

(REVIEW ARTICLE)



Understanding kriyakala: The stages of disease progression

Nija Chacko*

Department of *kriyasharira*, GAVC Trivandrum, India.

International Journal of Biological and Pharmaceutical Sciences Archive, 2025, 09(01), 032-037

Publication history: Received on 17 January 2025; revised on 07 March 2025; accepted on 10 March 2025

Article DOI: <https://doi.org/10.53771/ijbpsa.2025.9.1.0028>

Abstract

Ayurveda is the science of life that gives prime importance to the prevention and cure of diseases. Maintenance of health is essential for the proper maintenance of the body. A person is said to be healthy when their dosha, dhatu, and mala are in a balanced state and their mind, soul and sense organs are in a condition of total well-being. When this equilibrium is disrupted, it results in an imbalance of dosha and dhatus, ultimately leading to the onset of disease. In order to arrest the progression of disease, there should be a profound understanding of both the progression of diseases and their treatment. *Kriyakala* acts as an effective framework within this concept. It provides valuable insights for timely intervention during the disease process, enabling healthcare professionals to address health issues more effectively. This concept highlights the importance of timely action in managing health conditions, allowing for effective therapeutic interventions.

Keywords: *ShadKriyakala*; *Kriya*; *Kala*; Stages of disease

1. Introduction

In Ayurveda, an individual is said to be healthy when there is a state of balance in *dosha*, *dhatu*, and *mala*, along with total well-being of *soul*, *sensory organs*, and *mind*¹. When there is an imbalance in basic elements of body, disease will occur. According to Ayurveda, maintaining homeostasis involves balancing the dosas—*Vata*, *Pitta*, and *Kapha*. Imbalances in these are often triggered by unsuitable diet and lifestyle choices, lead to disturbances in the *dhatus* (body elements), ultimately resulting in the manifestation of disease. The process of disease development is gradual, occurring through multiple stages. Ayurveda presents a distinctive concept of *ShatKriyakala* (stages of disease progression). *Kriyakala* (Kriya meaning treatment and Kala meaning time) refers to the timing of treatment or intervention in the process of disease manifestation. *ShatKriyakala*² are *sanchaya*, *prakopa*, *prasara*, *sthana samshraya*, *vyakti* and *bheda*. It is the different stages of a progression of disease and it is also the karma avasara²[apt time for the management of disease. Apt time for the management of disease is its commencement stage itself. According to *Ayurvediya sabdakosha*, *Kriyakala* is also known as *chikitsa kala*[favourable time for *chikitsa*. The timing of when to initiate management is categorized and is depicted on a hierarchical order as *ShatKriyakala*. Modern science explains that illness develops gradually, beginning with the incubation phase. This is followed by the appearance of prodromal symptoms, and eventually the manifestation of full symptoms. Not all concepts in Ayurveda can be directly compared to those of modern science; however, certain concepts remain relevant in the present era.[please Delete this sentence. This article is an attempt to correlate the concept of *kriyakala* in modern perspective. This paper aims to explore and highlight some aspects of the idea of *Kriyakala*.

Aim

To examine the concept of *Kriyakala* from an Ayurvedic perspective and its relevance in contemporary times.

* Corresponding author: Nija Chacko

Objectives

To analyse and correlate this information with the modern aspects.

2. Material and methods

Data were collected from all ayurvedic texts including Bruhathrayee and Laguthrayee. 20 articles were collected and reviewed. Articles available in search engines were used.

2.1. KRIYAKALA

Kriyākāla can be classified into two categories: one based on the progression of disease, known as *Vyādhikriyākāla* (or *Vikṛtikriyākāla*), and the other referring to the natural variations of the doshas that occur within physiological boundaries, called *Prākṛtakriyākāla* [*Rtukriyākāla*³ The term "*Kriya*" refers to treatment, while "*Kala*" denotes both *Nithyaga* (*Ritu Kala* - seasonal variations) and *Avasthika* (*Vyadhi Kala* - stages of disease manifestation). Acharya Charaka and Acharya Vagbhata describe the three stages of *Dosha Vruddhi* in the *Kiyantasheerashiya Adhyaya* and *Doshabhediya Adhyaya*, respectively. Acharya Sushruta illustrates the concept of *Shatkriyakala* in the context of *Vrana Sopha* (inflammation associated with wounds)⁴.

2.2. SHATKRIYAKALA

Table 1 Stages of *shatkriyakala*²

Shat kriyakala	Stages
Sanchaya	Stage of accumulation
Prakopa	Stage of aggravation
Prashama	Stage of spread
Sthanasamshraya	Stage of localization
Vyakti	Stage of presentation
Bhedam	Stage of prognosis

2.2.1. SANCHAYA – STAGE OF ACCUMULATION

It represents the initial pathological change in the doshas and marks the first stage of disease management. In this stage, the doshas accumulate in the body or specific parts, preparing for the next phase, known as *Prakopa* (the stage of aggravation). During the stage of *Sañcaya* (accumulation), the doshas gather but have not yet aggravated. If managed at this point using appropriate *Sodhana* or *Samana* protocols. Susruta describes the symptoms of *Caya*, which is the initial stage of *Kriyakala* (specifically for *Vata*), as abdominal blockage and fullness, yellowish discoloration, a decrease in body temperature, and a sensation of heaviness in the body⁵. In all these instances, the patient exhibits an aversion to the cause of *Caya*.

2.2.2. PRAKOPA

Prakopa (the stage of aggravation) provides a second opportunity to manage the condition. The *doshas* aggravate in their location, leading to the potential for their liquefaction or dissolution into adjacent body tissues and *Srotas*⁶. This stage is more potent than the previous one, as the *doshas* are about to begin their transit. Management is still feasible at this stage, as indicated for the earlier stage. This represents the second opportunity for management (*Dvitiya Kriyākāla*).

- *Vata prakopa lakshana* - Abdominal pains that resemble needles[*Kōstha tōdam* and *Vata* movement in the abdomen[*kōstha Sañcaranam* are symptoms of *Vata Prakopa Lakshana*
- *Pitta Prakopa Lakshana*: regurgitation[*Amlika* accompanied by intense thirst[*Pipāsa*, a burning feeling in the chest[*paridaha*, and a sour taste[delete this blue ink marked portion.
- *Kapha Prakopa Lakshana*: Loss of appetite and nausea⁷

Hemadri further categorizes *Prakopa* into two types: *Prakṛti Sama Samavēta Prakopa* and *Vikṛti Viṣama Samavēta Prakopa*. He explains that in the former, the disease presentation is identical (*Prakṛti Sama*) to the involved doshas, while in the latter, it is opposite (*Vikṛti Viṣama*)⁸.

Concept of *sanchaya* and *prakopa* in modern perspective

The two stages of *Kriyakala*, *Sanchaya* and *Prakopa*, can be likened to the "pre-pathogenesis stage," which is the early phase before a disease manifest. It can be considered as **Stage of susceptibility**⁹. During this stage, the individual does not have the disease but is susceptible to the disease¹⁰. During this phase, infectious agents find a point of entry into the host, making the host vulnerable due to the presence of certain risk factors. Once inside, the organism must reach the appropriate tissue in the host's body and find optimal conditions for its growth, development, and survival, leading to the onset of the disease¹¹. Primary prevention aims to stop diseases before they occur, targeting the stage of susceptibility, which is before any disease process begins. This involves interventions designed to prevent the onset of illness. Primary prevention is essential in addressing potential health risks at the earliest stage, before disease development¹⁰.

2.2.3. PRASARA

It is third stage of *Kriyakala*. It is the stage of spread. In the stage of *Prakopa* (aggravation), the doshas undergo a process of liquefaction. Disturbed doshas lead to disease, either affecting the entire body or targeting specific areas where conditions allow. They leave their original location and begin to invade nearby areas but have not yet reached their target vulnerable sites, which is known as *Sthānasamśraya* (stage of localization) However, if these doshas are not fully vitiated, they settle deeply in a particular site (*lina*) and remain in the *rogamarga* (pathway of disease) without manifesting symptoms, simply waiting for an opportunity to gain strength through the consumption of causative factors¹². However, if these doshas are not completely vitiated, they settle deeply in a specific location [*lina* and remain within the *rogamarga* [pathway of disease without exhibiting symptoms, merely waiting for an opportunity to strengthen through the intake of causative factors.

This physical change allows the doshas to spread and gain access to parts of the body that are more susceptible to disease due to *srotas vaigunya*. Once they reach these critical areas, they settle there, marking the next stage called *Sthānasamśraya* (localization). As a result, symptoms may appear sporadically in different areas. At this stage, the disease becomes challenging to diagnose using medical methods¹³.

They exhibit the following particular symptoms and signs:

- *Vata Prasara Lakshana*: Abnormal movement of Vata away from its usual path and abdominal gas displacement.
- *Pitta Prasara Lakshana*: feverish sensation, dehydration, burning sensation, and finally, excessive burning.
- *Kapha Prasara Lakshana*: Indigestion, vomiting, bodily pain, and loss of taste¹⁴.

Concept of *prasara* in modern perspective

This can be considered as the Stage of preclinical disease/ latent stage. During this stage, the disease process has started but the person does not have symptoms. The preclinical phase refers to the time between the onset of the first immune disturbances and the development of noticeable disease. This phase can last from months to years before a formal diagnosis is made. This stage is also known as the presymptomatic stage, subclinical stage, or latent disease stage¹⁰. The infection becomes evident after a specific period known as the incubation period. This is the time between the entry of the infective agent and the appearance of the first signs or symptoms of the disease. For non-infectious diseases, this period can be considered a latent stage¹⁵.

2.2.4. Sthana samsraya

Sthānasamśraya refers to the localization of doshas in a specific part of the body. This occurs due to the obstruction of *doshas* caused by defects in the *Srotas*. Toxic things are produced as a result of vitiated *doshas*, which circulate throughout the entire system. When an organ's self-immune response is weakened, these vitiated doshas can effectively create harmful and toxic substances, signaling the initial onset of disease¹⁶. This stage is marked by the appearance of prodromal symptoms indicating an impending disease event, though these symptoms do not necessarily reveal the specific doshas involved in the disease's pathogenesis. It corresponds to the fourth *kriyākāla*.

- In Abdomen – *Gulma, Vidradhi, Udararoga, Anaha, Visuchika, Atisara, Agnimandya*.
- In Basti – *Prameha, Kidney stone, Mutraghat, Mutradosha* and other related disease of urinary tract.
- In *Vrushana – Vrushanagata vrudhi*
- In *Shishna – Niruddhaprakash, Upadansha, Shukra dosha*
- In *Gudamarga – Bhagandara and Arsha*
- In *Urdhwajatru – Urdhwajatrugata vyadhi*
- In *Twacha – mamsa – Rakta – Kshudraroga, Kushta, Visarpa*
- In *Medadhatu – Granthi, Apachi, Arbuda, Galaganda, Alaji*
In *Asthi – Vidradhi, Asthi majja shoth, Anushayi pitika*
- In *pada – Shleepada, Vatashonita, Vatakantaka*
- In All body – *Jwara* and diseases of all body affecting all systems¹⁷

In *Sthanasamshraya* stage, the treatment should be given for *Vitiated dosha* and its specific location.

Concept of *sthanasamshraya* in modern perspective

This can be considered as the Stage of prodromal symptoms. The **prodromal stage** is a phase in the progression of a disease that occurs after the incubation or latency period. Characteristics of the prodromal stage are nonspecific and short-duration. The body is signaling that an illness is developing, but the specific disease has not yet manifested in a way that allows for a clear diagnosis.

2.2.5. VYAKTI [STAGE OF MANIFESTATION

It is the fifth stage of *Kriyakala*. It is the stage of manifestation of disease. The *Vyakti* stage is marked by the complete manifestation of all the symptoms of a disease. At this stage, the *dosha-dūṣya sammūrchana* is fully realized, and the disease presents itself with all its distinctive signs and symptoms, collectively referred to as the presentation of the disease or symptomatology. It represents the confirmation of the illness. Conditions such as *Sopha* (swelling), *Arbuda* (tumor), *Granthi* (aneurysm), *Vidradhi* (abscess), *Visarpa*, and *Jwara* (fever) may all manifest at this stage¹⁸. This stage serves as the final opportunity for effective treatment toward a cure.

Concept of *vyakti* in modern perspective

This can be considered as the Stage of clinical disease. During this stage, the individual experiences signs and symptoms of the disease and the disease is clinically apparent. Most diseases are diagnosed during this stage. The stage where symptoms become evident aligns with *Vyakti*, where the disease can be accurately diagnosed based on signs and symptoms, marking the acute phase of disease manifestation¹⁰. Secondary prevention aims to identify individuals in the preclinical or early clinical stages of disease and intervene to reduce its impact. This approach focuses on the early detection and treatment of disease to prevent its progression. By detecting disease early, treatment can begin promptly, preventing further advancement. Secondary prevention is applied during the preclinical stage, which includes the presymptomatic, subclinical, or latent phases of the disease¹⁰.

2.2.6. BHEDA

Bheda is the final stage of management, serving as a crossroads for prognostic divergence and indicating a likelihood of poor curability. *Vāgbhaṭa* almost equates this stage with the *Asadhya* stage. If effective treatment is not applied during the initial five stages of the disease, conditions like *vranasopha* or *jvara* can become chronic or uncontrolled, which is also referred to as "*bheda*¹⁷" (indicating a worsening change). Some also interpret *bheda* as the *dosic* distinction in the presentation of a disease, much like the eight types of fevers are "different from one another," hence the term "*bhinna*." This categorization of illnesses based on vitiated doshas is referred to as *Bheda*. It represents the ongoing condition in which the illness manifests. At this stage, the disease may become incurable¹².

Concept of *bheda* in modern perspective

Final stage of disease progression is Stage of recovery, disability, or death. During this final stage, the person recovers or dies from the disease. If the person recovers, they may not experience short- and long-term sequelae of the disease¹⁰. *Bheda* can be considered as the stage of disability or complication. Tertiary prevention can be done in this stage. Tertiary prevention aims to reduce the long-term effects of disease and help individuals achieve the highest possible level of function and quality of life. It focuses on recovery and rehabilitation after a disease or injury has occurred, with the goal of restoring maximum function and well-being. Tertiary prevention is implemented during the later stages of clinical disease and continues throughout recovery, disability, or end-of-life care.

3. Discussion

The concept of *ShatKriyakala* is crucial for both public health interventions and disease control strategies. It offers valuable opportunities at every stage to halt disease progression through appropriate measures¹⁹. In modern science, the disease progression pyramid is commonly used to illustrate the stages through which a disease evolves, from initial exposure to advanced illness. Each level represents a phase in the disease's development, offering opportunities for public health interventions at various points to prevent or reduce its impact. Natural history of disease refers to the progression of a disease process in an individual over time, in the absence of treatment²⁰. stage of Susceptibility can be considered as *sanchaya* and *prakopa*. After the disease process is initiated, pathological changes begin to occur without the individual's awareness. This phase, known as the subclinical stage, spans the period from exposure to the appearance of symptoms. During this stage, the disease is asymptomatic, meaning no visible symptoms are present. *Prasara* can be included under this stage because it is the just before the appearance of prodromal symptoms. This stage is comparable to the pre-symptomatic phase of disease, where the disease process has already begun, but outward signs and symptoms have not yet appeared. The stage of disease progression where the causative factors accumulate in various body parts can be correlated with *Sthanasamsraya*, during which the prodromal symptoms begin to appear. The stage where symptoms become evident aligns with *Vyakti*, where the disease can be accurately diagnosed based on signs and symptoms, marking the acute phase of disease manifestation. Finally, the stage involving disease complications corresponds to *Bheda*, wherein chronic or incurable conditions may develop if appropriate treatments are not applied. The spectrum of disease refers to the range of its severity, from mild to severe. The natural history of disease describes its development and progression over time without any intervention. Understanding this progression is crucial for prevention, as well as for developing effective approaches to screening and diagnosis.

4. Conclusion

A thorough understanding of *ShatKriyakala* aids in comprehending the processes involved in the manifestation of various diseases and facilitates accurate diagnosis. If diagnosis is made at initial stage itself, it will be helpful in prevention and treatment of disease. This model emphasizes the opportunities for implementing preventive measures at earlier stages, while later stages require more intensive medical interventions and care. Adopting appropriate diet and regiment it will be helpful in arresting disease progression. Understanding *ShataKriyakala* is essential for determining the appropriate treatment for each stage of Dosh. It provides a clear insight into the *Sadhyaasadhya* of a disease, helping clinicians tailor their approaches effectively.

References

- [1] Jadavji Trikamji. Sushruta Samhita of Susruta with Nibandhasangraha Commentary of Dalhanacharya. Reprint edition. Sutra sthana.15/41 Chawkhamba Sanskrit Sansthan, Varanasi, 2021; 75p
- [2] Prof.KR Srikanthamurthy. Susruta Samhitha. Reprint edition.Sutrasthan.21/36. Chawkhamba Sanskrit Sansthan, Varanasi.163p.
- [3] Acharya JT. Sushrutha Samhita with Nibandhasangraha commentary of Dalhana. Reprint ed. Varanasi: Chaukamba Sanskrit Sansthan; 2010.p.111
- [4] Acharya JT. Sushrutha Samhita with Nibandhasangraha commentary of Dalhana.Reprint ed. Varanasi: Chaukamba Sanskrit Sansthan; 2010.p. 103.
- [5] Jadavji Trikamji. Sushruta Samhita of Susruta with Nibandhasangraha Commentary of Dalhanacharya. Reprint edition. Sutra sthana.. 21/18 Chawkhamba Sanskrit Sansthan, Varanasi, 2019 ; 103
- [6] P.V.Sharma. Vagbata's Ashtanga hrudayam. 10th edition. Sutra sthana. 12.23 chaukamba Orientalia. 196 p.
- [7] Prof.KR Srikanthamurthy. Susruta Samhitha. Reprint edition.Sutrasthan.21/327. Chawkhamba Sanskrit Sansthan, Varanasi.160p.
- [8] P.V.Sharma. Hemadri on Vagbata's Ashtanga hrudayam. 10th edition. Sutra sthana. 13.15 chaukamba Orientalia. 214 p.
- [9] Bishnoi N, Meena S, Sharma MM. Kriyakala in Ayurveda: Understanding disease progression for precise treatments. Journal of Ayurveda and Integrated Medical Sciences. 2024 Feb 24;9(1):104-12.
- [10] <https://library.frontier.edu/c.php?g=1248178&p=9135211> Epidemiology and biostatistics published in Frontier Nursing University

- [11] Park. Parks, Textbook of Preventive & Social Medicine, 21st edition, Jabalpur; M/s Banarsidas Bhanot; 2011, 94p.
- [12] T. Sreekumar. Textbook of Ayurvedic Physiology. Harisree publications.2022.127p
- [13] Thakare SH, Patil U, Pande SM. Kriyakala'A Fundamental Concept of Ayurveda & Its Contemporary Relevance. COMPUTER. 2024;24(7).
- [14] Jadavji Trikamji. Sushruta Samhita of Susruta with Nibandhasangraha Commentary of Dalhanacharya. Reprint edition. Sutra sthana.. 21/32 Chawkhamba Sanskrit Sansthan, Varanasi, 2019 ; 105p
- [15] Rodríguez-Lago I, Zabana Y, Barreiro-de Acosta M. Diagnosis and natural history of preclinical and early inflammatory bowel disease. Annals of Gastroenterology. 2020 Sep;33(5):443.
- [16] Vaidya P. G. Athavale, Drushtarth Sushrut. Chintan, Dhanwantari book Publishers, Second Edition 2017, Part 1, page no. 195
- [17] Jadavji Trikamji. Sushruta Samhita of Susruta with Nibandhasangraha Commentary of Dalhanacharya. Reprint edition. Sutra sthana.. 21/33 Chawkhamba Sanskrit Sansthan, Varanasi, 2019 ; 105p
- [18] Jadavji Trikamji. Sushruta Samhita of Susruta with Nibandhasangraha Commentary of Dalhanacharya. Reprint edition. Sutra sthana. 21/34 Chawkhamba Sanskrit Sansthan, Varanasi, 2019 ; 105p
- [19] Thakare SH, Patil U, Pande SM. Kriyakala'A Fundamental Concept of Ayurveda & Its Contemporary Relevance. COMPUTER. 2024;24(7)
- [20] Centers for Disease Control and Prevention (CDC). Lesson 1: Introduction to Epidemiology, Section 9: Natural History and Spectrum of Disease. CDC. GOV. 2012.