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A CLINICAL STUDY ON THE EFFECT OF AYURVEDIC PROTOCOLS IN THE TREATMENT OF PSORIASIS AND ECZEMA

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ABSTRACT

Psoriasis and eczema are chronic inflammatory skin disorders that significantly affect patients' quality of life. Conventional treatments, such as topical corticosteroids, immunomodulators, and biologics, primarily focus on managing symptoms but often lead to side effects and do not always address the underlying cause of the disease. Ayurveda, a holistic system of medicine, offers an alternative approach, focusing on treating the root cause of skin disorders by balancing the body's doshas, detoxifying, and using herbal medicines with anti-inflammatory, immune-modulatory, and skin-repairing properties. Ayurvedic protocols include the use of *Khadira*, *Neem*, and *Haridra*, along with detoxifying procedures like Panchakarma. This review examines the Ayurvedic understanding and treatment of psoriasis and eczema, focusing on herbal remedies, detoxification therapies, and the comparative efficacy of Ayurvedic protocols versus modern treatments. Evidence from various clinical studies suggests that Ayurvedic treatments are effective in managing symptoms and reducing recurrence rates, with fewer side effects compared to conventional medicine.

KEYWORDS: Psoriasis, Eczema, Ayurveda, Herbal Treatment, Panchakarma.

INTRODUCTION

Psoriasis and eczema are two of the most common chronic inflammatory skin conditions, each with distinct pathophysiologies and clinical presentations. Psoriasis is an autoimmune condition characterized by hyperproliferation of keratinocytes, leading to the formation of thick, scaly patches on the skin. Eczema, or atopic dermatitis, is primarily an allergic or hypersensitivity reaction, resulting in red, inflamed, and itchy skin. Both conditions are recurrent, with exacerbations triggered by environmental factors, stress, or infections.[1]

Modern medicine treats psoriasis and eczema primarily with topical corticosteroids, calcineurin inhibitors, systemic immunosuppressants, and biologics. While these treatments provide symptomatic relief, they often come with potential side effects such as skin thinning, metabolic disturbances, and immune suppression, especially with long-term use.[2]

Ayurveda provides a comprehensive view of skin disorders, attributing conditions like psoriasis (Ekakushta)[3] and eczema (Vicharchika)[4] to imbalances in the body's doshas (Vata, Pitta, and Kapha). According to Ayurvedic principles, these disorders are due to the accumulation of toxins (Ama) and imbalances in the digestive and immune systems. Treatment in Ayurveda focuses on both external and internal therapies, including detoxification through Panchakarma, herbal formulations to balance the doshas, and lifestyle changes to support overall health.

Need for the Study

A review of Ayurvedic protocols is essential to explore the holistic treatment approach for psoriasis and eczema, providing a complement to modern treatments and potentially reducing side effects.

Ayurvedic Perspective on Psoriasis and Eczema

In Ayurveda, psoriasis (Ekakushta) is believed to result from an imbalance in the Vata and Kapha doshas, causing abnormal skin cell growth and scaling. Eczema (Vicharchika) is mainly associated with Pitta and Kapha imbalances, leading to inflammation and itching. Both conditions are aggravated by the accumulation of toxins (Ama) in the blood and tissues due to poor digestion, improper diet, and lifestyle factors.[5]

Ayurvedic treatment aims to address these root causes by purifying the blood, balancing the doshas, and promoting skin healing. The Ayurvedic approach generally includes:

1. **Detoxification (Panchakarma)**

Panchakarma, a detoxifying therapy, plays a central role in treating skin conditions. Procedures like Virechana (purgation) and Vamana (emesis) help eliminate toxins and balance the doshas. This is especially important for individuals with chronic, severe symptoms, where detoxification is necessary to improve digestion and remove accumulated toxins from the body.[6]

2. **Herbal Formulations**[7,8,9,10]

Various herbs with anti-inflammatory, antioxidant, and immune-modulating properties are commonly used in Ayurveda for treating psoriasis and eczema:

- **Khadira** (*Acacia catechu*): Known for its blood-purifying and anti-inflammatory properties, Khadira is commonly used in skin diseases.
- **Neem** (*Azadirachta indica*): A powerful detoxifying and immune-enhancing herb, Neem helps reduce inflammation and fights bacterial infections associated with skin conditions.
- **Haridra** (*Curcuma longa*): Curcumin, the active component in Haridra, has potent anti-inflammatory and antioxidant effects, making it valuable in reducing skin inflammation and irritation.
- **Manjistha** (*Rubia cordifolia*): A blood purifier, it helps improve skin texture and tone by promoting the elimination of toxins.

3. **External Applications**[11,12]

Ayurvedic skin treatments also involve topical applications to soothe the skin and reduce inflammation:

- **Aloe Vera (Kumari)**: Aloe vera gel is used for its cooling and moisturizing properties, helping to relieve itching and dryness.
- **Chandana (Sandalwood)**: Applied as a paste, sandalwood has anti-inflammatory and cooling effects, reducing skin irritation and inflammation.

Modern Perspective on Psoriasis and Eczema[13-19]

From a modern medical standpoint, **psoriasis** is classified as an **autoimmune disease**, meaning that the body's immune system, which normally protects against infections and diseases, mistakenly attacks healthy cells. In the case of psoriasis, the immune system primarily targets skin cells. This immune dysfunction causes the skin cells, or **keratinocytes**, to multiply rapidly, much faster than they should. Normally, skin cells are replaced every 28-30 days, but in psoriasis, this turnover happens in just 3-4 days. This rapid proliferation

results in the buildup of skin cells, forming **thick, red, scaly patches** known as plaques, which are most commonly found on areas like the scalp, elbows, knees, and lower back.

The immune response in psoriasis is primarily mediated by **T cells**, a type of white blood cell. Normally, T cells help protect the body from infections and foreign invaders. In psoriasis, however, T cells are mistakenly activated and begin producing pro-inflammatory cytokines, such as **TNF-alpha (tumor necrosis factor-alpha)**, **interleukin-17 (IL-17)**, and **interleukin-23 (IL-23)**. These cytokines trigger inflammation and stimulate the rapid production of skin cells, leading to the characteristic plaques of psoriasis. The exact cause of this autoimmune response is still not fully understood, but a combination of **genetic predisposition** and environmental triggers like stress, skin injuries, infections, and medications are believed to play a role.

Eczema, or **atopic dermatitis**, is different from psoriasis in its pathophysiology. Eczema is primarily linked to a **defective skin barrier**, which allows moisture to escape from the skin while allowing environmental allergens and irritants to penetrate. This defective barrier leads to **dry, itchy, and inflamed skin**. Eczema is a **chronic, relapsing inflammatory skin condition** that often begins in early childhood, though it can persist into adulthood. It is often associated with other allergic conditions like asthma and hay fever, suggesting a strong **immune hypersensitivity** component.

The key issue in eczema is a mutation in the **filaggrin gene**, which is essential for maintaining the skin's protective barrier. The compromised skin barrier results in a higher risk of **allergen penetration**, triggering an immune response that leads to inflammation. The immune system becomes hyperactive and produces cytokines such as **IL-4**, **IL-13**, and **IL-**

31, which contribute to inflammation, itchiness, and further disruption of the skin barrier.

Current Treatments for Psoriasis and Eczema

The treatment goals for psoriasis and eczema in modern medicine are to **suppress the immune response**, **reduce inflammation**, and **repair the skin barrier**. While these treatments are generally effective at managing symptoms, they often need to be maintained over the long term to prevent flare-ups, as neither condition has a definitive cure.

1. Topical Corticosteroids

These are the first-line treatment for both psoriasis and eczema, particularly for mild to moderate cases. Corticosteroids work by reducing inflammation and suppressing the overactive immune response. They are available in various strengths and are applied directly to the affected skin. However, long-term use can lead to side effects such as **skin thinning (atrophy)**, **stretch marks (striae)**, and **tolerance** (where the medication becomes less effective over time).

2. Calcineurin Inhibitors (Tacrolimus and Pimecrolimus)

These are non-steroidal medications that suppress the immune system by blocking the enzyme calcineurin, which is involved in T cell activation. Calcineurin inhibitors are often used for eczema, especially for sensitive areas like the face and neck where corticosteroids might cause thinning of the skin. They help reduce inflammation and are considered safer for long-term use than corticosteroids, though they may increase the risk of skin infections and are not recommended for continuous use due to concerns about cancer risks with prolonged use.

3. Biologics

Biologics have revolutionized the treatment of moderate to severe psoriasis, particularly in cases that do not respond well to topical treatments. Biologics are **targeted therapies** that work by blocking specific parts of the immune system, such as **TNF-alpha**, **IL-17**, or **IL-23**, which are responsible for driving inflammation in psoriasis. Some commonly used biologics include:

- **TNF-alpha inhibitors** (e.g., Adalimumab, Etanercept, Infliximab): These drugs block the activity of TNF-alpha, a cytokine that plays a central role in psoriasis inflammation.
- **IL-17 inhibitors** (e.g., Secukinumab, Ixekizumab): These target interleukin-17, which is another key cytokine in the inflammatory pathway of psoriasis.

- **IL-23 inhibitors** (e.g., Guselkumab, Risankizumab): These drugs block interleukin-23, which is involved in the activation of the Th17 cells that drive psoriasis pathology.

While biologics are highly effective in controlling psoriasis, they come with potential risks, including **increased susceptibility to infections**, **reactivation of latent diseases like tuberculosis**, and **long-term immune suppression**. These drugs are expensive and typically reserved for patients with severe disease who have not responded to other therapies.

4. Moisturizers and Emollients

In both psoriasis and eczema, maintaining skin hydration is critical for preventing flare-ups. **Emollients** are used to keep the skin moisturized and help restore the skin barrier, especially in eczema. Moisturizers are often recommended in combination with other treatments to manage dryness, scaling, and itching.

5. Immunosuppressants

For severe cases of psoriasis and eczema, systemic immunosuppressants like **Methotrexate**, **Cyclosporine**, and **Azathioprine** may be used. These medications suppress the immune system more broadly, reducing inflammation and skin symptoms. However, they can lead to significant side effects, including liver toxicity, kidney damage, and an increased risk of infections.

6. Phototherapy

Phototherapy, or **light therapy**, is used for both psoriasis and eczema, particularly in moderate to severe cases. This treatment involves exposing the skin to **ultraviolet (UV) light** under medical supervision. UV light helps slow the rapid turnover of skin cells in psoriasis and reduces inflammation in both conditions. Long-term use of phototherapy, however, can increase the risk of skin cancer.

Long-Term Management and Side Effects

Despite their effectiveness, modern treatments for psoriasis and eczema are not curative, and patients often require long-term management. This can lead to **cumulative side effects** over time. For instance, long-term corticosteroid use can cause skin thinning and systemic effects, while biologics and immunosuppressants can increase the risk of infections and other immune-related complications. Additionally, many treatments are expensive, particularly biologics, which can limit their accessibility for some patients.

The **recurrence of symptoms** is common in both conditions once treatment is stopped, necessitating continuous or intermittent therapy. While new treatments like biologics offer hope for more sustained remission, their safety and efficacy over decades of use are still being evaluated.

DISCUSSION

Several studies indicate that Ayurvedic protocols are effective in managing psoriasis and eczema. A study by Khurana and Jain (2019) revealed that the combined use of *Khadira* and *Neem* significantly reduced the severity of psoriasis and improved skin texture, with fewer side effects compared to conventional steroidal treatments. Another study by Singh et al. (2020) demonstrated that Panchakarma therapies, particularly Virechana, were effective in reducing the recurrence of eczema by removing toxins and balancing doshas. The study showed that patients who underwent Panchakarma reported fewer flare-ups compared to those receiving only external applications.

One of the key strengths of Ayurvedic treatments is their focus on long-term management and overall health. By addressing the root causes of skin diseases, such as poor digestion and toxin accumulation, Ayurveda may provide more sustained relief and fewer side effects than conventional treatments.

However, the integration of Ayurveda into mainstream dermatological practices is still limited due to a lack of large-scale clinical trials and standardization in treatment protocols. Further research is needed to validate the effectiveness of Ayurvedic treatments and to establish standardized guidelines for integrating them with modern medicine.

CONCLUSION

Ayurvedic protocols offer a holistic and potentially effective approach to the treatment of psoriasis and eczema. By focusing on detoxification, dosha balance, and the use of herbal medicines, Ayurveda targets both the symptoms and underlying causes of these conditions. While modern treatments remain essential for acute management, integrating Ayurvedic therapies could offer patients long-term relief with fewer side effects. Future studies should focus on large-scale clinical trials to further validate the efficacy of Ayurvedic treatments and explore their integration with conventional approaches.

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