggrin.
- Age (19) • Obesity • Vitamin D

Staphylococcus bacteria, harsh detergents and soaps, low humidity, excessive skin washing and frequent hand washing, and sweating are all contributing factors.

Marketed product:



Rufous Redefine Yourself

ROSEMARY ESSENTIAL OIL

BENEFITS FOR SKIN

- Antiseptic Property
- Widely use in cosmetic & perfumery
- Soothes Inflammation
- Get Rid of Acne & Gives Glowing Skin

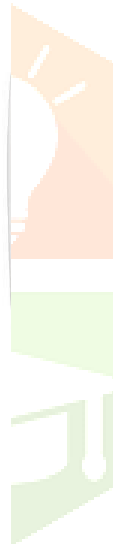


Table I Summary of medicinal plants used for eczema

Scientific name	Unani name	Chemical constituents	Possible action in eczema
<i>Aloe vera</i>	Elva/Sibr	Anthraquinone, glycoside	Anti-inflammatory, anti-bacterial
<i>Ziziphus jujube</i>	Unnab	Vitamin C, minerals	Anti-inflammatory, anti-bacterial, wound healing
<i>Centella asiatica</i>	Brahmi	Alkaloids	Blood purifier, sedative, relaxant, wound healing
<i>Matricaria chamomile</i>	Baboona	Alkaloids, essential oils, glycoside	Demulcent, anti-inflammatory
<i>Rosmarinus officinalis</i>	Iklyl aljabal	Essential oils: p-cymene, linalool	Detergent, anti-oxidant, anti-inflammatory
<i>Curcuma longa</i>	Haldi	Curcumin	Anti-inflammatory, soothing effect, detergent, desiccative
<i>Glycyrrhiza glabra</i>	Aslussoos	Glycyrrhizin, glycyrrhizic acid, glycyrrhetic acid	Anti-inflammatory
<i>Calendula officinalis</i>	Gule ashrafi	Triterpenoids, flavonoids	Anti-inflammatory, anti-bacterial, wound healing
<i>Lawsonia inermis</i>	Henna	Napthoquinone, terpenoids	Anti-inflammatory, soothing effect, emollient
<i>Azadirachta indica</i>	Neem	Alkaloids, steroid, glycoside, flavonoids	Anti-septic, anti-inflammatory, blood purifier
<i>Calotropis gigantea</i>	Aak	Glycoside (calotropin)	Anti-inflammatory, detergent
<i>Cassia fistula</i>	Amaltas	Mucilage, pectin, anthraquinone	Anti-inflammatory, resolvent
<i>Celastrus paniculatus</i>	Malkangni	Alkaloids, oil, tannins	Anti-inflammatory, wound healing
<i>Hemidesmus indicus</i>	Ushba	Acetyl-parigenin, astilbin, α -sitosterol, dihydroquercetin, diosgenin, epsilon-sitosterol, eucryphin, ferulic acid, kaemferol, parillin, saponin, sarasaponin, smilagenin, stigmasterol	Blood purifier, soothing effect
<i>Ocimum basilicum</i>	Rehan	Essential oil terpinene, linalool	Demulcent

Summary of medicinal plants used for eczema (13)

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