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Understanding of Nityaga Kaala from Geographical perspective in India

Dr. Ramesh Kumar K. L.¹, Dr. A. S. Baghel², Dr. Prof. Mahesh Vyas.³

¹Assistant Professor, Dept. of PG Studies in Ayurveda Samhita and Siddhanta, Govt. Ayurveda Medical College, Mysuru, Karnataka, ²Prof and Head, Dept. Of Basic Principles, I.P.G.T and R.A., Gujarat Ayurved University, Jamnagar, Gujarat, ³Prof and HOD, Dept. of Basic Principles, All India Institute of Ayurveda, Sarita Vihar, New Delhi, INDIA.

ABSTRACT

Philosophies are the foundation for any science, the primary inquest for any science actually starts from philosophy. Whatever scientific theories have been laid today are the transformed versions of philosophy only, Ayurveda being a philosophical science has proven its relevance till date, because of its thumping philosophical background. The philosophy of Shadpadartha is the common root for Indian philosophies and Ayurveda, Dravya or substance/matter is considered to be the foremost Padartha by Vaisheshika philosophers, though Ayurveda has placed it after Samanya, Vishesha and Guna, it has given utmost importance to it because of its applicability and supremacy in Chikitsa. Charaka Samhita has emphasized the importance of the Karana Dravyas for the homeostasis of body tissue and thus maintaining good state of health, the Nine Karana Dravyas viz, Pancha Mahabhuta, Atma, Manas, Kaala and Disha/ Dik or Desha are the materialistic causes for the creation and health.

Key words: Kaala, Nityaga Kaala, Avastika Kaala, Geography, Season, Climate.

INTRODUCTION

Kaala being the regulator of the events of universe as well as life is regarded as Bhagawan, it is divine, and it neither has a beginning nor an end. It follows effect of accumulated actions (of the past). Ordained by it, Aditya, Akasha and other Mahabhuta undergo transformation. It is the cause for birth and death of all living beings, for the disorders and excellence of the seasons; of the tastes and potency of drugs (of all the substances); of disorder or excellence of the strength of the Dosas and body.^[1] Kaala is the cause

Address for correspondence:

Dr. Ramesh Kumar K. L.

Assistant Professor, Dept. of Ayurveda Samhita and Siddhanta, Govt. Ayurveda Medical College, Mysuru, Karnataka, INDIA. E-mail: dr.ramesh.mysore@gmail.com

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for any transformation or change.^[2]

For the purpose of practical applicability, Kaala has been divided in to two types viz, Nityaga Kaala and Avasthika Kaala, where as Nityaga Kaala is the seasonal time, Charaka describes that Kaala is Samvatsara (a year) which features with the characteristics of cold, hot and rainy in Hemanta, Greeshma and Varsha Ritus respectively.^[3]

In Ayurveda the seasons are broadly grouped into three types based on their main climatological features such as hot, cold and rainy, the seasons have been included under these climatological divisions. We can find two sets of seasonal classifications based on natural strength of living beings, dominancy of Rasa in environment in one set and in another set the natural accumulation, progression and regression of Doshas in respective months for the purpose of seasonal purification.

In Charaka Samhita, it is described that the Shodhana should be carried out in Sadharana Ritus i.e., Pravrit, Sharad and Vasanta because of the mildness and suitability of season for the same. And Shodhana is Dr. Ramesh Kumar K. L. et al. Understanding of Nityaga Kaala from Geographical perspective in India

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contra-indicated in *Tikshna Ritus* such as *Varsha*, *Hemanta* and *Greeshma*, due to their strong nature.^[6]

Table 1: Classification of seasons based ondominancy of Rasa and Swabhavika Bala

Climatological condition	Seasons	Hindu calendar	Greek calendar
Cold	Sharad	Aswayuja Karthika	Sep – Oct Oct –Nov
	Hemanta	Margaseersha - Pushya	Nov- Dec Dec –Jan
	Shishira	Magha Phalguna	Jan-Feb Feb-Mar
Hot	Vasanta	Chaitra Vaisakha	Mar-Apr Apr-May
	Greeshma	Jyeshta Aashada	May-June June-July
Rainy	Varsha	Shravana Bhaadrapada	July-Aug Aug –Sept

Table 2: Division of seasons based on Doshik Avastha and Rituvat Shodhana^[5]

Climatological condition	Seasons	Hindu calendar	Greek calendar
Cold	Sharad	Kartika- Mārgashirsha	Oct-Nov Nov-Dec
	Hemanta	Pushya- Magha	Dec-Jan Jan-feb
Hot	Vasanta	Phalguna- Chaitra	Feb-Mar Mar-April
	Greeshma	Vaishakha- Jyeshtha	April-May May- June

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Rainy	Pravrit	Ashadha — Shravana	June-July July-Aug
	Varsha	Bhadrapada- Ashwayuja	Aug-Sep Sep-Oct

Nityaga Kaala is having Samavaya Sambandha with Desa, off course the exact nature of season cannot be understood without the knowledge of relativity of Kaala with Desa. The nature of season is mainly depend upon the Desa or location. These two principals have Samavaya Sambandha with each other.

Though there is tremendous information is found in Ayurveda regarding *Nityaga Kaala*, its effective utilization is not being made. The reason for this is not having adequate knowledge about the relation between *Kaala* and *Desa*. Understanding *Kaala-Desa* from geographical perspective is very important for Ayurvedic practitioners, since these two are major examination aspects in *Dasavidha Pariksha Bhavas*. Hence this article aims to understand the seasons of India geographically.

Climate refers to the sum total of weather conditions and variations over large area for a long period of time (more than 30 years). Weather is state of atmosphere over an area at any point of time. Similarly weather conditions which last for longer duration are responsible for making a season. Seasons basically happens due to the northwardly and southwardly movement of sun from the equatorial line, the tilt of earth about 23.5° is the major reason for the formation of seasons across the globe. Geographically India is a sub-tropical country with very vast area with varied climatic conditions situated above equatorial plane with the latitude 8°N -36°N and altitude 68°E-96°E and tropic of cancer passes through the middle of the country.^[7]

There is a gross climatic differences found in India due to many factors, this knowledge is very useful for an Ayurveda *Vaidya* to have a better understanding of his patient and morbidity.

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Factors affecting the climate of India^[8]

- **1.** Location: The places which are closer to equator have high temperature. As one moves towards the poles temperature decreases.
- 2. Distance from the sea: The southern half of India is surrounded by sea from three sides: the Arabian Sea in the west, the Bay of Bengal in the east and the Indian Ocean in the south. Due to moderating influence of the sea this region is neither hot in summer nor very cold in winter.
- 3. Altitude: It means the height above the average sea level. The atmosphere becomes less dense and we feel breathlessness as we go higher from the earth surface and thus the temperature also decreases with the height.
- 4. Mountain Ranges: Mountain ranges also affect the climate of any region to a great extent. The Himalaya Mountain is located in the northern part of our country with an average height of 6000m. It protects our country from cold winds of Central Asia. Similarly, Western Ghats force rain bearing winds to cause heavy rain fall on the Western slopes of the Western Ghats.
- 5. Direction of surface winds: The wind system also affects the Indian climate. This system consists of monsoon winds, land and sea breeze, and local winds. In winter the winds blow from land to sea so they are cold and dry.
- 6. Upper air Currents: Besides surface winds, there are strong air currents called Jet streams which also influence the climate of India. These jet streams are a narrow belt of fast blowing winds located generally at 12,000 meter height above the sea level. They bring western cyclonic disturbances along with them.

India mainly features with three types of climate

- 1. Cold weather season (December February)
- 2. Hot weather season (March May)
- 3. Rain weather season, which is of two types West monsoon season (June September) and Post or

retreating monsoon season (October – November).

The above classification of climate of India is the same as mentioned in Ayurvedic literatures, in which the year is comprised of cold, hot and rain weather conditions.

ञीतॊष्णवर्ष लक्षण: |^[9] (Haranachandra in Dalhana Teeka Su.su.6/7), (Ch.Su.6/4)^[10]

एके चतुर्मासिकं ऋतुं कृत्वा शीतॊष्णवृष्टिलक्षणान् हेमन्तग्रीष्मवर्षासंख्यां त्रीन् ऋतून् इछन्ति || (Arunadatta -Ah.su.3/2)^[11]

Though all seasons in India can be categorized in to cold, hot and rainy seasons, there are regional variations found across the country. The above said season types are found in moderate to severe in nature. In *Charaka Samhita* it is described that the moderate seasons are best suitable for administration of elimination therapy due to the mild nature of that season and strong tolerability of patients.

DISCUSSION

Shita Kaala or cold weather seasons

This seasons forms in the later part of *Visarga Kaala* and first quarter of *Adana Kaala*, after *Vrishti* or rainy season, the *Visarga Kaala* mainly dominates with the dark cloud covers and cold winds. The seasons *Sharad* and *Hemanta* are the main seasons during this solastice, and *Shishira* being the first season of *Adana Kaala* has dominant cold weather condition is also the major *Ritu* of this *Kaala*. When we generally observe the climate of India grossly, the North-west part of India experiences more winter months, where as the peninsular India and eastern India experiences more rainy months.

The *Hemanta* and *Shishira Ritu*'s constitute cold weather season in India generally, in the greater parts of India, *Hemanta Ritu* begins in the later part of November in the north, and by the beginning of December in the rest of the country. When we observe the synonyms of *Hemanta Ritu*, it is mentioned as *Sheeta*, *Tushara Samaya*, *Himaagama*,

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Shishiragama,^[12] which indicates the predominant misty, cold climatic conditions of the season.

During Hemanta Rutu, cold wind blows from the north, The quarters (space around) are full of dust and smoke, The Sun rays are hindered by fog, Reservoirs of water are covered with mist, *Rodhra*, *Priyangu* and *Punnāga* trees flourish (bring up flowers). The season of *Hemanta* is cold but *Ruksha*. The sun is weak and the atmosphere is very airy.^[13] In *Shishira Rutu* the intensity of cold is more and all other *Lakshanas* are the same as in *Hemanta Rutu*, In *Shishira, Purva Vaayu* is good which has qualities like *Shita*, *Madhura*, *Vata Prakopi, Balakrut* and which is not good for *Vranasopha*. In *Hemanta, Agneyavayu* which has qualities like *Madhura Rasa, Kapha* and *Vata Rogas* are produced, which is not good for *Shopha Vrana*.

The cold weather season is characterized by outflowing winds, dry and stable air, and clear skies. During winter season there is a general decrease in temperature from north to south, Isotherm or constant temperature run parallel to the latitudes (horizontal axis). The description of Agneya Vayu during Hemanta can be considered as the north westerly flow prevails down the Ganges Valleys, and the Purva Vavu in Shishira Ritu can be compared to the inflow wind of western disturbances originating from the Mediterranean Sea, which lasts up to the spring season. These winds will be extremely cold, besides snowfall from westerly wind towards east, which feed the western glaciers of Himalaya.^[14] In the month of January i.e. in Hemanta Ritu, the northwestern parts of the great plains of India (Punjab, Haryana, Western Uttar Pradesh and Rajasthan) 15°C mean monthly experiences less than temperature. The night temperature in the plains of Punjab, Haryana, and Rajasthan (Amritsar, Hisar and Jodhpur) reads below freezing point, producing ground frost condition. Often there is a decrease of more than 6°C in the mean temperature, resulting in the cold wave in the northern plains of India, it can be understood as the Shishira Ritu, which is characterized with extreme cold. January is the coldest month in India, especially in north India, this indicates the dominant appearance of Shishira Ritu in north western India. In south India, however does not have a well-defined cold weather season. The mean maximum temperature for the month of January at Thiruvananthapuram and Chennai reads 31°C and 30°C respectively.^[15]

Ushna Kaala or hot weather seasons

This is the latter two thirds of *Adana Kaala*, mainly characterized with the hot weather condition, this season constituted by the moderate hot weather season *Vasanta Ritu* and extreme hot weather season *Greeshma Ritu*. As the sun moves above the tropic of cancer the northern part of the earth starts getting warmer, the sun rays will be very sharp and it drains away the moisture from the earth.^[16]

In this season the sun absorbs the unctuous qualities from the living beings as well as from the nature.^[17] *Vayu* is *Ruksha* and *Laghu* by its *Swabhava*.^[18] The wind blowing from *Nairutya* (south-west) direction causes un pleasant experiences. Earth will be very much hot.^[19]

The north Indian region experiences a well-defined hot weather season from mid-March to mid-June, with the northward march of the sun towards the tropic of cancer after the vernal equinox the temperature begins to rise. At the advent of March, the temperature starts rising abruptly. Whereas in south India the intensity of heat is not as much as in northern India, it is because of the presence of relative humidity due to the oceans surrounding this region. During Vasanta Rutu the wind blows from the south, the sun's rays are coppery red in color, the trees are full of fresh tender leaves and bark, and all the quarters are clean and clear.^[20] The wind blowing from the south through the rows of *Chandana* trees carry their sweet smell and produces pleasure in amorous persons by enhancing sexual desire.^[21] During this period the sky will be very clear without any fog.^[22]

By April, the peninsular region south of the Vindhyan range heat up with mean maximum temperature of 40°C. In May the mean maximum temperature reaches 42°C in Rajasthan, Delhi, West Uttar Pradesh, south Punjab Jammu city and Haryana. At some

places, particularly in north-western India, day temperature may be as high as 45°C or 47°C. The mean minimum daily temperature in May also remains guite high being about 26°C at Delhi and Jaipur.^[23] Because of this high temperature During Greeshma Ritu as the sun rays become more powerful, the body feels as if squeezed with increasing atmospheric temperature, The earth is extremely hot in all directions due to forest fire (davat) kind of extremely hot sunrays, All animals feel as if they are suffering from fever due to the hot sun, wind and sweat.^[24] During summer season, the sun is scorching and the relative humidity is generally below Occasionally reaching below 10%, the 30%, atmospheric air become very hot and dry. The total rainfall in this season is below 2cm in most of the north western India, This is why it causes extreme exhaustion in human beings as well as animals. Due to the soaring heat, the water resources dries up, the pond water dries of and their banks looks high. The water of the river and pond are polluted by elephants and buffaloes,^[25] this is the attempt from these animals to regulate their body's temperature due to heat wave.

The temperature in the eastern states of India and in the hilly regions in the month of May is generally cool and invigorating. Being transitional season between the north-east and the south-west monsoon (rainy season), it is characterized by unstable air pressure and wind circulation. This low pressure moves from south-east to north-west and finally settles over north-west India by mid of May to early June. The general wind direction is from north-west and west in north western India and from south-west in the Arabian Sea in south India. The tornado like dust storms of Punjab, Haryana and western Uttar Pradesh, the hot winds (*Loo*) in western India, the northwesters (*Kalbaishaki*) of West Bengal are the characteristics of summer season.^[26]

Vrishti Kaala or rain weather seasons

This season mainly features rainy weather conditions, there are two seasons are described for *Vrishti Kaala* i.e., *Pravrit* and *Varsha*. The *Pravrit Ritu* is mentioned in the context of seasonal purification, *Pravrit Ritu* **REVIEW ARTICLE** Mar-Apr 2019

constitutes *Ashada* (June-July) and *Shravana* (July-Aug) months, *Varsha Ritu* constitutes *Bhadrapada* (Aug-Sep) and *Ashwina* (Sep-Oct) months. In generally when we look into the rainy pattern in Indian subcontinent, there is a large rainy season prevails in south and North-East India, in this region receives an average of 2000mm rainfall annually. In contrast to this in north and north-west India receives an average of 500-1000 mm rain fall annually.^[27]

In *Kashyapa Samhita* it is explained that, some scholars hold the view that in the region of south of Ganga there is excessive rain which continues over six months. This period is divided into two seasons and they are known as *Pravrit* (beginning of rainy season) and *Varsha* (Rainy season proper). Similarly in the region north of Ganga there is excessive cold months which continues for over four months. This period is divided into two seasons and they are known as *Pravrit* (beginning of rainy season) and *Varsha* (Rainy season proper). Similarly in the region north of Ganga there is excessive cold months which continues for over four months. This period is divided into two seasons and they are known as *Hemanta* (Early winter) and *Shishira* (winter proper).

Pravrit Ritu can be considered as the early rainy season, in south India the month of May records highest temperature and in north India temperatures goes to peak in June. This heating of earth during these months causes low pressure over the northern plains of India, generally in the afternoon of a scorching day, rain begins suddenly, and this is known as Monsoon burst. In south India in the end of May occasional rainfall can be noticed, this can be attributed to Pravrit Ritu or early Monsoon. The onset of Monsoon in India progresses with the northwards wind from Arabian Sea reaches the southern end of Kerala by June-1 later spreads over entire country by July 10. Hence *Pravrit Ritu* is the early rainy season or pre monsoon season or the Forepart of the rainy season.

Varsha Ritu is the main season of Vrishti Kaala and the first season in Visarga Kaala after Pravrit Ritu in southern and eastern India, whereas in north-west India it happens after Greeshma Ritu. This is mainly characterized by the heavy and continuous rain fall all over the country, the words 'Vrishti', 'Sechana' means the continuous shower, when the heavy rain causes damage to the lives it is often termed as 'Ati Vrishti' (over flood), the word Vrishti can also be equated

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with flood. Vrishti, Meaha, Ghana, Kaala, Jalarnava, Meghagama, Ghanakara (Shabda Ratnavali) are the synonyms of Varsha Ritu, this signifies the rainfall and dark cloud cover, and here the word Ghana signifies the dark cloud cover, a typical characteristic feature during monsoon season. By the end of July the monsoon covers the entire country and produces heavy to very heavy rain fall, from July to September the country receives the highest rainfall of the year. The north and north-west region receives about 350-500 mm rain, East and north-east and south India receives about 1000-2000mm rainfall in this season.^[28] The description of this season found in Avurvedic classics very clearly indicates that during this season Wind blows from Vaaruna Disha, Sky is covered with Indraneela coloured clouds which move slowly, Rivers appear like ocean, Demarcation between land and water are not clear, Pleasant sounds from clouds, Peacocks and Frogs are heard, Earth shines with Indragopa insects, Rainbow and Lightenings, Covered with Shyamala Trina, Shilindra and Kutaja flowers appears.^[29] Earth being covered with Silted mud and profuse vegetation Sky becomes overcast with huge clouds, Excess of Humidity dulls the appetite, Thus, Oshadhi's partaken causes Vidaha and causes Pitta Sanchaya, Rivers overflow their banks, Ponds and Lakes filled with Kumuda and Neelotpala flowers.^[30] Sky becomes overcast with huge clouds and Rivers overflow their banks.^[31] These observation this season a typical classical characteristic of rainy season, during this time the relative humidity will be about 65%-80%, this causes the cool atmospheric condition, most of the country experiences good cloud cover. In the third week of September, the southwest monsoon retreats from Punjab and adjacent regions, however unlike the burst of monsoon the retreat is slow and steady. By the end of October the rainy season fades away and the winds from Himalayan region enters the plains of north India and thus begins the winter season.

CONCLUSION

To understand a particular science it is definitely not possible to imbibe the essence of that science, to conceive the core idea of the respective science, it is equally important to have the knowledge of other sciences. This enables a *Vaidya* to perfectly understand and implement practically, leads to successful accomplishment of treatment. India being a subcontinent, cannot be applied one regional knowledge everywhere, since the gross diversity in geographical conditions, climatological patterns, food and culture, demands the necessity of understanding all these variations. This article has elaborated the understanding of this seasonal diversity in relation to geographical variations for the better understanding of *Ritucharya* and its practical application.

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