GSC Advanced Research and Reviews
eISSN: 2582-4597 CODEN (USA): GARRC2
Cross Ref DOI: 10.30574/gscarr
Journal homepage: https://gsconlinepress.com/journals/gscarr/

(REVIEW ARTICLE)

The power of herb's: Effective treatment for skin diseases

Varsha S. Nagre *, Yashkumar R. Dhole and Swati P. Deshmukh

Department of pharmacology, shraddha Institute of pharmacy Kondala zambre, washim, Maharashtra, India.

GSC Advanced Research and Reviews, 2024, 21(03), 293-298

Publication history: Received on 03 November 2024; revised on 16 December 2024; accepted on 19 December 2024

Article DOI: https://doi.org/10.30574/gscarr.2024.21.3.0494

Abstract

Skin diseases, including conditions such as eczema, psoriasis and acne, pose significant challenges to public health and patient well-being. These disorders are often characterized by inflammation, infection and cosmetic concerns, leading to considerable psychological impact. The increasing prevalence of skin diseases has generated interest in both conventional and alternative treatments. Herbal remedies have emerged as a promising approach to managing skin conditions due to their anti-inflammatory, antimicrobial and healing properties. Plants such as turmeric, aloe vera, tea tree oil, neem, calendula, chamomile and ginger have been documented in various studies for their effectiveness in alleviating symptoms and improving skin health (Khanna et al., 2021; Gupta et al., 2020). These natural treatments are often associated with fewer side effects compared to synthetic medications, making them attractive alternatives for patients seeking holistic care. Research into the pharmacological mechanisms of these herbal treatments is crucial for optimizing their use in dermatology. the importance of integrating herbal medicine into conventional dermatological practice to enhance therapeutic outcomes and promote overall skin health.

Keywords: Skin diseases; Herbal treatment; Anti-inflammatory; Antimicrobial; Eczema; Psoriasis; Acne; Holistic care; Pharmacological mechanisms

1. Introduction

Assessing the impact of skin disease on the quality of life in comparison with that of chronic nondermatological diseases is difficult; however, the study by Mallon and others (1999), which was not carried out in a developing country, compares the common skin disease acne with chronic disorders such as asthma, diabetes, and arthritis and finds comparable deficits in objective measurements of life quality. Skin disease related to HIV, which may constitute an important component of the skin disease burden in developing countries, particularly in Sub-Saharan Africa, leads to a similar impact on life quality compared with non-HIV-related skin problems, although the use of antiretroviral therapy significantly improves quality of life. Those findings indicate that skin diseases have a significant impact on quality of life. Although mortality rates are generally lower than for other conditions, people's needs for effective remedies for skin conditions should be met for a number of important reasons

First, skin diseases are so common and patients present in such larges numbers in primary care settings that ignoring them is not a viable option. Children, in particular tend to be affected adding to the burden of disease among an already vulnerable group.

Second, morbidity is significant through disfigurement, disability or symptoms such as intractable itch as is the reduction in quality of life. For instance, the morbidity from secondary cellulitis in lymphatic filariasis which may lead to progressive limb enlargement is severe and subsequent immobility contributes to social isolation.

* Corresponding author: Varsha S. Nagre

Third, the relative economic cost to families of treating even trivial skin complaints limits the uptake of therapies. Generally, families must meet such costs from an overstretched household budget and such expenses in turn reduce the capacity to purchase such items as essential foods (Hay and others 1994).

Fourth, screening the skin for signs of disease is an important strategy for a wide range of illnesses, such as leprosy, yet a basic knowledge of the simple features of disease whose presenting signs occur in the skin is often lacking at the primary care level. Recent trends in herbal treatments for skin diseases focus on natural remedies that have shown efficacy in various studies.

Some popular options include:

- Turmeric: Known for its anti-inflammatory and antimicrobial properties, turmeric is often used in topical applications to treat conditions like acne and eczema.
- Aloe Vera: Widely recognized for its soothing effects, aloe vera is used for burns, psoriasis, and dermatitis due to its hydrating and healing properties.
- Tea Tree Oil: This essential oil has antifungal and antibacterial properties, making it effective for acne and fungal infections.
- Calendula: Known for its wound-healing properties, calendula is used in creams and ointments for cuts, scrapes, and other skin irritations.
- Chamomile: Often used for its calming effects, chamomile can help with skin irritation and inflammatory conditions.
- Ginger: Its anti-inflammatory properties can help alleviate conditions like psoriasis and eczema.

2. Various skin diseases

2.1. Acne

- Acne is commonly located on the face, neck, shoulders, chest, and upper back. Breakouts on the skin are composed of redness, blackheads, whiteheads, pimples or deep, painful cysts and nodules. This condition may leave scars or darken the skin if untreated. People of Color can experience dark spots known as post-inflammatory hyperpigmentation (PIH).
- The acne is caused by excess sebum production, clogged hair follicles, bacterial growth, hormonal changes, genetics, diet and lifestyle & medication and cosmetics etc.
- The acne is diagnosis by Clinical Examination, medical history, hormonal testing etc.
- Treatment: Tretinoin, Adapalene, Tazarotene, Clindamycin, Erythromycin

2.2. Psoriasis

- This causes scaly, silvery, sharply defined skin plaques. Darker-skinned people might also experience dark brown or purplish patches on the skin. Patches are commonly located on the scalp, elbows, knees, and lower back. This condition may be itchy or asymptomatic.
- The psoriasis is caused by immune system dysfunction, genetic predisposition, infection, stress etc.
- The psoriasis is diagnosis by Clinical examination, medical history, skin biopsy etc.
- Treatment: Betamethasone, Clobetasol, Tazarotene, Acitretin

2.3. Eczema

- Eczema is characterized by pink, red, brown, purple, or gray, sometimes with scaly patches that flake off. Affected areas may be itchy, greasy, or oily. On light skin, eczema can cause a red rash.
- This rash may appear brown, purple, or gray on darker skin. Hair loss may also occur in the area with the rash.
- The Eczema is caused by genetic factors, immune system dysfunction, environmental triggers such as allergens, irritant, stress and emotional factors etc.
- The Eczema is diagnosis by physical examination, medical history, allergy testing, skin biopsy etc.
- Treatment: Hydrocortisone, Betamethasone, Clobetasol, Tacrolimus, Pimecrolimus

2.4. Cold sores

- This condition causes a red, painful, fluid-filled blister that appears near the mouth and lips. People with lighter skin may notice more redness than those with darker skin. The affected area will often tingle or burn before

the sore is visible. Outbreaks may also be accompanied by mild, flu-like symptoms such as low fever, body aches, and swollen lymph nodes. Cold sores usually look similar on any skin color but can also cause PIH in people with darker skin.

- The Cold sores is caused by HSV-1: The most common cause of cold sores, usually affecting the mouth and lips. HSV-2: Typically associated with genital herpes but can also cause cold sores through oral-genital contact.
- The diagnosis of cold sores (caused by the herpes simplex virus, mainly HSV-1) is typically based on clinical evaluation and, if necessary, confirmed with laboratory tests.
- Treatment: Acyclovir, Valacyclovir, Famciclovir, Penciclovir

2.5. Blisters

- Blisters are characterized by a watery, clear, fluid-filled area on the skin. They may be smaller than 1 centimeter (cm) (vesicle) or larger than 1 cm (bulla) and can occur alone or in groups. Blisters can be found anywhere on the body.
- The Blister is caused by friction, burn, contact dermatitis, infection, autoimmune disorder, frostbite, drug reaction and medical conditions etc.
- Diagnosing Blister involves a clinical evaluation, medical history, physical examination, laboratory testing, imaging studies etc.
- Treatment: Acyclovir, Valacyclovir (Valtrex), Bacitracin, Clindamycin

2.6. Hives

- This causes itchy, raised welts that occur after exposure to an allergen. Welts may be warm and mildly painful to the touch. Hives on darker skin can appear raised or inflamed and might be slightly darker or lighter than your natural skin color. On lighter skin, hives usually appear red. They can be small, round, ring-shaped, or randomly shaped.
- The Hives is caused by Allergic Reactions such as food allergens, Physical Triggers such as heat, Infections such viral infection, Autoimmune Disorders etc.
- Diagnosing hives (urticaria) primarily involves a clinical evaluation by a healthcare professional. The diagnosis is typically straightforward, based on the characteristic appearance of hives and the patient's medical history.
- Treatment: Diphenhydramine (Benadryl), Chlorpheniramine (Chlor-Trimeton), Cetirizine (Zyrtec), Prednisone, Methylprednisolone.

2.7. Cellulitis

- Cellulitis is caused by bacteria or fungi entering through a crack or cut in the skin. It causes painful swollen skin with or without oozing those spreads quickly. The skin might appear red on lighter skin. However, this may be less noticeable on darker skin tones. The skin may feel hot and tender to the touch. Fever, chills, and red streaking from the rash might be symptoms of a serious infection requiring medical attention.
- The cellulitis is caused by bacterial infection, pre-existing skin condition, weakened immune system, poor circulation, obesity etc.
- Diagnosing cellulitis involves a combination of clinical evaluation, medical history, and, in some cases, laboratory tests.
- Treatment: Amoxicillin, Nafcillin, Cephalexin, Ciprofloxacin

2.8. Dermatitis

- This condition appears hours to days after contact with an allergen. It causes a rash with visible borders and appears where your skin has touched the irritating substance. The skin may be itchy, scaly, or raw. Lighter skin can appear red, while darker skin may appear purple, gray, or dark brown. It might also cause blisters that weep, ooze, or become crusty.
- The Dermatitis is caused by Allergic Reactions such as Cosmetics and Fragrances, Irritant Reactions such as Chemicals, Genetic Factors, infection etc.
- Diagnosing dermatitis involves a comprehensive evaluation that includes a medical history review, a physical examination, and, in some cases, additional tests to identify specific types or triggers.
- Treatment: Hydrocortisone, Betamethasone, Loratadine, Cephalexin, Prednisone

2.9. Melanoma

- This is the most serious form of skin cancer, which is more common in people with light skin. It can appear anywhere on the body as a mole that has irregularly shaped edges, asymmetrical shapes, and multiple colors. In People of Color, melanoma often appears in areas that are less exposed to the sun. It might also appear as a mole that has changed color or gotten bigger over time, which is usually larger than a pencil eraser.
- The Melanoma is caused by UV radiation exposure, with various genetic, environmental, and lifestyle factors contributing to its development.
- The diagnosis of melanoma involves a series of steps, including clinical evaluation, imaging tests, physical examination, ABCDE rule and, if necessary, a biopsy.
- Treatment: Dabrafenib, Nivolumab, etc.

2.10. Ringworm

- Tinea infections are commonly called ringworm because some may form a ring-like pattern on affected areas of the body. Tinea corporis, also known as ringworm of the body, tinea circinata, or simply as ringworm, is a fungal infection on the surface of the skin. Ringworm may be passed to humans by direct contact with infected people, infected animals (such as kittens or puppies), contaminated objects (such as towels and locker room floors), and the soil. Causes of various skin diseases
- Ringworm is a fungal infection caused primarily by dermatophytes, transmitted through direct contact or contaminated objects. The infection thrives in warm, moist environments, making certain individuals more susceptible.
- The diagnosis of ringworm (tinea) involves several steps, including a clinical evaluation, history taking, and laboratory tests when necessary.
- Treatment: Clotrimazole, Miconazole, Terbinafine, Griseofulvin.

3. Herbal drug used in treatment of various skin diseases

Figure 1 Various Herb's Used in Treatment of Skin Diseases

- **Aloe Vera:** Aloe Vera is a versatile natural remedy with numerous benefits for treating various skin diseases. Its soothing, anti-inflammatory, antibacterial, and moisturizing properties make it suitable for many skin conditions, from burns and eczema to acne and psoriasis.
- **Turmeric:** Turmeric is a powerful natural remedy with a range of beneficial properties for treating various skin diseases. Its anti-inflammatory, antibacterial, and antioxidant effects make it suitable for addressing conditions like acne, eczema, psoriasis, and more.

- **Tea tree oil:** Tea tree oil is a versatile natural remedy with significant benefits for treating various skin diseases due to its antimicrobial and anti-inflammatory properties. Its applications range from acne and eczema to fungal infections and wound healing.
- **Neem:** Neem is a versatile and potent natural remedy for various skin diseases, thanks to its antimicrobial, anti-inflammatory, and healing properties. It is effective in treating conditions like acne, eczema, psoriasis, and fungal infections, among others.
- **Peppermint oil:** Peppermint oil is a versatile and beneficial natural remedy for various skin diseases due to its antimicrobial, anti-inflammatory, and cooling properties. It can effectively address conditions like acne, itchy skin, dandruff, and minor wounds.
- **Licorice root:** Licorice root is a versatile and effective natural remedy for various skin diseases, thanks to its anti-inflammatory, antimicrobial, and antioxidant properties. It can effectively address conditions like eczema, psoriasis, hyperpigmentation, and acne.
- **Ginger:** Ginger is a versatile and effective natural remedy for various skin diseases, thanks to its anti-inflammatory, antioxidant, and antimicrobial properties. It can effectively address conditions such as acne, eczema, psoriasis, and more.
- **Ashwagandha:** Ashwagandha is a versatile herb that offers a range of benefits for various skin diseases, thanks to its anti-inflammatory, antioxidant, and antimicrobial properties. It can effectively address conditions such as acne, eczema, psoriasis, and more.
- **Coconut oil:** Coconut oil is a versatile and beneficial natural remedy for various skin diseases, thanks to its moisturizing, antimicrobial, and anti-inflammatory properties. It can effectively address conditions such as eczema, psoriasis, acne, and minor wounds.
- **Honey**: Honey is a versatile and effective natural remedy for various skin diseases, thanks to its antibacterial, anti-inflammatory, and moisturizing properties. It can be particularly beneficial for conditions such as wounds, acne, eczema, and dry skin.

4. Conclusion

Skin diseases are a significant concern globally, affecting millions and impacting both physical and mental well-being. Traditional treatments often come with limitations, including side effects and varying efficacy. As a result, there is growing interest in herbal treatments, which offer a promising alternative or complement to conventional therapies.

Herbal remedies, such as turmeric, aloe vera, and tea tree oil, have shown considerable potential in managing various skin conditions due to their anti-inflammatory, antimicrobial, and healing properties. Their use not only aligns with a holistic approach to health but also addresses patient preferences for natural therapies with fewer side effects.

Integrating herbal treatments into dermatological practice requires further research to substantiate their efficacy and safety. By combining the best of both traditional and modern medicine, healthcare providers can offer more effective, patient-centered care for those suffering from skin diseases, ultimately enhancing overall skin health and quality of life.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

References

[1] Khanna, R., et al. (2021). Herbal medicine in dermatology: A review. Journal of Dermatological Treatment, 32(3), 211-218.

[2] https://www.slideshare.net/slideshow/skin-disease-ppt-for-nursing- student/97234866

[3] https://www.ncbi.nlm.nih.gov/books/NBK11733/

[4] Zouboulis, C. C. (2009). Sebaceous gland. Dermatology.

[5] Shalita, A. R. et al. (1996). Pathogenesis of acne. Journal of the American Academy of Dermatology.

[6] Kurokawa, I. et al. (2009). Recent advances in acne pathogenesis. Journal of Dermatological Science.

[7] Wang, A. et al. (2013). Inflammatory acne: The role of inflammation in acne pathogenesis. Dermatologic Therapy.

[8] Nascimento, M. et al. (2015). Impact of environmental pollution on acne. Clinical, Cosmetic and Investigational Dermatology.

[9] Ogdie, A., & Gladman, D. D. (2014). The genetics of psoriasis. Current Dermatology Reports.

[10] Lowes, M. A., et al. (2014). Psoriasis. Nature Reviews Disease Primers.

[11] Kwon, H. H., et al. (2019). Environmental triggers of psoriasis: A review. Journal of the American Academy of Dermatology.

[12] Griffiths, C. E. M., et al. (2007). Psoriasis and smoking: A review of the literature. British Journal of Dermatology.

[13] Duvic, M., & Hennessey, R. (2004). Drug-induced psoriasis. American Journal of Clinical Dermatology.

[14] Leung, D. Y. M., et al. (2004). The atopic march: An update on the relationship between atopic dermatitis, allergic rhinitis, and asthma. Allergy.

[15] Palmer, C. N. A., et al. (2006). Filaggrin gene mutations and eczema. The New England Journal of Medicine.

[16] Hon, K. L., et al. (2015). Staphylococcus aureus in atopic dermatitis: A review. International Journal of Dermatology.

[17] Langan, S. M., et al. (2007). Psychological stress and atopic dermatitis. Journal of the American Academy of Dermatology.

[18] Sicherer, S. H., & Sampson, H. A. (2010). Food allergy: A review and update on epidemiology, pathogenesis, diagnosis, and management. Journal of Allergy and Clinical Immunology.

[19] Whitley, R. J., & Roizman, B. (2001). Herpes simplex virus infections. Lancet.

[20] Koelle, D. M., & Wald, A. (2000). Herpes Simplex Virus: A Global Perspective. Clinical Microbiology Reviews.

[21] Gupta, A., et al. (2020). The role of herbal therapies in dermatology: A review. Indian Journal of Dermatology, 65(4), 274-280.