



Review Article

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AN ANALYTIC REVIEW OF VATAKALAKALIYA ADHYAYA FROM THE PERSPECTIVE OF ONE HEALTH CONCEPT

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ABSTRACT

Ayurveda describes the universe (loka) and the human being (purusha) are reflections of each other and function through the same natural principles. In the Vatakalakaliya Adhyaya of the Charaka Samhitha, this interdependence is explained through the nature, functions, and disturbances of vata, with references to pitta and kapha. Among the three doshas, vata is the most dynamic, governing movement, communication, and bodily activities. In the external world, vata corresponds to wind, pitta to the sun, and kapha to the moon—together representing the natural forces that sustain life and maintain balance in the cosmos. This analytical review explores the relevance of these principles through the perspective of the modern One Health concept, which emphasizes the interconnection between human, animals, plants, and the environment. The boundaries between these systems are becoming increasingly fragile due to industrialization, pollution, and climate change. Imbalance in one sphere affects the others, just as disturbance of the doshas within the body results in disease and disorder. By correlating Ayurveda and modern ecological perspectives, the study demonstrates that the Vatakalakaliya Adhyaya provides a classical foundation for the One Health concept. It emphasizes that the preservation of health depends on harmony between the body and the environment, highlighting preventive care, ecological balance, and ethical responsibilities as essential for sustaining universal well-being.

Keywords: Vatakalakaliya Adhyaya, One Health, industrialization, ecology

INTRODUCTION

Ayurveda envisages a state of balance between the individual and the universe as a pivotal role in the achievement of health. Life is not an isolated process but a continuous interaction between the body, mind, environment, and cosmic forces. A human being is considered as a miniature of the universe, and any change occurring in the external world is mirrored within the body. This relationship is explained through the concept of Loka-Purusha Samya, which in a general sense as, “Te saamaanyapraati paadanardhamuchyanta iti vakyardham” which means that the same elements and forces that form the universe also exist within living beings¹.

This similarity is highlighted by Acharya Susruta as the equilibrium of the tridosha maintains health in the individual, just as the balance of natural forces preserves harmony in the external environment. Among these, vata is regarded as the most dynamic and vital, as it governs all forms of movement and initiates every physiological and psychological function. In the external world, vata corresponds to anila (wind), pitta to surya (sun), and kapha to soma (moon). The balanced functioning of these forces sustains the order of both the cosmos and the body². Thus, the same tridosha principles that maintain harmony within the human body also operate in animals, plants, and the environment.

The Vatakalakaliya Adhyaya, the twelfth chapter of Charaka Samhitha Sutrasthana tries to explore the inter-relationship

between the endogenous biomechanical, chemical, and structural changes with exogenous environmental factors like wind, temperature, and humidity, where Acharya explains this in Ayurveda concepts. It mainly focuses on the nature, functions, and disturbances of vata along with pitta and kapha, giving a concise but significant mention to their roles in maintaining tridosha balance³. Through the description of vata's normal and abnormal activities, this chapter presents the deep connection between cosmic and physiological forces, emphasizing that the well-being of all forms of life depends upon maintaining this universal balance.

From a modern scientific viewpoint, this ancient understanding can be interpreted in the context of geo-climatological and environmental factors that influence health. Climatic variations in temperature, air movement, humidity, and seasonal transitions directly affect metabolism, circulation, and immunity, reflecting the Ayurveda view that the balance of dosha changes with environmental rhythms. Thus, the same natural laws that maintain ecological stability in the external world also regulate physiological balance within the human body.

The boundary between the internal and external environments is subtle and dynamic. The air inhaled, the water consumed, and the food ingested form vital links connecting the organism with the larger biosphere. These elements do not merely enter the body but mirror the forces of the external environment within. Just as wind moves through the world, air moves within the body through

respiration. In the same way, as rivers flow across the land, bodily channels transport nutrients and sustain circulation. These continuous exchanges illustrate the principle of Loka-Purusha Samya, showing that patterns and forces in the external world are reflected in internal physiology. These interconnections further extend across multiple biomes, including human, animal, plant, and environmental systems, forming a living network sustained by air, water, and microbial interactions. When these boundaries function harmoniously, stability prevails; but when they are disturbed by pollution, habitat loss, or ecological imbalance, disease, and disorder manifest both within the body and in nature.

This holistic vision aligns closely with the modern 'One Health' concept, which emphasizes that the health of humans, animals, and the environment is interconnected. The idea, which gained global attention through the "Manhattan Principles on One World, One Health," arose as a response to emerging zoonotic outbreaks such as West Nile Virus, Ebola, and SARS⁴. These events remind us that phenomena like species loss, habitat degradation, pollution, and global climate change are fundamentally altering life on Earth, from the depths of the oceans to the most densely populated cities.

While modern science often views man and nature as separate entities, Ayurveda perceives them as one integrated whole governed by the same natural laws. The tridosha serves as the unifying principle underlying both physiological and ecological balance. The Vatakalakaliya Adhyaya supports this idea by demonstrating that internal and external equilibrium is maintained by identical forces. Thus, the harmony of vata, pitta, and kapha within the body and the balance of natural forces in the environment are two expressions of the same universal order that sustains life.

The present analytical review aims to explore the Vatakalakaliya Adhyaya of the Charaka Samhitha in relation to the modern One Health concept. It seeks to correlate the Ayurveda principles of vata, pitta, and kapha with ecological and environmental balance, and to highlight their relevance in promoting health, sustainability, and the holistic well-being of all life forms.

THE TRIDOSHA DYNAMICS OF LIFE: INSIGHTS FROM VATAKALAKALIYA ADHYAYA

Normal and Abnormal Functions of Vata

The Vatakalakaliya Adhyaya of the Charaka Samhitha describes vata as the supreme principle of motion and intelligence that sustains all life. It is endowed with the six characteristic qualities known as ruksha (dryness), laghu (lightness), sita (coldness), dharuna (instability), khara (roughness), and visada (non-sliminess)⁵. These qualities make vata responsible for all kinds of activity and communication within the body as well as in the universe. When vata remains in its normal state, it maintains the integrity of the organism and coordinates all vital and mental functions.

Internally, balanced vata governs the proper functioning of the five types of vayu, namely prana, udana, samana, vyana, and apana. It regulates respiration, speech, locomotion, circulation, excretion, enthusiasm, and cognition. It impels the sensory and motor organs, stimulates the digestive fire, maintains compactness of body tissues, and coordinates the connection between the body and the mind. It moves through all bodily channels, gives shape to the embryo, and sustains the continuity of life⁶. In this state, vata acts as the integrative force that links consciousness with physiological activity and ensures smooth internal communication throughout the body.

The natural vayu in the external universe performs analogous activities by sustaining the earth, kindling fire, maintaining the movements of the sun, moon, and stars, forming clouds, bringing rainfall, and directs the flow of rivers. It also assists in the germination of seeds, the flowering and maturation of plants, and the growth and ripening of grains⁷. In this way, the balance of vata maintains both the organism and the cosmos. The same vital air that circulates through the body as vata, moves through nature as wind that carries clouds and sustains ecological balance. This correspondence reveals the concept of Loka-Purusha Samya, showing the close balance between the human body and the universe.

When vata becomes aggravated, the natural order of motion is disturbed. Internally, its vitiation appears as deviation or obstruction in the flow of channels. This abnormal movement results in various diseases such as vatarakta (gout), sandhivata (osteoarthritis), pakshaghata (hemiplegia), tremors, stiffness, and degenerative disorders. The chapter also describes that aggravated vata causes mental and emotional disturbances like fear, grief, delusion, and instability. Externally, the disturbed vayu expresses itself as cyclones, storms, earthquakes, and droughts⁸. Just as disordered wind can uproot trees, shake mountains, and disturb oceans, aggravated vata within the body can disrupt physiological equilibrium, damage tissues, and obstruct the channels of communication.

From the perspective of One Health, which highlights the interdependence of human, animal, and environmental health, this vision of vata offers a remarkably integrated outlook. The balanced movement of vata within the body maintains circulation, respiration, and nervous function, like the balanced flow of air and energy in the environment that maintains ecological stability. When river channels are clear, water nourishes the land and supports life but when they are blocked, it causes erosion and flooding. In the same way, obstruction of the bodily channels or srotorodha by vitiated vata leads to pain, distension, and impaired function. Internal spasms or tremors are comparable to external storms or turbulent winds. Thus, equilibrium of vata, both within the body and in the external world, is essential for the preservation of health, stability, and continuity of life.

Normal and Abnormal Functions of Pitta and Kapha

Following the detailed explanation on vata, the Vatakalakaliya Adhyaya also describes the functional roles of pitta and kapha. Marichi explains that the bodily agni is represented by pitta, which in its normal and abnormal states performs both beneficial and harmful functions. It governs digestion, metabolism, vision, luster, courage, and understanding. In a balanced state, pitta supports normal digestion, maintains clarity of vision, regulates body temperature, and imparts radiance and intelligence. When vitiated, it produces heat, indigestion, anger, and irritability, leading to disorders such as burning sensations, ulcers, and skin diseases⁹. In the cosmic dimension, pitta corresponds to the energy of the sun. The balanced heat of the sun maintains the cycle of day and night, supports vegetation, and maintains environmental temperature. When disturbed, it manifests as excessive heat, drought, or ecological imbalance. Thus, just as pitta governs transformation and metabolism within the body, the sun performs similar transformative functions in the universe, sustaining life through warmth and light.

In the same context, Soma describes kapha as the principle of stability and cohesion, corresponding to the lunar and aquatic essence. In its normal state, kapha provides structure, firmness, and stability to the body. It maintains nourishment, fertility, calmness, and emotional steadiness. When disturbed, kapha gives rise to stagnation, heaviness, and lethargy, producing disorders

such as obesity, edema, and excessive sleep¹⁰. On the cosmic level, this principle governs moisture and fertility. When this balance is disturbed, it can lead to stagnation, floods, droughts, decay, and reduced vitality in the environment. Just as kapha ensures stability and nourishment in the body, the presence and proper flow of water sustain life and ecological balance in the natural world.

THE ONE HEALTH PERSPECTIVE

The concept of One Health recognizes that the well-being of humans, animals, and the environment is deeply interconnected¹¹. It views life as a single and integrated system where the health of one component directly influences the others¹². The Vatakalakaliya Adhyaya represents this vision by showing that the same natural forces that maintain order within the body also sustain balance in the cosmos. This integrated view highlights that disturbances in nature inevitably reflect as imbalances within living beings and in turn, disturbances within living beings can affect the natural world¹³.

Within this framework, life itself is seen as the central principle that must be preserved. All forms of existence including human, animal, and plant life share a common foundation that deserves protection and care. The evolution and adaptation of nature, along with ecological balance, are considered essential for the continuity of all species. When these natural processes are disturbed, disharmony arises, which manifests as disease both in individuals and in the environment.

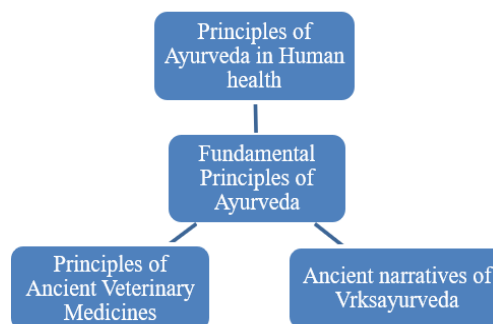
The interaction between man and nature forms another crucial element of this approach. Every change in the surroundings, whether climatic, biological, or social, affects internal equilibrium. The One Health concept also emphasizes integration as a guiding idea in medicine, encouraging a comprehensive understanding of health that includes social, economic, and geopolitical dimensions along with biological aspects¹⁴.

Another important feature of this approach is its preventive orientation. It gives equal or greater importance to maintaining balance and preventing disease rather than focusing only on treatment after illness appears. This preventive attitude is closely related to the Ayurvedic concept of swasthavritta (Preventive medicine), which promotes health maintenance through proper food, conduct, and lifestyle¹⁵. Finally, ethical living forms the moral foundation of the One Health philosophy. Responsible and compassionate behavior toward all forms of life ensures harmony and wellbeing across the entire web of existence.

In addition to the above discussion, Ayurveda broadens the concept of health to include all living beings through the specialized branches of Vrksayurveda (Ayurveda for trees/plants) and Mrgayurveda (Ayurveda for animals). The Vrksayurveda elaborates the growth, nourishment, and preservation of trees and plants, describing them as living entities endowed with vitality and sensitivity. The verse “Dasa koopa sama vaapi, dasa vaapi samo hrida, dasa hrida sama putra, dasa putra samo druma” highlights the sacred value of trees, equating the planting of a single tree to the value of ten sons¹⁶. By placing this verse at the very beginning, the text establishes its central theme Vrksa purusha, which regards the tree as analogous to a human being. The concept reveals that the fundamental Ayurvedic view sees all forms of life as interconnected manifestations of the same living principle, emphasizing harmony between human existence and the natural world. Mrgayurveda, the science of animal care, represents another dimension of this inclusive vision. Classical references such as Hastayurveda (science of elephants) and Aswayurveda (science of horse) explains methods of diagnosis,

nourishment, and treatment for animals, which were used for various purposes at that time, affirm that they too share the same vital essence. Thus, Ayurveda upholds a universal philosophy of health that encompasses humans, animals, and plants alike, recognizing the interdependence of all forms of life. The following figure represents this integrated perspective.

Integration of human, animal, and plant health in Ayurvedic thought



DISCUSSION

The study of the Vatakalakaliya Adhyaya reveals that Ayurveda presents a deeply ecological and holistic vision of health. It describes life as sustained by the same natural principles that operate throughout the universe, showing that the human body functions as a reflection of the cosmos. The balance of vata, pitta, and kapha within the individual corresponds to the equilibrium of air, fire, and water in nature. When this equilibrium is maintained, both the organism and the environment remain stable, while disturbance in any part of this system leads to disorder on both internal and external levels. This principle of correspondence forms the foundation for integrating Ayurvedic understanding with the modern One Health perspective.

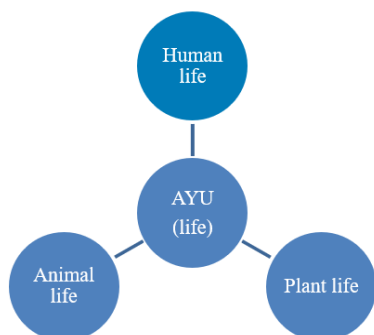
The concept of One Health recognizes that the well-being of humans, animals, and the environment is deeply interconnected. It views life as one integrated system in which the health of each component directly influences the others. The Vatakalakaliya Adhyaya embodies this vision by explaining that the same natural forces which sustain order within the body also preserve balance in the cosmos. Any disruption in one domain inevitably reflects in the other, demonstrating the indivisible unity between life and the environment.

In this context, life itself stands as the central principle to be preserved. All forms of existence, including human, animal, and plant life, share a common foundation that must be protected and sustained. The evolution and adaptation of nature are essential for maintaining ecological balance and ensuring the continuity of life. Human health depends upon harmony with environmental and ecological systems, emphasizing the importance of the relationship between man and nature. Integration is therefore considered a fundamental idea in medicine, connecting biological, social, economic, and geopolitical dimensions. Equal importance is given to prevention, which focuses on maintaining balance and preventing disease rather than depending solely on treatment after illness arises. In addition, ethical living is regarded as a core value since compassion and responsibility towards all forms of life support universal well-being.

This integrated vision finds its ancient counterpart in Ayurveda, which places Ayu, or life itself, at the center of all knowledge and practice. Ayurveda defines health not merely as the absence of

disease but as a state of dynamic balance between body, mind, society, and environment. The preservation of life across all forms-human, animal, and plant-is regarded as the highest goal of medical science. The Ayurvedic view aligns naturally with the One Health approach, since both emphasize the unity of life and the need for balance within and beyond the human body. This concept is illustrated in the diagram below.

The unified concept of Ayu (Life) reflecting the One Health approach



Ayurveda upholds several core principles that parallel the ideas of One Health. It highlights the protection and flourishing of life in all forms and views the human being as part of a living cycle inseparable from nature. Through the practice of ritucharya (seasonal regimen), it advises adaptation of diet and lifestyle according to seasonal and environmental changes to maintain internal stability in response to external variation. The doctrine of janapadodhwamsaneeya (epidemics), described by Acharya Charaka, gives a detailed account of how disturbances in the natural elements like vayu (air), jala (water), desa (land/soil) and kala (time/season) can lead to the decline of entire communities. It explains that abnormalities in the sky, planets, seasons, and stars, as well as changes in air, rainfall, and soil fertility are early indicators of ecological imbalance that may precede the outbreak of epidemics. The wise ancestors perceived these cosmic and terrestrial variations as signs of disturbance in natural harmony, revealing their profound awareness of environmental health long before modern metrology or epidemiology evolved. These teachings reveal that environmental harmony is not only essential for human health but also for preventing large-scale epidemics and ecological collapse.

Equal importance is given to swasthavritta, the science of maintaining health through proper diet, behavior, and daily routines. Preventive care is as important as curative measures. The concept of sadvritta, which emphasizes moral and ethical conduct, further illustrates that individual and social ethics are essential for the maintenance of health. Ayurveda also recognizes that external causes, known as agantu rogas (exogenous diseases), arise from disturbances in the environment and teaches preventive measures through awareness and harmonious adaptation to natural rhythms.

Through these principles, the Ayurvedic system demonstrates that health extends beyond the physical body to include mental, social, and ecological dimensions. Its vision aligns with modern ecological thinking, where life is regarded as a single interconnected network governed by natural law. This understanding promotes the idea that protecting the environment, practicing ethical living, and maintaining preventive health measures are all integral parts of sustaining life on Earth.

CONCLUSION

Both Ayurveda and the One Health framework converge on the understanding that life is a single, integrated system in which human, animal, and ecological health are interdependent. The Vatakalakaliya Adhyaya offers one of the earliest and most profound articulations of this principle by linking the regulation of vata, pitta, and kapha within the body to the movements of air, heat, and moisture in the universe. It portrays health as the dynamic balance between the inner and outer worlds, a harmony that must be consciously maintained. Ayurveda thus provides a timeless foundation for the One Health vision through its emphasis on ecological awareness, preventive care, and ethical responsibility. Its message remains clear and universal, highlighting that the preservation of health depends upon maintaining harmony between man, nature, and the greater cosmic order that sustains all forms of life.

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