



Review Article

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AN EXPLORATIVE CONCEPTUAL STUDY OF SAMANYA VISESHA AND TRIDOSHA SIDDHANTA BASED ON SYSTEMS BIOLOGY: A REVIEW

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ABSTRACT

In every science, there exists certain fundamental theories. Exploring these fundamental theories without losing its essence is an important process for the development of every science. It is recommended that understanding the fundamental theories in different ways helps enhancement of science than inventing a new theory. In current scenario, Ayurveda needs to be studied and applied in a better way by comprising its basic theories. One of the basics of Ayurveda is Samanya visesha theory directly explained in Charaka Samhita and it acts as a key component to disclose profound knowledge of Ayurveda. In Ayurveda, it is explained in a holistic way considering its subjectivity and objectivity. But it is doubtful that all factors of Samanya visesha theory get an equal importance and understood in a better way. So, this explorative conceptual literary study aims to unravel a different aspect of Samanya visesha siddhanta mentioned in Charaka Samhita associated with Tridosha siddhanta by considering its description based on systems biology which is an emerging new science having an interdisciplinary holistic approach with respect to the reductionist approach of conventional science. This study definitely enlightens the path of exploring the Samanya visesha and Tridosha principles based on systems biology without losing its inner core which will propel the momentum of development in Ayurveda, resulting in better acceptance and application of Ayurveda.

Keywords: Samanya, Visesha, Tridosha, Siddhanta, Systems biology

INTRODUCTION

Ayurveda is one of the ancient medical systems based on physical, mental, social and spiritual aspects of an individual as a whole. Ayurveda as a traditional system existing for a long period have a treasure of fundamental concepts. It is necessary to convert these principles to a more applicable level for its greater acceptance, like other science. For this, exploration of these principles by considering its different aspects, analysis of Ayurveda through the eyes of these principles and make it in a testable form rather than sticking on its own epistemology.

One of the basic principles in Ayurveda is Samanya visesha principle (theory of increase by similar and decrease by dissimilar) which has a profound application. From the literature, especially from Charaka Samhita we can get the direct reference of Samanya and visesha. Samanya is the factor which is the cause for adds-up/ increases, unity, similar motive (tulyārthata) or one that is eternal, one in number and resides in various places. Visesha that causes depletion/decrease (hrāsahetu), diversity (prthaktva) or the one, which resides in eternal dravya and differentiates one from the other¹. Meaning mentioned as similar motive (tulyārthata) or unity, diversity (prthaktva) respectively for samanya and visesha are subjective and analytical. Increasing objectivity in subjective matter will make a concept more scientific and acceptable. To improve the exploratory method, Tridosha siddhanta also incorporated in this study.

Ayurveda is famous for its holism which makes it unique from other science. We can see this holism in its basic theories like Samanya visesha and tridosha as well. In Ayurveda, the application of samanya and visesha is explained as pravruttrubhayastu, i.e. its application inter-related in terms of holism and reductionism, subjectivity and objectivity. Up to the certain years, modern science focused more on reductionist approach. But in now-a-days, a new outlook emerged within modern science with recognizing that reductionist approach has limitations. From this outlook, new innovating sciences like systems biology are emerged and enhanced at present. Systems biology investigates how interactions between biological components lead to the system functionality². These emerging sciences which have equalities with fundamental principles of Ayurveda in certain levels definitely enlighten the knowledge in application and indirectly increase its acceptance. Re-analysis of Ayurveda through Samanya visesha principle will lead to new pathways and make Ayurveda into a testable form rather than its own epistemology. So, this humble conceptual literary effort looks into an innovating spark that is necessary for Ayurveda through exploring the most important Samanya visesha and tridosha theories based on systems biology.

This study followed an explorative conceptual method related to available literature. Samanya visesha theory (theory of increase by similar and decrease by dissimilar) is analyzed covering its different aspect based on the Charaka Samhita. From which, the meaning conveying unity and diversity aspect of samanya and visesha respectively are selected for more exploration in relation

to systems biology. Systems biology was analyzed comprising its basic principle, systems theory and compared with Samanya visesha principle. Then as an example for implementation of Ayurvedic concepts, tridosha were looked through the eyes of above-mentioned aspect of Samanya visesha theory and analyzed incorporating systems biology concepts.

Fundamental principles of systems biology match with the Samanya visesha principles of Ayurveda. So, it can be easy to incorporate the Ayurvedic concepts which are analyzed with samanya and visesha into the new emerging sciences like systems biology. Analysis of tridosha theory through the eyes of samanya and visesha considering its certain factors and its incorporation with systems biology concepts helped in exploration and integration in a conceptual way.

Table 1: Samanya and Visesha principle with reference to Systems theory

Samanya and visesha principle	Systems theory
Samanya	System
Visesha	Individual component
Pravrutirubhayastu	Total functionality of a system.
Holistic approach	Holistic approach
Subjective rather than objective	Primarily subjective when selecting system and its components

Table 2: Analyzing Tridosha with Samanya and Visesha

	Tridosha theory	Samanya visesha
Whole system	Human body	Pravritirubhayastu
Common factor	Dosha	Samanya
Individual factor	Vata, Pitta, Kapha	Visesha
Factors influencing	Ahara, Vihara, Prakriti, Agni, Dhatu, Mala, Desa, Kala etc.	Assumptive factor for analyzing Ahara, Vihara etc.

Table 3: Conceptual incorporation of Tridosha theory with systems biology

Basic system	Tridosha	Cell
Components	Vata, pitta, kapha	Genome
Output	Dhatu, mala	Transcriptome, proteome, metabolome
Processing	Agni	Translation, transcription
Factors affecting	Ahara, vihara, desa, kala etc.	Related to epigenetics

DISCUSSION

It is not an easy task to incorporate one ancient science like Ayurveda and new emerging science like systems biology. But this made possible due to their similarities in their basic principles and approaches. Systems biology is about putting together rather than taking apart, integration rather than reduction³. One of the precursor theories of systems biology is General systems theory by Ludwig von Bertalanffy. According to this theory, General systems theory seems to be an important headway towards interdisciplinary synthesis and integrated education⁴. A system is sets of elements standing in interrelation⁵. The living organism as well as its components are called open systems i.e., systems maintaining themselves in a continuous exchange of matter with environment⁶. In terms of effects, a system can be more than the sum of its parts if it expresses synergy or emergent behavior. From this we can understand that the basic principle behind systems biology is similar to Samanya visesha theory in the aspect of holism. So, it made easy to incorporate Ayurveda concepts into systems biology through the application of samanya and visesha. Samanya visesha principle’s application in tridosha is extensive comprising its all aspects. Ayurveda considers the living body is made up of tridosha, dhatu and mala⁷. Individual doshas are vata, pitta and kapha, can be considered as sub systems. Their mutual interaction makes the dhatu and mala which are essential for the life in a living body system. The contemporary science states that the fundamental unit of life is the cell as that of the tridosha in Ayurveda. Cell can be considered as a basic system with subsystem of genes, collectively called in an organism as genome. The relation between genomics and systems biology stated as ‘we can use the operational definitions of systems biology as the study of interactions between parts of the system to identify areas of genomics that are clearly systems centric’⁸. Transcriptome, proteome and metabolome are formed from the mutual interaction of genes in a systemic way. Both the tridosha and genes are influenced by environment, food etc. to express their

features. From these facts, we can understand that the incorporation of tridosha principle via the Samanya visesha into the systems biology definitely possible. Sushruta states that it is necessary to study and incorporate other sastras for more awareness in Ayurveda⁹.

CONCLUSION

The exploration of samanya- visesha and tridosha concepts in depth based on systems biology indirectly leads to the beneficial integration of Ayurveda and Systems biology in upcoming era. Upcoming researches incorporating Ayurveda and Systems biology definitely help to explore Ayurveda in depth and can change it into a more scientific one without losing its core principles beyond its epistemology. It can be concluded that exploration of Samanya visesha and tridosha siddhanta considering its different aspect based on systems biology will open new eyesight in Ayurveda in application and acceptance.

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