



Review Article

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ROLE OF *DOSHA* AND *DHATU* IN THE MANIFESTATION OF *KHALITYA* (ALOPECIA)

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ABSTRACT

Background *Khalitya* is described in *Ayurveda* as a disorder characterized by gradual hair fall leading to baldness. It is mainly considered under *Shiroroga* and is associated with vitiation of *Dosha* and depletion or dysfunction of *Dhatu*. Hair, being a derivative of *Asthi Dhatu*, reflects the internal equilibrium of body tissues. The involvement of *Vata*, *Pitta*, and *Kapha* along with disturbance in *Rasa*, *Rakta*, and *Asthi Dhatu* plays a crucial role in the manifestation of *Khalitya*. In modern science, alopecia is understood as hair loss due to hormonal, nutritional, autoimmune, or genetic factors, but *Ayurveda* provides a deeper systemic explanation through *Dosha-Dhatu* interaction. **AIM** To study the role of *Dosha* and *Dhatu* in the manifestation of *Khalitya* (Alopecia). **OBJECTIVES** To review classical references of *Khalitya*. To understand the role of *Vata*, *Pitta*, and *Kapha*. To analyze the involvement of *Rasa*, *Rakta*, and *Asthi Dhatu*. To correlate Ayurvedic concepts with modern Alopecia. **Materials and Methods** A conceptual and literary review was carried out using classical Ayurvedic texts including *Charaka Samhita*, *Sushruta Samhita*, and *Ashtanga Hridaya*, along with their commentaries. Relevant references regarding *Khalitya*, *Dosha*, *Dhatu*, and *Kesha Utpatti* were critically analyzed. Modern dermatological literature on alopecia was also reviewed for comparative understanding. **Results** Classical references indicate that vitiated *Pitta* associated with *Vata* affects the hair roots located in the scalp, leading to falling of hair. *Kapha* and *Rakta* involvement causes obstruction of hair follicles, preventing regrowth. *Asthi Dhatu Kshaya* results in weakness of hair structure, as hair is considered the *Upadhatu* or *Mala* of *Asthi Dhatu*. Impairment of *Rasa* and *Rakta Dhatu* further disturbs nourishment to hair follicles, accelerating hair fall. **Discussion** The

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manifestation of *Khalitya* is a multifactorial process involving *Dosha Prakopa* and *Dhatu Kshaya*. Predominant aggravation of *Pitta* causes damage to hair follicles due to its heat and sharp qualities. *Vata* contributes to dryness and degeneration, while *Kapha* leads to blockage of hair pores. Simultaneously, depletion of *Asthi Dhatu* weakens hair roots. This integrative view correlates with modern understanding of inflammatory, hormonal, and nutritional causes of alopecia. **Conclusion** *Khalitya* results from the combined effect of aggravated *Dosha* and impaired *Dhatu*, particularly *Pitta*, *Vata*, and *Asthi Dhatu*. Understanding this interplay helps in planning targeted Ayurvedic management focusing on *Dosha Shamana*, *Dhatu Poshana*, and restoration of scalp health.

Keywords *Khalitya*, *Alopecia*, *Dosha*, *Dhatu*, *Asthi Dhatu*, *Kesha*

INTRODUCTION

Khalitya is described in *Ayurveda* as a condition characterized by gradual hair fall leading to thinning or baldness of the scalp. It is included under *Shiroroga* and is considered a disorder arising due to imbalance of *Dosha* and improper nourishment of *Dhatu*. Hair, known as *Kesha*, reflects the internal health of the body. In classical texts, healthy hair is a sign of proper tissue metabolism and balanced internal environment, while excessive hair fall indicates systemic disturbance.¹

According to Ayurvedic principles, the pathogenesis of *Khalitya* primarily involves vitiation of *Pitta Dosha* along with *Vata Dosha*. Aggravated *Pitta* affects the hair roots due to its hot and sharp qualities, leading to damage and loosening of hair. *Vata*, with its dry and rough attributes, further accelerates hair fall by causing degeneration. Later, *Kapha Dosha* along with *Rakta* may obstruct the hair follicles, preventing regrowth. Thus, the interaction of all three *Dosha* plays an important role in disease manifestation.²

From the perspective of *Dhatu*, hair is closely related to *Asthi Dhatu* and is considered either its *Upadhatu* or *Mala* as per different Acharyas. Therefore, *Asthi Dhatu Kshaya* directly affects the strength and stability of hair. In addition, proper nourishment of *Kesha* depends on healthy *Rasa* and *Rakta Dhatu*. Any disturbance in these tissues results in inadequate supply of nutrients to the scalp, leading to weak, brittle, and falling hair.³

In modern science, alopecia is understood as hair loss caused by hormonal imbalance, nutritional deficiency, autoimmune factors, stress, or genetic predisposition. However, the Ayurvedic concept provides a more holistic understanding by explaining the condition through *Dosha-Dhatu* interaction and systemic imbalance. Therefore, understanding the role

of *Dosha* and *Dhatu* in *Khalitya* helps in developing a comprehensive and rational approach for its prevention and management.⁴

AIM AND OBJECTIVES

AIM

To study the role of *Dosha* and *Dhatu* in the manifestation of *Khalitya* (Alopecia).

OBJECTIVES

- To review classical references of *Khalitya*.
- To understand the role of *Vata*, *Pitta*, and *Kapha*.
- To analyze the involvement of *Rasa*, *Rakta*, and *Asthi Dhatu*.
- To correlate Ayurvedic concepts with modern Alopecia.

MATERIAL AND METHOD

The present study was carried out as a conceptual and literary review based on classical Ayurvedic texts such as *Charaka Samhita*, *Sushruta Samhita*, and *Ashtanga Hridaya*, along with their available commentaries. Relevant references related to *Khalitya*, *Dosha*, *Dhatu*, and *Kesha Utpatti* were collected, compiled, and critically analyzed. Supporting information was also gathered from contemporary textbooks, research articles, and modern dermatological literature on Alopecia to establish a comparative understanding. The collected data were systematically arranged and interpreted to evaluate the role of *Dosha* and *Dhatu* in the manifestation of *Khalitya*.

CONCEPTUAL STUDY

Khalitya is described in *Ayurveda* as a condition characterized by excessive hair fall leading to thinning or baldness of the scalp. It is generally discussed under *Shiroroga* and reflects systemic imbalance rather than a purely local scalp disorder. Healthy *Kesha* is considered a sign of proper tissue nourishment and balanced internal physiology. When internal harmony is disturbed, hair becomes weak, thin, and gradually falls.⁵

Nidana (Etiological Factors) of *Khalitya*

The causative factors of *Khalitya* include excessive intake of *Katu*, *Amla*, and *Lavana Rasa*, along with *Ushna* and *Tikshna* Ahara that aggravate *Pitta*. Irregular dietary habits, weak *Agni*, night awakening, mental stress, anger, and excessive exposure to heat also contribute

significantly. These factors disturb the equilibrium of *Dosha* and impair proper nourishment of scalp tissues, initiating the disease process.⁶

Role of *Dosha* in the Manifestation of *Khalitya*

Among the three *Dosha*, *Pitta* plays a predominant role due to its hot and sharp qualities, which damage hair roots and cause inflammation of the scalp. *Vata* contributes by inducing dryness, roughness, and degeneration, leading to brittle and falling hair. *Kapha*, in later stages, may obstruct hair follicles and hinder regrowth. Thus, *Khalitya* is understood as a combined disturbance primarily of *Pitta* and *Vata* with secondary involvement of *Kapha*.⁷

Role of *Dhatu* in *Khalitya*

Hair is closely associated with *Asthi Dhatu* and is described as either its *Upadhatu* or *Mala* in classical literature. Therefore, depletion or weakness of *Asthi Dhatu* directly affects the strength and stability of hair. Additionally, *Rasa* and *Rakta Dhatu* are responsible for nourishment and vitality of the scalp and hair follicles. Disturbance in these *Dhatu* results in inadequate nutrition, leading to progressive hair fall and poor regrowth.⁸

Samprapti (Pathogenesis) of *Khalitya*



Sadhyasadhyatva of *Khalitya*

The prognosis of *Khalitya* depends upon the degree of *Dosha* involvement, extent of *Dhatu Kshaya*, chronicity of the disease, and strength of the patient. In early stages, when hair fall is recent and *Dhatu* depletion is minimal, the condition is generally Sadhya (curable) with proper *Nidana Parivarjana*, *Dosha Shamana*, and *Dhatu Poshana*.⁹

When the disease is moderately chronic, with noticeable thinning but partial preservation of hair follicles, it can be considered Yasya, meaning manageable with sustained treatment and lifestyle regulation. In such cases, regrowth may be slow and maintenance therapy is often required. In long-standing cases with severe baldness, marked *Asthi Dhatu Kshaya*, hereditary tendency, or complete destruction of hair follicles, the condition is often regarded as Asadhya. Here, treatment may help in preventing further progression, but complete restoration of hair is usually difficult.¹⁰

MODERN REVIEW OF ALOPECIA

Alopecia refers to partial or complete loss of hair from the scalp or other parts of the body. It may be temporary or permanent depending upon the underlying cause. Hair loss becomes clinically significant when shedding exceeds the normal daily limit and visible thinning or bald patches appear.¹¹

Hair Growth Cycle

Hair growth follows a cyclic pattern consisting of three phases: anagen (growth phase), catagen (transitional phase), and telogen (resting phase). Any disturbance in this cycle, especially shortening of the anagen phase or increased number of hairs entering the telogen phase, leads to excessive hair shedding. Disruption of this cycle is a key mechanism in most forms of alopecia.¹²

Types of Alopecia

The most common type is androgenetic alopecia, which occurs due to genetic and hormonal influences, particularly sensitivity to dihydrotestosterone (DHT). Alopecia areata is an autoimmune disorder characterized by patchy hair loss. Telogen effluvium occurs after stress, systemic illness, or nutritional deficiency and leads to diffuse hair shedding. Scarring

(cicatricial) alopecia involves permanent destruction of hair follicles due to inflammation or trauma.¹³

Etiological Factors

Alopecia can result from hormonal imbalance, genetic predisposition, autoimmune conditions, nutritional deficiencies, thyroid disorders, anemia, chronic infections, and psychological stress. Chemical exposure, excessive hairstyling, and certain medications may also contribute to hair loss.¹⁴

Pathophysiology

The underlying mechanisms include miniaturization of hair follicles, perifollicular inflammation, altered immune response, hormonal effects, and reduced blood supply to the scalp. Nutritional deficiencies such as iron, zinc, protein, and vitamin D deficiency further weaken hair structure and growth. Chronic stress can alter endocrine and immune pathways, worsening hair fall.¹⁵

Management

Management depends upon the type and cause of alopecia. Treatment options include topical minoxidil, oral finasteride, corticosteroids for autoimmune forms, nutritional supplementation, and lifestyle modification. In advanced cases, procedures like platelet-rich plasma therapy and hair transplantation are considered. Long-term management is often required, as recurrence may occur if the underlying cause persists.¹⁶

RESULTS

- Classical Ayurvedic texts describe *Khalitya* as a disorder primarily involving vitiation of *Pitta* and *Vata Dosha*.
- *Kapha Dosha* was found to play a secondary role by causing obstruction at the level of hair follicles.
- *Rasa*, *Rakta*, and *Asthi Dhatu* were identified as the principal *Dhatu* involved in nourishment and maintenance of *Kesha*.
- *Asthi Dhatu Kshaya* showed strong conceptual association with progressive hair thinning and baldness.

- *Rakta Dushti* was observed to contribute to inflammatory scalp changes and poor follicular health.
- Modern literature supports that hormonal imbalance, inflammation, stress, and nutritional deficiencies are key contributors to alopecia.
- Predominant involvement of *Pitta* leads to damage of hair roots due to its heat and sharp qualities.
- Associated *Vata* aggravation causes dryness and degeneration of hair shafts.
- Obstructive action of *Kapha* interferes with regrowth mechanisms.
- Impaired nourishment due to *Rasa* and *Rakta Dhatu* dysfunction weakens hair follicles.
- Depletion of *Asthi Dhatu* is conceptually linked with structural weakness of hair.
- The Ayurvedic concept of *Dosha–Dhatu* imbalance shows parallel understanding with modern mechanisms such as follicular miniaturization and inflammatory processes.

DISCUSSION

Khalitya is understood in *Ayurveda* as a systemic disorder rather than a purely local scalp problem. The present review highlights that repeated exposure to etiological factors disturbs the equilibrium of *Dosha*, particularly *Pitta* and *Vata*. Aggravated *Pitta* affects the hair roots due to its hot and penetrating qualities, leading to inflammation and loosening of follicles. Simultaneously, *Vata* induces dryness and degeneration, which accelerates hair shedding. This combined disturbance initiates the pathological process of *Khalitya*.¹⁷

The involvement of *Dhatu* plays an equally important role in sustaining the disease. Hair is closely related to *Asthi Dhatu*, and depletion of this tissue results in weakened hair structure and reduced stability. Additionally, proper nourishment of hair depends on healthy *Rasa* and *Rakta Dhatu*. When these tissues are impaired, the scalp and follicles fail to receive adequate nutrition, resulting in thinning and poor regrowth. Thus, *Dosha Prakopa* along with *Dhatu Kshaya* forms the core pathological basis of *Khalitya*.¹⁸

From a modern perspective, alopecia involves hormonal imbalance, inflammation, immune dysregulation, and nutritional deficiency. These mechanisms show conceptual similarity with the Ayurvedic explanation of *Pitta* aggravation, *Rakta Dushti*, and tissue depletion. Therefore,

the integrative understanding of *Dosha–Dhatu* interaction provides a comprehensive framework for explaining the onset, progression, and chronicity of *Khalitya*, supporting a holistic approach toward its management.¹⁹

CONCLUSION

Khalitya is a multifactorial disorder arising from the combined vitiation of *Pitta* and *Vata Dosha* along with secondary involvement of *Kapha*, leading to damage and obstruction at the level of hair follicles. The condition is further sustained by impairment and depletion of *Rasa*, *Rakta*, and especially *Asthi Dhatu*, which are essential for proper nourishment and strength of *Kesha*. The Ayurvedic concept of *Dosha–Dhatu* imbalance provides a comprehensive and systemic understanding of alopecia, emphasizing that effective management should focus on correction of *Dosha*, restoration of *Dhatu*, and maintenance of overall physiological balance.

CONFLICT OF INTEREST –NIL

SOURCE OF SUPPORT –NONE

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