ISSN: 2322 - 0902 (P)
ISSN: 2322 - 0910 (O)

International Journal of Ayurveda and Pharma Research

Review Article

KLEDA IN DERMATOLOGICAL DISORDERS: A FORGOTTEN CONCEPT REVISITED - CLASSICAL INSIGHTS AND CONTEMPORARY CORRELATIONS

Samiksha Sanjeev Naik[1]*, Basil Cardozo[2], Bishnupriya Mohanty[3]

*[1]PG Scholar, [2]Professor, Head of Department, Department of Kayachikitsa, [3]Professor, Head of department, Sanskrit Samhita & Siddhanta, GAM&RC, Shiroda-Goa, India.

Article info

Article History:
Received: 16-06-2026
Accepted: 14-07-2026
Published: 15-08-2026

KEYWORDS:
Kleda, Twak Vikara, Kushtha, Ayurveda, Dermatology, *Kledahara Chikitsa,* Skin Barrier, Inflammatory Exudation.

ABSTRACT

Among the fundamental physiological concepts, *Kleda* represents an important yet underexplored factor. Although not considered an independent *Dosha, Dhatu or Mala*, *Kleda* plays a vital role in maintaining tissue hydration, metabolic processes and physiological homeostasis. Pathological aggravation of *Kleda* results in excessive moisture, impaired tissue metabolism, *Srotodushti* and manifestations commonly observed in dermatological disorders. **Objective:** To critically review the classical concept of *Kleda*, elucidate its physiological and pathological significance and explore its role in the etiopathogenesis and management of dermatological disorders with possible contemporary correlations. **Materials and Methods:** A narrative review was performed through analysis of classical *Ayurvedic* texts including *Charaka Samhita, Sushruta Samhita, Ashtanga Hridaya, Ashtanga Sangraha, Madhava Nidana* and *Bhavaprakasha*, along with relevant contemporary dermatological literature. The role of *Kleda* in disease progression and its conceptual parallels with modern biomedical mechanisms were evaluated. **Results:** The review indicates that physiological *Kleda* contributes to tissue nourishment, hydration and functional stability, whereas pathological *Kleda* contributes to *Srava* (oozing), *Kandu* (itching), *Shopha* (swelling), *Paka* (suppuration), *Picchilata* (stickiness) and delayed wound healing. Classical descriptions associate deranged *Kleda* with *Kapha, Pitta, Rakta* and *Meda* involvement in disorders such as *Kushtha, Vicharchika, Pama, Visarpa, Prameha Pidaka* and *Dushta Vrana*. Modern concepts such as inflammatory exudation, interstitial edema, epidermal barrier dysfunction and moisture-associated skin damage demonstrate conceptual similarities with pathological *Kleda*, although they should not be considered direct equivalents. **Discussion:** Understanding *Kleda* as a dynamic pathogenic factor provides a broader perspective on Ayurvedic dermatopathology. Assessment of *Kleda* involvement may aid in better *Samprapti* understanding, individualized therapeutic planning and rational application of *Kledahara Chikitsa*. Further clinical and experimental studies are required to establish its diagnostic and therapeutic significance.

INTRODUCTION

The skin is the largest organ of the human body and serves as the first line of defense against physical, chemical and microbial insults. It performs essential physiological functions including barrier protection, thermoregulation, immune surveillance, sensory perception and and maintenance of fluid homeostasis.

Access this article online

Quick Response Code

https://doi.org/10.47070/ijapr.v14i8.4309

Published by Mahadev Publications (Regd.) publication licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International (CC BY-NC-SA 4.0)

Despite advances in dermatological therapeutics, chronic inflammatory skin disorders such as eczema, psoriasis, chronic dermatitis and non-healing wounds continue to pose significant clinical challenges because of their recurrent nature and multifactorial pathogenesis. These conditions considerably impair quality of life and contribute substantially to the global burden of disease, emphasizing the need for comprehensive approaches that address the underlying pathogenic mechanisms rather than only symptomatic manifestations.[14-16]

Ayurveda describes skin diseases under the broad heading of *Twak Vikara*, with *Kushtha* encompassing a wide spectrum of dermatological disorders. The Ayurvedic understanding of disease is based on the interaction of *Dosha, Dhatu, Mala, Agni, Ama* and *Srotas*, which collectively determine tissue health and disease progression. Among these factors, *Kleda* occupies a distinctive position as a physiological principle responsible for maintaining tissue moisture and facilitating normal metabolic processes. Although *Kleda* is not classified as an independent *Dosha, Dhatu* or *Mala*, it is repeatedly mentioned in the classical texts in relation to digestion, tissue nourishment, fluid regulation and disease pathogenesis, indicating its fundamental importance in maintaining physiological equilibrium.[3,9-11]

The term *Kleda* is derived from the *Sanskrit* root "*Klid*", meaning to moisten, soften or liquefy. Physiologically, *Kleda* maintains the appropriate hydration and softness of body tissues, facilitates digestion and supports nutrient transformation. *Charaka Samhita* identifies *Kleda* as one of the *Shad Ahara Parinamakara Bhavas*, emphasizing its indispensable role in the digestion and assimilation of food. Balanced *Kleda* contributes to proper tissue nourishment, whereas excessive accumulation due to impaired digestion (*Mandagni*), *Kapha* aggravation and inappropriate dietary and lifestyle practices lead to pathological changes that predispose to disease.[9,12,13]

Pathological *Kleda* is characterized by excessive tissue moisture, impaired metabolism, obstruction of *Srotas* and vitiation of *Kapha, Rakta* and *Meda*. Classical Ayurvedic texts associate these changes with clinical manifestations such as *Srava* (oozing), *Kandu* (itching), *Shopha* (swelling), *Paka* (suppuration), *Picchilata* (stickiness) and delayed wound healing, features commonly observed in diseases including *Vicharchika*, *Kushtha*, *Visarpa*, *Pama*, *Prameha Pidaka* and *Dushta Vrana*. These observations suggest that *Kleda* is not merely a consequence of disease but an important determinant influencing disease initiation, progression and chronicity.[3,9-11]

Recent advances in dermatology have highlighted the importance of tissue fluid homeostasis, epidermal barrier integrity, inflammatory exudation, oxidative stress, immune dysregulation and extracellular matrix remodelling in chronic skin diseases. Although these mechanisms cannot be considered direct equivalents of *Kleda*, they demonstrate meaningful conceptual similarities with the Ayurvedic description of pathological tissue moisture and impaired homeostasis. Understanding these parallels may facilitate scientific interpretation of classical Ayurvedic concepts while preserving their original philosophical framework.[7,14-16]

Despite its repeated mention in the Ayurvedic classics, the role of *Kleda* in dermatological disorders has received comparatively limited scientific attention. Most contemporary publications have focused on its significance in metabolic disorders such as *Prameha*, while its contribution to the pathogenesis and management of skin diseases remains inadequately explored. Therefore, a comprehensive review of the classical concept of *Kleda*, its dermatological relevance and its possible contemporary correlations is warranted. The present review aims to critically evaluate the concept of *Kleda* from classical Ayurvedic literature, explore its role in dermatological disorders and discuss its significance in light of current biomedical understanding.[7,12,13]

MATERIALS AND METHODS

The present study was conducted as a narrative review to critically evaluate the Ayurvedic concept of *Kleda* and its role in the pathogenesis of dermatological disorders. Classical Ayurvedic texts including *Charaka Samhita, Sushruta Samhita, Ashtanga Hridaya, Ashtanga Sangraha, Madhava Nidana* and *Bhavaprakasha* were reviewed to collect references related to the definition, physiological functions, pathological involvement, etiological factors and therapeutic implications of *Kleda*. Commentaries of *Chakrapani*, *Dalhana*, *Arunadatta* and *Hemadri* were consulted for deeper interpretation of classical concepts.[1-4,11]

Relevant Ayurvedic lexicons, including *Shabdakalpadruma* and Monier-Williams Sanskrit Dictionary, were referred to understand the etymology and contextual meaning of the term *Kleda*.[17,18]

Contemporary literature was reviewed from databases including PubMed, Google Scholar, Scopus and ScienceDirect to identify possible correlations between pathological *Kleda* and modern concepts such as tissue fluid imbalance, inflammatory exudation, edema, skin barrier dysfunction, lymphatic physiology and moisture-associated skin damage.

The collected information was analyzed under thematic categories including physiological and pathological aspects of *Kleda*, its association with *Dosha, Dushya* and *Srotas* and its role in dermatological conditions. Classical concepts were interpreted alongside contemporary scientific understanding to identify conceptual similarities without establishing direct equivalence. The findings were synthesized descriptively to provide an integrated perspective on the role of *Kleda* in dermatological disorders and highlight areas requiring further research.

Classical Review of *Kleda*

Concept and Etymology of *Kleda* (*Nirukti*)

The term *Kleda* is derived from the Sanskrit root "*Klid* (क्लिद्)", meaning to moisten, soften, liquefy

or become wet. Classical dictionaries describe *Kleda* as moisture, dampness, fluidity or the state of becoming softened by fluid. However, in Ayurveda, *Kleda* represents more than physical moisture; it is a functional principle responsible for maintaining tissue hydration, fluid balance, metabolic activity and physiological homeostasis.[17,18]

Unlike *Dosha, Dhatu or Mala*, *Kleda* is not described as an independent anatomical entity. Instead, it is mentioned throughout Ayurvedic literature in relation to digestion, metabolism, tissue nourishment, disease pathogenesis and therapeutic management, indicating its dynamic role in maintaining body functions.[1]

Physiological Importance of *Kleda*

Physiological *Kleda* is essential for maintaining normal tissue consistency, lubrication, flexibility and nourishment. Balanced moisture supports *Dhatu* functions, facilitates nutrient transport and maintains the integrity of *Srotas*. It is closely associated with body fluids such as *Udaka, Lasika and Sweda*, which contribute to internal fluid homeostasis.[1,3]

Thus, normal *Kleda* is considered essential for sustaining life processes, whereas disturbance in its quantity or quality results in pathological changes.

Pathological *Kleda* and Disease Manifestation

Pathological accumulation of *Kleda* occurs due to *Mandagni*, excessive intake of *Guru, Snigdha, Madhura* and *Abhishyandi Ahara*, sedentary lifestyle and predominance of *Kapha Dosha*. Increased *Drava* and *Snigdha Guna* leads to excessive moisture accumulation, impaired metabolism, *Srotorodha and* tissue dysfunction.[1,2]

Clinical manifestations associated with aggravated *Kleda* include *Srava* (oozing), *Kandu* (itching), *Shopha* (swelling), *Paka* (suppuration), *Picchilata* (stickiness) and delayed healing. These features are frequently observed in dermatological disorders such as *Kushtha, Vicharchika, Pama, Visarpa and Dushta Vrana*.[2,3,11]

***Kleda* in Classical Texts**

Charaka Samhita

Charaka Samhita describes *Kleda* mainly in relation to metabolism, *Prameha and* systemic pathology. In *Prameha*, excessive *Kleda* associated with aggravated *Kapha, Meda* and *Mamsa* contributes to abnormal fluid metabolism and disease progression. *Charaka* advocates measures such as *Langhana, Rukshana, Deepana, Pachana* and *Lekhana* for reducing pathological moisture and restoring metabolic balance.[1]

Sushruta Samhita

Sushruta Samhita emphasizes the importance of *Kleda* in surgical and dermatological conditions, particularly *Kushtha, Vrana* and *Shopha*. Excessive moisture is considered responsible for discharge, tissue maceration, delayed healing and chronic inflammation. Removal of pathological *Kleda* through *Shodhana, Rukshana* and appropriate wound management principles is highlighted for restoration of healthy tissue architecture.[3]

Ashtanga Hridaya* and *Ashtanga Sangraha

Vagbhata correlates pathological *Kleda* with *Kapha* aggravation, *Mandagni* and *Srotodushti*. Excessive *Guru, Snigdha* and *Madhura Ahara* increase *Drava Guna*, leading to accumulation of abnormal moisture and impaired tissue nourishment. Management focuses on correcting metabolism, eliminating vitiated *Dosha and* reducing excessive *Kleda* through *Deepana, Pachana, Rukshana* and *Shodhana* therapies.[2,11]

Madhava Nidana

Madhava Nidana describes the involvement of *Kleda* indirectly through diseases such as *Kushtha, Visarpa and Prameha*. Clinical features including *Srava, Kandu, Shopha* and *Paka* indicate disturbed moisture regulation and tissue dysfunction.[4]

Bhavaprakasha

Bhavaprakasha contributes to the therapeutic understanding of *Kleda* through descriptions of drugs and dietary measures possessing *Tikta, Kashaya, Katu Rasa* and *Laghu, Ruksha* and *Lekhana Guna*. These properties help reduce excessive moisture and restore metabolic balance, demonstrating the principle of *Kledahara Chikitsa*.[5]

Critical Appraisal

Review of classical literature demonstrates that *Kleda* is a dynamic physiological factor involved in maintaining tissue hydration and metabolic equilibrium. Although not described as an independent entity, its repeated association with *Kapha, Agni, Srotas and Dushya* establishes its importance in disease pathogenesis. *Charaka* emphasizes metabolic aspects, *Sushruta* highlights wound and skin pathology, while *Vagbhata* integrates systemic and therapeutic perspectives.[1-3,11]

Therefore, pathological *Kleda* may be considered an important contributor to dermatological disorders characterized by excessive moisture, inflammation, exudation and impaired healing.

***Kleda* in Dermatological Disorders**

Role of *Kleda* in the Etiopathogenesis of Dermatological Disorders

The pathogenesis of dermatological disorders (*Twak Vikara*) in Ayurveda involves complex interactions between *Dosha, Dushya, Agni, Ama, Srotas and Kleda*. Although *Kleda* is not considered an independent *Dosha* or *Dhatu*, its repeated association with disorders such as *Kushtha, Prameha, Vrana, Visarpa* and *Shotha* highlights its significant role in

disease initiation and progression. Physiologically, *Kleda* maintains tissue hydration and fluid balance; however, its pathological aggravation results in excessive moisture accumulation, impaired tissue metabolism and *Srotodushti*, contributing to chronic skin disorders.[1-3]

The development of pathological *Kleda* is primarily influenced by *Kledakara Ahara* and lifestyle factors such as excessive intake of *Guru, Snigdha, Madhura* and *Abhishyandi Ahara*, *Viruddha Ahara*, sedentary habits, excessive sleep and *Mandagni*. These factors aggravate *Kapha Dosha* and increase *Drava* and *Snigdha Guna*, resulting in abnormal moisture accumulation. Persistent *Kleda* disturbs tissue metabolism, obstructs *Srotas* and vitiates *Rakta* and other *Dushya*, leading to manifestation of dermatological disorders.[1,11]

Among the *Tridosha*, *Kapha* has the closest association with *Kleda* due to its inherent *Snigdha, Guru, Manda, Sheeta* and *Picchila* qualities. Aggravated *Kapha* promotes excessive moisture retention and stagnation of metabolic products. *Pitta* contributes through its inflammatory and liquefying properties, while *Rakta* acts as an important medium for pathological changes occurring in the skin. Thus, *Kleda* interacts with *Kapha, Pitta* and *Rakta* to produce inflammatory and exudative skin manifestations.[1-3]

Clinical features indicating pathological *Kleda* include *Srava* (oozing), *Kandu* (itching), *Shopha* (swelling), *Paka* (suppuration), *Picchilata* (stickiness) and excessive sweating. These manifestations suggest that *Kleda* acts as an active pathogenic factor rather than merely a secondary consequence of inflammation.[1,3]

The role of *Kleda* is particularly evident in *Vicharchika* (*Kshudra Kushtha*), where classical features such as itching, exudation, thickening, discoloration and recurrence indicate significant involvement of moisture imbalance. Acute exudative lesions demonstrate *Kleda* predominance, whereas chronic lesions may progress towards dryness and lichenification due to increasing *Vata* influence. Therefore, therapeutic selection should be based on disease stage, with *Kledahara, Rukshana* and *Langhana* measures being beneficial during active exudative phases.[2,4]

Other disorders such as *Pama, Visarpa, Prameha Pidaka* and *Dushta Vrana* also demonstrate pathological *Kleda* involvement. Moist itchy lesions in *Pama*, inflammatory swelling and tissue involvement in *Visarpa*, suppuration in *Prameha Pidaka* and persistent discharge with delayed healing in *Dushta Vrana* reflect the detrimental effect of excessive tissue moisture. Sushruta particularly emphasizes the importance of reducing pathological moisture in wound management to facilitate proper healing.[3]

The relationship between *Kleda* and *Srotodushti* explains the chronic and recurrent nature of dermatological diseases. Excessive *Kleda* affects *Rasavaha, Raktavaha, Swedavaha* and *Medovaha Srotas*, resulting in impaired nutrition, waste elimination, inflammation and delayed repair. Hence, correction of underlying *Kleda* imbalance is essential for achieving long-term therapeutic outcomes rather than providing only symptomatic relief.[1,11]

From a therapeutic perspective, management of pathological *Kleda* involves *Langhana, Rukshana, Deepana, Pachana and Shodhana* therapies along with drugs possessing *Tikta, Kashaya* and *Katu Rasa* and *Laghu, Ruksha* and *Lekhana Guna*. Dietary correction and avoidance of *Kledakara Ahara* are equally important components of management.[1,2]

Thus, *Kleda* may be considered a dynamic pathogenic determinant influencing the initiation, progression, recurrence and healing of dermatological disorders. Understanding its role provides a deeper insight into Ayurvedic dermatopathology and supports individualized treatment planning.

Modern Correlation of *Kleda*

The Ayurvedic concept of *Kleda* does not have a direct equivalent in contemporary biomedical science; however, several modern physiological and pathological mechanisms demonstrate conceptual similarities with its understanding of tissue moisture regulation, fluid balance and homeostasis. Ayurveda considers physiological *Kleda* essential for maintaining tissue hydration, nourishment and functional integrity, whereas pathological increase of *Kleda* results in excessive moisture, *Srava* (exudation), swelling, tissue maceration and impaired healing.[1,3]

One of the closest modern parallels of physiological *Kleda* is tissue fluid homeostasis. Normal skin hydration depends on the interaction between vascular circulation, lymphatic drainage, extracellular matrix and epidermal barrier function. Appropriate interstitial fluid supports nutrient exchange, waste removal and maintenance of tissue elasticity. Disturbance of this balance leads to either excessive dryness or pathological fluid accumulation, comparable to the Ayurvedic concept of imbalance in *Kleda*.[7]

Inflammatory conditions provide another important correlation. During inflammation, mediators such as histamine, prostaglandins, cytokines and vascular endothelial growth factor increase vascular permeability, resulting in leakage of plasma fluid and proteins into tissues. This inflammatory exudation produces edema, erythema, swelling and moist lesions. These manifestations show conceptual similarity with Ayurvedic features such as *Srava, Shopha, Paka* and *Picchilata* observed in *Kleda*-dominant disorders. However, inflammatory exudate should not be

considered an exact equivalent of *Kleda*, as the Ayurvedic concept represents a broader functional disturbance.[16,23]

The epidermal barrier function also provides a significant area of correlation. The stratum corneum regulates transepidermal water loss and protects against environmental insults. In disorders such as atopic dermatitis and chronic eczema, barrier disruption leads to increased water loss, inflammation, microbial susceptibility, exudation and delayed healing. Similarly, pathological *Kleda* reflects disturbance of tissue integrity and impaired healing capacity.[8]

Interstitial edema represents another comparable phenomenon. Excess accumulation of fluid due to vascular injury, increased hydrostatic pressure, reduced oncotic pressure or lymphatic dysfunction results in swelling and tissue heaviness. These features resemble *Shopha* described in Ayurveda, where abnormal fluid accumulation occurs due to *Dosha* imbalance and *Srotodushti*. However, edema represents only one manifestation, whereas *Kleda* encompasses wider aspects of moisture imbalance, metabolism and tissue dysfunction.[19]

Modern understanding of the lymphatic system further supports this correlation. Lymphatic vessels regulate tissue fluid balance, immune surveillance and resolution of inflammation. Impaired lymphatic drainage leads to persistent edema, chronic inflammation and delayed tissue repair. Ayurvedic concepts of *Rasa, Lasika and Srotas* may be considered functional parallels involved in maintaining fluid equilibrium, although they should not be interpreted as direct anatomical equivalents.[20]

The concept of moisture-associated skin damage (MASD) in wound care demonstrates close similarity with pathological *Kleda*. Excessive exposure to moisture from wound exudate, sweat or body fluids causes epidermal maceration, barrier disruption, secondary infection and delayed healing. These changes resemble *Dushta Vrana* manifestations described in Ayurveda, where excessive moisture contributes to discharge, foul smell and impaired granulation.[21]

Chronic inflammatory skin diseases are also associated with oxidative stress and cytokine-mediated inflammation involving pathways such as IL-1β, IL-6, IL-17, IL-23 and TNF-α. Although these molecular mechanisms are not directly described in Ayurveda, they may represent underlying biological processes contributing to manifestations attributed to pathological *Kleda*.[22]

Thus, *Kleda* may be understood as a comprehensive Ayurvedic principle integrating tissue hydration, fluid regulation, inflammation, metabolism and repair mechanisms. It should not be equated with a single biomedical entity such as edema, exudate or barrier dysfunction, but rather viewed as a broader functional concept reflecting disturbed tissue homeostasis. Such conceptual integration may provide a foundation for future translational research in Ayurvedic dermatology.

DISCUSSION

The present review highlights *Kleda* as an important yet underexplored pathogenic factor in Ayurvedic dermatology. Although extensively mentioned in relation to disorders such as *Kushtha, Prameha, Visarpa, Shotha and Dushta Vrana*, its role has often remained integrated within broader concepts of *Dosha, Agni, Ama* and *Srotas*. The findings suggest that *Kleda* should not be considered merely a secondary manifestation of disease but as a dynamic physiological principle whose imbalance contributes to disease initiation, progression and chronicity.[1-3]

Classical descriptions indicate that physiological *Kleda* maintains tissue hydration, nourishment, fluid balance and structural integrity. However, pathological increase due to *Mandagni*, *Kapha* aggravation, excessive intake of *Guru, Snigdha and Abhishyandi Ahara* and sedentary lifestyle results in excessive tissue moisture, impaired metabolism, *Srotodushti* and *Dushya* involvement. These mechanisms provide an Ayurvedic explanation for chronic, recurrent and exudative dermatological conditions.[1,11]

The review demonstrates that clinical features such as *Srava* (oozing), *Kandu* (itching), *Shopha* (swelling), *Paka* (suppuration), *Picchilata* (stickiness), *Ati Sweda* (excessive sweating) and delayed wound healing represent important indicators of pathological *Kleda*. These manifestations are commonly observed in conditions such as *Vicharchika, Pama, Visarpa, Prameha Pidaka* and *Dushta Vrana*, suggesting that disturbed *Kleda* may act as a common pathogenic link among diverse dermatological disorders.[1-3]

Comparative analysis of classical texts reveals consistency regarding the importance of *Kleda*. *Charaka Samhita* emphasizes its role in metabolism and systemic disorders, particularly *Prameha*, while *Sushruta Samhita* highlights its significance in wound healing, inflammation and tissue degeneration. *Ashtanga Hridaya* and *Ashtanga Sangraha* further correlate pathological *Kleda* with *Kapha* predominance, impaired digestion and *Srotodushti*. Collectively, these references establish *Kleda* as an important determinant of tissue pathology.[1-4,11]

The correlation with contemporary dermatology suggests conceptual similarities between pathological *Kleda* and mechanisms such as inflammatory exudation, interstitial edema, epidermal barrier dysfunction, altered fluid homeostasis and chronic inflammation. Increased vascular permeability

during inflammation leads to fluid accumulation and exudation, while disruption of the skin barrier promotes moisture imbalance, infection susceptibility and delayed healing. However, these mechanisms should not be considered direct equivalents of *Kleda* but rather biomedical interpretations of overlapping pathological phenomena.[6,7,19]

Recognition of *Kleda* predominance has important therapeutic implications. Classical management of excessive *Kleda* includes *Langhana, Rukshana, Deepana, Pachana* and *Shodhana* therapies along with drugs possessing *Tikta, Kashaya* and *Katu Rasa* and *Laghu, Ruksha* and *Lekhana Guna*. These approaches aim to reduce excessive moisture, improve metabolic function, restore *Srotas* integrity and correct underlying disease mechanisms. Thus, the concept of *Kledahara Chikitsa* may provide a rational basis for individualized management of moist, exudative and *Kapha*-dominant skin disorders.[1,2]

Despite its significance, certain limitations exist. The concept of *Kleda* is dispersed across multiple classical texts and lacks standardized clinical parameters for assessment. Current understanding is primarily based on classical interpretation, while experimental validation and clinical studies remain limited. Future research should focus on developing objective assessment tools for *Kleda* involvement, evaluating *Kledahara* interventions through clinical trials and exploring correlations with inflammatory biomarkers, skin barrier function and tissue fluid regulation.[23]

Overall, *Kleda* represents a comprehensive Ayurvedic concept integrating tissue hydration, metabolism, inflammation and repair mechanisms. Revisiting this concept provides a broader understanding of dermatological pathogenesis and may contribute to evidence-based integration of *Ayurvedic* principles with contemporary dermatological science.

CONCLUSION

Kleda represents an important yet underexplored concept in Ayurvedic physiology and pathology. The present review highlights that *Kleda* is not merely a representation of moisture but a dynamic functional principle involved in maintaining tissue hydration, metabolic balance and structural integrity. Under pathological conditions, excessive *Kleda* associated with *Kapha* aggravation, *Mandagni, Srotodushti* and *Dushya* involvement contributes to the initiation and progression of dermatological disorders. Clinical features such as *Srava* (oozing), *Kandu* (itching), *Shopha* (swelling), *Paka* (suppuration), *Picchilata* (stickiness) and delayed healing described in conditions like *Kushtha, Vicharchika, Pama, Visarpa and Dushta Vrana* reflect the pathogenic significance of disturbed *Kleda*.

Review of classical texts demonstrates that although *Kleda* is not described as an independent entity, its repeated association with various diseases establishes its role as an important pathogenic determinant. Therapeutic principles including *Langhana, Rukshana, Deepana, Pachana* and *Shodhana*, along with *Kledahara* drugs possessing *Tikta, Kashaya and Katu Rasa* and *Laghu-Ruksha Guna*, emphasize the importance of correcting pathological moisture imbalance for effective disease management.

The modern correlation of *Kleda* with concepts such as inflammatory exudation, tissue fluid imbalance, interstitial edema, epidermal barrier dysfunction and moisture-associated skin damage provides useful interpretative parallels. However, these mechanisms should not be considered direct equivalents, as *Kleda* represents a broader *Ayurvedic* concept integrating fluid regulation, metabolism, inflammation and tissue homeostasis.

Despite its clinical relevance, objective assessment methods and scientific validation of pathological *Kleda* remain limited. Future research should focus on developing measurable parameters for *Kleda* evaluation, validating *Kledahara Chikitsa* through clinical studies and exploring its relationship with inflammatory markers, oxidative stress, skin barrier function and tissue fluid regulation.

Thus, revisiting the concept of *Kleda* provides a deeper understanding of Ayurvedic dermatopathology and may contribute to individualized therapeutic planning and future translational research integrating Ayurveda with contemporary dermatological science.

REFERENCES

1. Agnivesha. Charaka Samhita with Ayurveda Dipika commentary of Chakrapani Datta. Edited by Yadavji Trikamji Acharya. Varanasi: Chaukhamba Surbharati Prakashan. 2021.
2. Vagbhata. Ashtanga Hridaya with Sarvangasundara commentary of Arunadatta and Ayurveda Rasayana commentary of Hemadri. Varanasi: Chaukhamba Surbharati Prakashan 2021.
3. Sushruta. Sushruta Samhita with Nibandha Sangraha commentary of Dalhana. Edited by Yadavji Trikamji Acharya. Varanasi: Chaukhamba Surbharati Prakashan; 2021
4. Madhavakara. Madhava Nidana. With Madhukosha Commentary by Vijayarakshita and Srikanthadatta. Edited by Yadunandana Upadhyaya. Varanasi: Chaukhambha Prakashan.
5. Bhavamishra. Bhavaprakasha Nighantu. Varanasi: Chaukhamba Bharati Academy.
6. Sharma PV. Classical Uses of Medicinal Plants. Varanasi: Chaukhamba Vishvabharati.

7. Proksch E, Brandner JM, Jensen JM. The skin: an indispensable barrier. Experimental Dermatology. 2008; 17(12): 1063-1072.
8. Elias PM. Skin barrier function. Current Allergy and Asthma Reports. Journal of Investigative Dermatology. 2008; 8: 299-305.
9. Agnivesha. Charaka Samhita. Revised by Charaka and Dridhabala. Edited by Acharya YT. Varanasi: Chaukhambha Surbharati Prakashan; 2021. (Sharira Sthana 6/14–15; Nidana Sthana 4; Chikitsa Sthana 6
10. Vagbhata. Ashtanga Hridaya. Edited by Paradakara HS. Varanasi: Chaukhambha Surbharati Prakashan; 2021.
11. Vagbhata. Ashtanga Sangraha. Edited by Sharma S. Varanasi: Chaukhambha Sanskrit Series Office.
12. Lalwani K, Kodape DT, Topare S, Pawar K. Concept of Kleda in accordance to Kriya Sharir – A Review Article. J Ayurveda Integr Med Sci. 2024; 9(2): 187-190. doi:10.21760/JAIMS.9.2.29.
13. Gupta S, Yadav SS. The Twin Pathological Pillars of Prameha: An Ayurvedic Review of Meda and Kleda. J Ayurveda Integr Med Sci. 2025; 10(11): 293–298.
14. Kang S, Amagai M, Bruckner AL, et al., editors. Fitzpatrick's Dermatology. 9th ed. New York: McGraw-Hill Education; 2019
15. Bolognia JL, Schaffer JV, Cerroni L. Dermatology. 4th ed. Philadelphia: Elsevier; 2018.
16. Kumar V, Abbas AK, Aster JC. Robbins and Cotran Pathologic Basis of Disease. 10th ed. Philadelphia: Elsevier; 2021.
17. Bhattacharya T. Sabdakalpadruma. Varanasi: Chaukhamba Sanskrit Series.
18. Monier-Williams M. A Sanskrit-English Dictionary. Oxford: Clarendon Press.
19. Levick JR, Michel CC. Microvascular fluid exchange and the revised Starling principle. Cardiovascular Research. 2010; 87: 198-210.
20. Rockson SG. Lymphedema. American Journal of Medicine. 2001; 110: 288-295.
21. Gray M, Weir D. Prevention and treatment of moisture-associated skin damage. Journal of Wound Ostomy Continence Nursing. 2007; 34: 153-157.
22. Coondoo A. Role of cytokines in the pathogenesis of inflammatory skin diseases. Indian Journal of Dermatology. 2010; 55: 1-7.
23. Nathan C. Points of control in inflammation. Nature. 2002; 420: 846-852.

Cite this article as:
Samiksha Sanjeev Naik, Basil Cardozo, Bishnupriya Mohanty. Kleda in Dermatological Disorders: A Forgotten Concept Revisited - Classical Insights and Contemporary Correlations. International Journal of Ayurveda and Pharma Research. 2026;14(8):60-66.
https://doi.org/10.47070/ijapr.v14i8.4309
Source of support: Nil, Conflict of interest: None Declared

***Address for correspondence**
Dr. Samiksha Sanjeev Naik
PG Scholar,
Department of Kayachikitsa,
GAM&RC Shiroda, Goa.
Email: naik.15.samiksha@gmail.com

Disclaimer: IJAPR is solely owned by Mahadev Publications - dedicated to publish quality research, while every effort has been taken to verify the accuracy of the content published in our Journal. IJAPR cannot accept any responsibility or liability for the articles content which are published. The views expressed in articles by our contributing authors are not necessarily those of IJAPR editor or editorial board members.