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Review Article

A CRITICAL STUDY OF THE CONCEPT OF “KAALA” IN AYURVEDA

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ABSTRACT

The concept of *Kaala* (time) in Ayurveda extends beyond mere chronology, encompassing a dynamic principle that profoundly influences health, disease, and therapeutic interventions. This study explores the multifaceted role of *Kaala* as a causative factor, examining its impact on the balance of *Tridosha* (Vata, Pitta, Kapha), *Dhatu*s (tissues), and disease manifestations. It also highlights the influence of *Kaala* on daily routines (*Dincharya*), seasonal regimens (*Ritucharya*), and the timing of treatments to optimize health outcomes. Through critical analysis of classical Ayurvedic texts and modern research, the study underscores the significance of aligning activities with natural rhythms, such as circadian and seasonal cycles, to maintain health (*Swasthya Raksha*) and manage disease (*Aatur Chikitsa*). The findings reaffirm *Kaala*'s relevance in contemporary healthcare, demonstrating its potential in preventive and therapeutic applications.

KEYWORDS: *Aatur Chikitsa, Ayurveda, Circadian Rhythms, Dhātu, Kaala, Seasonal Influences, Swasthya Raksha, Tridosha.*

INTRODUCTION

In Ayurveda, *Kaala* is recognized as one of the nine *Karana Dravyas* (causative factors) essential for understanding the dynamics of health and disease [1]. While the term *Kaala* is often equated with time, its interpretation in Ayurveda is far more profound, encompassing the cyclical patterns and temporal frameworks that govern life processes. The overarching goal of Ayurveda, as stated, is *Swasthasya Swasthya Rakshanam* (maintenance of health) and *Aturasya Vikara Prashamanam Cha* (management of disease) [2].

Kaala plays a pivotal role in achieving both these objectives. For maintaining health (*Swasthya Rakshana*), Ayurveda prescribes *Dincharya* (daily regimen) and *Ritucharya* (seasonal regimen), both of which are structured around the concept of *Kaala*. Adherence to these regimens enhances an individual's strength and vitality by aligning their lifestyle with the rhythms of nature. Daily and seasonal routines are directly influenced by temporal variations, highlighting the intrinsic link between *Kaala* and health.

In the management of diseases (*Aturasya Vikara Shamana*), *Kaala* serves as a critical factor. It influences the chronicity and progression of diseases, guides the planning of treatment strategies, and determines the appropriate timing for drug collection, preparation, preservation, and administration. Thus, *Kaala* provides a framework for both preventive and therapeutic interventions in Ayurveda, emphasizing its indispensable role in achieving holistic well-being.

Etymology and Derivation

The term *Kaala* is derived from the combination of 'Ka' and 'Aa' of *Kaala* and 'La' from the root verb *Lee dhatu*. Its meaning encompasses "to count" (*Kaalate*) and "to hold or place" (*Kaalayaati*) [3]. This highlights the intrinsic role of *Kaala* in organizing and sustaining the continuity of existence. The concept of *Kaala* is eternal, infinite, and unbroken [4].

Synonyms of Kaala

1. **Parinama** (*Transformation*)

Referenced in *Charaka Samhita, Vimana Sthana 8/48* and *Sutra Sthana 11/42* [5].

2. **Samwatsara** (*Year*)

Depicted as the cyclical representation of time in *Charaka Samhita, Vimana Sthana 8/125* [6].

3. **Bhagawan** (*The Almighty*)

Revered as the ultimate controller of time, mentioned in *Sushruta Samhita, Sutra Sthana 6/39* [7].

4. **Swayambhu** (*Self-Originating*)

Signifying time as self-existent, referenced in *Sushruta Samhita, Sutra Sthana 6/3* [8].

Definition and Features

- **Transformation (Parinama):**

Kaala signifies transformation, particularly the transition through seasons, emphasizing its dynamic nature [9].

- **Year (Samwatsara):**

Kaala represents the annual cycle, which is integral to both natural phenomena and the disease state of patients [10].

- **Universal Causality:**

Kaala governs the creation of beings and diseases, acting as the ultimate regulator of universal actions and processes [11].

- **Eternal and Indestructible:**

Kaala has no origin (*Anadi*) or end (*Ananta*), making it eternal and non-destructible [12]. Its existence is independent, constant, and indivisible.

Role of Kaala in Action and Existence

Time (*Kaala*) is essential for coordinating all actions in the universe. It influences every event, either early or late, ensuring the orderliness of the world. Without the governance of *Kaala*, the universe would become stagnant and inert. Thus, *Kaala* is fundamental to maintaining the rhythm and continuity of life and action.

Attributes (*Guna*) of Kaala

The attributes of *Kaala* are essential to understanding its multifaceted role in Ayurveda and life. These include:

1. Number (*Sankhya*):

Kaala is singular in its essence. Despite its diversity in perception and application, its fundamental quality recognizing actions as "early" or "late" is universal and consistent across all contexts.

2. Measure (*Parimana*):

Kaala is infinitely large (*Mahat*), signifying its boundless nature. It does not have a definitive size or form [13].

3. Combination (*Samyoga*) and Disjunction (*Vibhaga*):

As time progresses, molecular structures undergo changes through the combination and disjunction of atoms. These processes drive actions and movements in the physical world, highlighting *Kaala's* dynamic influence on the material realm.

Classification of Kaala

Depending on external conditions, *Kaala* is divided into two types:

1. Eternal (*Nityaga Kaala*)

This represents the continuous, cyclical passage of time marked by days, seasons, and years. It is commonly used as a calendar by both medical practitioners and the general public.

• Structure of Nityaga Kaala:

- **Year (*Samwatsara/Varsha*):** Divided into two solstitial movements (*Ayana*):
- **Uttarayana (Adana Kaala):** The northward movement of the sun.
- **Dakshinayana (Visarga Kaala):** The southward movement of the sun.
- Each *Ayana* comprises three seasons (*Ritus*), with each season consisting of two months (*Masas*).
- Each month has two fortnights (*Pakshas*):
- **Shukla Paksha:** The waxing phase of the moon.
- **Krishna Paksha:** The waning phase of the moon.

2. Transient (*Avasthika or Aturakaala*)

This refers to time as experienced during various stages of disease.

- The progression of diseases is influenced by *Kaala*, necessitating a precise understanding of its phases for effective diagnosis and treatment.

Units of Time in Ayurveda

The ancient texts describe a detailed hierarchy of time units, showcasing the precision with which *Kaala* was understood:

- **Akshinimesha (Matra):** Time taken for a blink of the eye (~88.9 milliseconds).
- **15 Matras = 1 Kashtha:** (~1.6 seconds).
- **30 Kashthas = 1 Kaalaa:** (~48 seconds).
- **20 Kaalaas = 1 Muhurta:** (~48 minutes).
- **30 Muhurtas = 1 Ahoratra:** (1 full day and night ~24 hours).
- **15 Ahoratras = 1 Paksha:** (1 fortnight).
- **2 Pakshas = 1 Masa:** (1 month).
- **2 Masas = 1 Ritu:** (1 season).
- **3 Ritus = 1 Ayana.**
- **2 Ayanas = 1 Varsha:** (1 year).
- **5 Varshas = 1 Yug:** (Era).

This intricate system illustrates the interplay of time with nature, human activities, and health in Ayurvedic science.

Significance of Kaala in Ayurveda

- *Kaala* influences **Swasthya Raksha (health maintenance)** through daily (*Dincharya*) and seasonal (*Ritucharya*) regimens, promoting harmony with natural rhythms.
- It guides **Aatur Chikitsa (disease management)** by determining the chronicity of ailments, selecting the optimal treatment methods, and timing drug collection, preparation, and administration.

DISCUSSION

Role of Kaala in Maintaining Health

The concept of *Kaala* is pivotal in maintaining physical and mental well-being. It directly influences the **Bala** (strength) of an individual, which Ayurveda categorizes into three types:

1. **Sahaja Bala:** Congenital or innate strength.
 2. **Kaalaja Bala:** Derived from the appropriate influence of time (e.g., age and seasons) [17].
 3. **Yuktikrita Bala:** Acquired strength through diet, exercise, and other measures.
- **Seasonal Impact on Health:**
 - *Kaala* manifests through the **Uttarayana (Adana Kaala)** and **Dakshinayana (Visarga Kaala)**, which affect health by altering environmental factors such as air, sunlight, and moonlight.
 - During **Visarga Kaala** (Dakshinayana), strength generally increases due to nurturing environmental influences.
 - In contrast, **Adana Kaala** (Uttarayana) tends to deplete strength, necessitating appropriate seasonal precautions, especially during transitional periods (*Ritusandhi*).

- **Daily Routine (*Dinacharya*) and *Kaala*:**

Observing daily rituals aligned with *Kaala* such as *Dhoomapana* (medicated smoke inhalation) at specific times (e.g., post-meal, post-bath) is emphasized to balance *Doshas* and maintain health. Ignoring these rhythms can lead to diseases, highlighting the significance of proper *Dinacharya*.

Role of *Kaala* in Understanding Physiology

Physiological processes in the body are intricately linked to *Kaala*. Some notable examples include:

- **Developmental Milestones:**

- Puberty around 13 years and menopause around 50 years in females.
- The development of specific foetal organs such as the *Manas* (mind) in the 5th month and *Buddhi* (intellect) in the 6th month of gestation [19].

- **Time-Specific Cycles:**

- Menstrual cycle (~21-35 days).
- Gestation period (~37-40 weeks).
- Daily vitals such as heart rate (70-80 beats/min), respiratory rate (18 breaths/min), and urine output (1.5-2 L/day).

- **Tridosha Cycles:**

- The accumulation (*Sanchaya*), provocation (*Prakopa*), and pacification (*Prashamana*) of the *Tridoshas* (Vata, Pitta, and Kapha) occur in specific seasonal cycles, emphasizing the need for physicians to tailor treatments according to time.

- **Life Stages and Dosha Predominance:**

- Childhood (*Balavastha*): Predominance of *Kapha*.
- Middle age (*Madhyamavastha*): Predominance of *Pitta*.
- Old age (*Vridhnavastha*): Predominance of *Vata*.
- Understanding these time-bound physiological processes is critical for precise diagnosis, treatment, and health maintenance in Ayurveda.

Dosha	Sanchaya (Accumulation)	Prakopa (Provocation)	Prashamana (Pacification)
Vata	Grishma Ritu (Summer)	Varsha Ritu (Rainy)	Hemanta Ritu (Winter)
Pitta	Varsha Ritu (Rainy)	Sharad Ritu (Autumn)	Hemanta Ritu (Winter)

Kapha	Shishira Ritu (Late Winter)	Vasanta Ritu (Spring)	Grishma Ritu (Summer)
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Role of Kaala in Understanding Etiopathology

1. Etiological Factors of Diseases:

- Diseases arise due to three primary causes:
 - *Asatmyaindriyartha Samyoga*: Incompatible sensory experiences.
 - *Prajnaparadha*: Intellectual errors.
 - *Kaala Parinama*: Disruption of natural rhythms and cycles.

2. Manifestations of Kaala Parinama:

- **Atiyoga**: Over-manifestation of seasons (e.g., excessive rains in the rainy season).
- **Ayoga**: Under-manifestation of seasons (e.g., insufficient rain during the rainy season).
- **Mithyayoga**: Unusual seasonal occurrences (e.g., unseasonal heat in winter).

3. Kaala's Role in Disease Dynamics:

- Vitiation of environmental factors (*Vayu, Jala, Desha*) due to Kaala imbalances can lead to pandemics (*Janapadodhwansa*).
- Specific diseases, such as types of intermittent fever (*Vishama Jwara*), are defined based on their temporal manifestation patterns:
 - *Santata*: Continuous fever.
 - *Satata*: Fever occurring twice a day.
 - *Anyedyushka*: Fever every alternate day.
 - *Tritiyaka*: Fever every third day.
 - *Chaturthaka*: Fever every fourth day.

4. Life Stages and Predominant Doshas:

- Childhood: Predominance of *Kapha*, leading to respiratory illnesses.
- Youth: Predominance of *Pitta*, leading to conditions like gastritis or skin disorders.
- Old Age: Predominance of *Vata*, leading to joint issues, insomnia, and neurological concerns.

5. Shat Kriya Kaala – Stages of Disease Progression:

- *Sanchaya*: Accumulation stage.
- *Prakopa*: Provocation stage.
- *Prasara*: Propagation stage.
- *Sthanasamshraya*: Localization stage.
- *Vyaktibhava*: Manifestation stage.
- *Bheda*: Complication stage.

Early intervention at appropriate *Kaala* can prevent disease progression to advanced stages.

Role of Kaala in Drug Collection, Preservation, and Administration

1. Optimal Collection and Preservation:

- Herbs are most potent when collected at the right season (*Kaala*).
- Preservation must ensure efficacy up to the stated shelf-life (*Saviryataavadhi*).

2. Timely Administration of Drugs:

- Medications should be consumed within their period of potency.
- Time-specific recommendations include:
 - Morning doses for stimulating digestion (*Deepana*) or evacuating toxins (*Pachana*).
 - Evening doses for calming therapies.

Role of Kaala in Treatment

1. Therapeutic Interventions:

- *Snehana* (oleation) duration varies based on individual constitution:
 - *Mridu Koshta* (soft bowels): 3 days.
 - *Madhyam Koshta* (moderate bowels): 5 days.
 - *Krura Koshta* (hard bowels): 7 days.

2. Seasonal Preferences for Panchakarma:

- *Vamana* (emesis): Spring (*Vasant Ritu*) for *Kapha* disorders.
- *Virechana* (purgation): Autumn (*Sharad Ritu*) for *Pitta* disorders.
- *Basti* (enema): Late summer (*Varsha Ritu*) for *Vata* disorders.

3. Time-Specific Therapies:

- *Nasya* (nasal therapy): Twice a day in conditions like hiccups or voice disorders.
- *Basti*:
 - *Niruha Basti* (evacuative enema): Afternoon, after digestion of the previous meal.
 - *Anuvasana Basti* (unctuous enema): Morning during winters; night-time during summer and rainy seasons.

4. Seasonal Restrictions:

- *Agnikarma* (thermal cauterization): Avoided in summer (*Grishma*) and autumn (*Sharad*).
- *Raktamokshana* (bloodletting): Best performed in *Sharad Ritu*.

5. Use of Ancient Remedies:

- Example: *100-year-old Ghrita* (ghee) is particularly potent, pacifies *Vata* and *Kapha*, enhances strength, and benefits the intellect.

CONCLUSION

Kaala is not just a concept of time but is synonymous with the divine and eternal, representing the ultimate force that governs transformation (*Parinama*). Devoid of origin or end, *Kaala* is perpetual and serves as the foundation for understanding the dynamics of life, health, and disease in Ayurveda.

1. Role in Drug Dynamics:

- *Kaala* influences every stage of drug management from optimal collection and preservation to the precise timing of administration, ensuring their efficacy.

2. Classification and Understanding of Diseases:

- Diseases are classified as timely (*Kaalaja*) or untimely (*Akaalaja*) and acute or chronic, based on their alignment with natural rhythms.

3. Physiological and Circadian Relevance:

- Many bodily processes follow the circadian rhythm, and *Kaala* aids in comprehending these physiological functions, including growth, aging, and vital functions like heartbeat, respiration, and digestion.

4. Treatment Protocols:

- The Ayurvedic therapeutic approach heavily relies on *Kaala* for determining the appropriate time for interventions such as *Panchakarma* therapies, seasonal routines (*Ritucharya*), and daily regimens (*Dinacharya*), aligning treatments with the doshas' natural cycles.

In conclusion, *Kaala* integrates the principles of Ayurveda, embodying its foundational aim: “**Swasthya Swasthya Rakshanam, Aturasya Vikar Prasamanam Cha**” the preservation of health in the healthy and the alleviation of diseases in the afflicted. By harmonizing with the cycles of *Kaala*, Ayurveda provides a timeless framework for holistic health and well-being.

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