

# AYURVEDIC MANAGEMENT OF SKIN DISORDERS: A COMPREHENSIVE REVIEW WITH ALLOPATHIC CORRELATES OF PATHOPHYSIOLOGY

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## ABSTRACT:

*Skin disorders represent a significant global health burden, impacting quality of life and imposing considerable socioeconomic costs. While allopathic medicine offers various treatment modalities, including corticosteroids, immunosuppressants, and biologics, these often come with side effects and may not address the root cause for all individuals. Ayurveda, a traditional Indian system of medicine, provides a holistic approach to skin health, emphasizing the balance of Doshas (Vata, Pitta, Kapha), Agni (digestive fire), and the removal of Ama (toxins). This article aims to explore the Ayurvedic management of common skin disorders, integrating contemporary allopathic understanding of their pathophysiology. It delves into specific Ayurvedic herbs, formulations, Panchakarma therapies, and dietary and lifestyle recommendations, correlating their mechanisms of action with the known pathological pathways in modern medicine.*

**KEYWORDS:** *Ayurveda, skin disorders, pathophysiology, allopathy, Dosha, Ama, Panchakarma, integrative medicine, dermatology.*

## 1. INTRODUCTION

The skin, the largest organ of the human body, serves as a protective barrier against environmental insults, regulates temperature, and plays a vital role in immunity. Skin disorders, ranging from inflammatory conditions like psoriasis and eczema to infectious diseases and autoimmune dermatoses, affect millions worldwide. The global prevalence of skin diseases is estimated to be over 25%, making them one of the most common health concerns [1]. These conditions can cause physical discomfort, disfigurement, psychological distress, and social stigma, significantly impacting an individual's well-being.

Allopathic medicine has made remarkable advancements in the diagnosis and treatment of skin disorders. Pharmacological interventions often target specific inflammatory pathways, immune responses, or microbial agents. However, many chronic skin conditions require long-term management, and conventional treatments can lead to adverse effects such as skin atrophy, systemic immunosuppression, and drug resistance [2].

Ayurveda, meaning "the science of life," It views health as a state of equilibrium among the three Doshas - Vata, Pitta, and Kapha and along with balanced Agni and the absence of Ama. Skin disorders, in Ayurveda, are often attributed to imbalances in these Doshas, particularly Pitta and Kapha, and the accumulation of Ama in the Rakta Dhatu (blood tissue) and Mamsa Dhatu (muscle tissue) [3]. This review aims to systematically explore the Ayurvedic principles of skin disease management and draw parallels with the modern allopathic understanding of their underlying pathophysiology, fostering a dialogue for integrative dermatology.

## 2. MATERIALS AND METHODS

This review article is based on an extensive literature search conducted across various databases, including PubMed, Scopus, Google Scholar, and traditional Ayurvedic texts. Keywords used for the search included "Ayurveda skin disorders," "psoriasis Ayurveda," "eczema Ayurvedic treatment," "acne Ayurvedic," "allopathic pathophysiology skin," "integrative dermatology," and specific Ayurvedic herb names related to skin. Articles published in English, focusing on both human and experimental studies, were included. Information was synthesized to identify common skin conditions, their allopathic pathophysiology, and corresponding Ayurvedic interpretations and management strategies.

## 3. RESULTS

### 3.1. Ayurvedic Understanding of Skin Disorders (Kushta)

In Ayurveda, skin diseases are broadly categorized under "Kushta" (skin affections), which are further classified into Maha Kushta (major skin diseases) and Kshudra Kushta (minor skin diseases). The pathogenesis of Kushta involves the vitiation of all three Doshas (Vata, Pitta, Kapha) and four Dushyas (polluted elements): Rasa (plasma), Rakta (blood), Mamsa (muscle), and Ambu (lymph/water). The primary Dosha involved often dictates the manifestation and clinical features of the skin condition [4].

- **Vata-predominant Kushta:** Characterized by dryness, roughness, scaling, itching, and cracks. Correlates with conditions having impaired skin barrier function.
- **Pitta-predominant Kushta:** Manifests as redness, burning sensation, inflammation, oozing, and suppuration. Correlates with inflammatory and hypersensitivity reactions.
- **Kapha-predominant Kushta:** Presents with itching, thickening, swelling, excessive oiliness, and pallor. Correlates with conditions involving hypertrophy and lymphatic stasis.

Accumulation of Ama, a product of improper digestion and metabolism, is considered a crucial factor in the development of skin diseases, as it obstructs channels (srotas) and impairs tissue nourishment [5].

### 3.2. Allopathic Pathophysiology of Common Skin Disorders

To understand the integrative potential, it's essential to briefly review the allopathic pathophysiology of key skin conditions:

- **Psoriasis:** A chronic autoimmune inflammatory disease characterized by accelerated keratinocyte proliferation and immune cell infiltration (T-cells, dendritic cells, neutrophils) into the epidermis and dermis. Genetic predisposition, environmental triggers, and dysregulation of cytokines (e.g., TNF- $\alpha$ , IL-17, IL-23) are central to its pathogenesis [6].
- **Eczema (Atopic Dermatitis):** A chronic inflammatory skin condition marked by intense itching, dry skin, erythema, and excoriation. It involves a complex interplay of genetic factors (e.g., filaggrin gene mutations

leading to barrier dysfunction), immune dysregulation (Th2-mediated inflammation), and environmental allergens [7].

- **Acne Vulgaris:** A common inflammatory disorder of the pilosebaceous unit. Its pathophysiology involves four main factors: increased sebum production, follicular hyperkeratinization, proliferation of *Cutibacterium acnes* (formerly *Propionibacterium acnes*), and inflammation [8].
- **Urticaria (Hives):** Characterized by transient, pruritic wheals. It is caused by the release of histamine and other mediators from mast cells and basophils, leading to vasodilation and increased vascular permeability. Both allergic and non-allergic mechanisms can trigger mast cell degranulation [9].

### 3.3. Ayurvedic Management Strategies and Allopathic Correlates

#### 3.3.1. Shodhana (Purification Therapies - Panchakarma)

Panchakarma, a set of five therapeutic procedures, aims to eliminate deep-seated toxins (Ama) and rebalance Doshas. These procedures are particularly emphasized for chronic and complex skin conditions.

- **Vamana (Therapeutic Emesis):** Indicated for Kapha-predominant conditions. By expelling toxins from the upper gastrointestinal tract, it reduces systemic Ama and Kapha vitiation.
- **Virechana (Therapeutic Purgation):** Highly effective for Pitta-predominant skin disorders like psoriasis, eczema with inflammation, and urticaria. It involves controlled purgation to eliminate vitiated Pitta and toxins from the gastrointestinal tract. From an allopathic perspective, Virechana might reduce systemic inflammation by influencing gut microbiota, reducing endotoxin load, and potentially modulating immune responses originating in the gut [10]. Purgation can also clear inflammatory mediators.
- **Raktamokshana (Bloodletting):** Directly removes vitiated blood (Rakta Dhatu) and Pitta, which are considered causative factors in many skin diseases. This includes methods like leech therapy (Jalaukavacharana) and venesection. Modern understanding suggests that local bloodletting can reduce inflammation and congestion, improve local circulation, and remove inflammatory cytokines from the affected area [11]. Leech saliva also contains anticoagulant and anti-inflammatory substances.
- **Basti (Medicated Enema):** Primarily for Vata-predominant conditions. It delivers medicinal substances directly to the colon, influencing systemic Vata and supporting gut health. This can indirectly impact skin conditions by improving digestion and absorption and modulating systemic inflammation.

#### 3.3.2. Shamana (Palliative Therapies - Internal and External Medications)

Ayurvedic herbal formulations are tailored to the individual's Dosha imbalance and the specific skin condition.

- **Herbs with Anti-inflammatory and Immunomodulatory Properties:**
  - **Neem (Azadirachta indica):** Possesses potent anti-inflammatory, antibacterial, antifungal, and immunomodulatory properties. Its compounds inhibit pro-inflammatory mediators and microbes [12]. Allopathically, neem's triterpenoids and limonoids show promise in reducing inflammation and microbial load, relevant for acne and eczema.
  - **Turmeric (Curcuma longa):** Curcumin, its active compound, is a well-researched anti-inflammatory and antioxidant agent. It inhibits NF- $\kappa$ B, a key transcription factor involved in inflammatory pathways, and modulates various cytokines [13]. This makes it beneficial for psoriasis, eczema, and inflammatory acne.
  - **Guduchi (Tinospora cordifolia):** Known for its immunomodulatory and anti-inflammatory actions. It enhances immunity while also suppressing hypersensitivity reactions, making it useful in autoimmune and allergic skin conditions [14].
  - **Manjistha (Rubia cordifolia):** A renowned "blood purifier" in Ayurveda, it supports detoxification and has anti-inflammatory properties. It helps in clearing skin lesions by improving blood circulation and lymphatic drainage [15]. Its compounds may exert antioxidant effects.
  - **Sariva (Hemidesmus indicus):** Used for its cooling and Pitta-pacifying properties, beneficial in inflammatory and burning skin conditions. It also acts as a "blood purifier" and has mild diuretic effects [16].

- **Herbs for Skin Barrier Repair and Moisturization:**
  - **Aloe Vera (*Aloe barbadensis miller*):** Its mucopolysaccharides help in moisturizing the skin and promoting wound healing. It also has anti-inflammatory and antiseptic properties [17]. Useful in dry eczema and wound care.
  - **Coconut Oil (*Cocos nucifera*):** Rich in fatty acids, it provides excellent moisturization and has antimicrobial properties. It helps in restoring the skin barrier function, particularly in eczema [18].
- **Formulations for Specific Conditions:**
  - **Psoriasis:** Internally, formulations like Mahatiktaka Ghrita, Arogyavardhini Vati, and Kaishore Guggulu are used. Externally, Psoria oil, Mahamarichyadi Taila, and various medicated pastes are applied. These formulations often combine anti-inflammatory, detoxifying, and immunomodulatory herbs.
  - **Eczema:** Internally, Khadirarishta, Panchnimba Churna, and Gandhak Rasayan are common. Externally, Jatyadi Taila, Karanj Taila, and specific Lepas (pastes) are used to reduce itching, inflammation, and promote healing.
  - **Acne:** Internally, Liv.52 (a polyherbal formulation for liver support), Triphala (bowel regularizer), and specific Pitta-pacifying herbs are prescribed. Externally, Ubtans (herbal scrubs) with ingredients like turmeric, sandalwood, and neem are used to cleanse and heal.

### 3.3.3. Diet and Lifestyle (Pathya-Apathya)

Ayurveda places immense importance on diet (Ahara) and lifestyle (Vihara) for maintaining skin health and managing disorders.

- **Dietary Recommendations:**
  - **Avoid Pitta-aggravating foods:** Spicy, sour, fermented, and oily foods are discouraged, especially in inflammatory conditions.
  - **Reduce Ama-producing foods:** Processed foods, excessive dairy, and incompatible food combinations are avoided.
  - **Emphasize whole, fresh, easily digestible foods:** Fresh fruits, vegetables, whole grains, and lean proteins are encouraged.
  - **Hydration:** Adequate water intake is crucial for skin health and detoxification.
  - **Specific foods:** Bitter vegetables (e.g., bitter melon), amla (Indian gooseberry), and pomegranate are often recommended for their detoxifying and antioxidant properties.
- **Lifestyle Modifications:**
  - **Stress Management:** Yoga, meditation, and pranayama (breathing exercises) are recommended to mitigate stress, a known trigger for many skin conditions. Stress influences the HPA axis and can exacerbate inflammation [19].
  - **Regular Exercise:** Promotes circulation and detoxification.
  - **Adequate Sleep:** Essential for skin repair and regeneration.
  - **Dinacharya (Daily Routine):** Following a consistent daily routine helps in maintaining Dosha balance.
  - **Abhyanga (Oil Massage):** Regular self-massage with medicated oils helps nourish the skin, improve circulation, and calm Vata.

## 4. DISCUSSION

The integration of Ayurvedic principles with allopathic understanding offers a promising avenue for comprehensive skin disorder management. While allopathy primarily focuses on symptomatic relief and targeting specific pathological pathways, Ayurveda seeks to address the root cause by restoring systemic balance.

The concept of "Ama" in Ayurveda finds parallels with the accumulation of metabolic waste products and inflammatory mediators in modern medicine. Panchakarma therapies like Virechana and Raktamokshana, aimed at eliminating Ama and vitiated Doshas, can be understood in terms of their potential to reduce systemic inflammatory load, modulate immune responses, and improve microcirculation. For instance, Virechana's impact on gut

microbiota and detoxification pathways can significantly influence skin inflammation, given the well-established gut-skin axis [20].

Herbal remedies, such as Neem, Turmeric, and Guduchi, have been extensively studied for their anti-inflammatory, antimicrobial, and immunomodulatory properties, which align with the allopathic approach of targeting inflammation and infection. The multi-component nature of Ayurvedic formulations often provides synergistic effects, addressing multiple pathological facets simultaneously. For example, a formulation for psoriasis might include herbs to reduce inflammation (Pitta pacification), improve detoxification (Ama reduction), and nourish tissues (Rakta Dhatu support), rather than just suppressing immune response.

Dietary and lifestyle recommendations in Ayurveda are crucial for maintaining long-term skin health. Avoiding Pitta-aggravating foods reduces the inflammatory burden, while stress management techniques can mitigate the neuro-immuno-cutaneous axis's role in exacerbating conditions like psoriasis and eczema. These recommendations complement allopathic treatments by promoting overall well-being and reducing triggers.

However, challenges remain. The lack of standardized research methodologies, rigorous clinical trials, and clear mechanisms of action for all Ayurvedic interventions often hinders their widespread acceptance in conventional medicine. Furthermore, variability in herbal preparation and quality can impact efficacy. This will facilitate evidence-based integration and validate traditional practices.

## 5. CONCLUSION

Ayurveda offers a rich repository of knowledge and therapeutic strategies for managing skin disorders, focusing on holistic balance and root cause resolution. By understanding the allopathic pathophysiology of these conditions, we can appreciate how Ayurvedic interventions, ranging from Panchakarma to herbal medicine and lifestyle modifications, may exert their therapeutic effects. The principles of detoxification (Ama elimination), Dosha balancing, and tissue nourishment align with modern concepts of reducing inflammation, modulating immune responses, and restoring skin barrier function. An integrative approach, combining the strengths of both Ayurveda and allopathy, holds immense potential to provide more effective, sustainable, and patient-centered care for individuals suffering from chronic skin disorders. Further scientific validation and collaborative research are essential to unlock the full potential of this ancient healing system in modern dermatological practice.

## 6. ACKNOWLEDGEMENTS

The authors would like to thank the ancient seers and practitioners of Ayurveda for preserving and transmitting this invaluable knowledge for generations.

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