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A STUDY ON STATE OF VATA DOSHA THROUGH PHYSICAL AND BIOCHEMICAL EXAMINATION OF BLOOD

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ABSTRACT

Our human body is constituted of Dosha, Dhatu and Mala. Vata Dosha is regarded as the most significant of all the Sharira Doshas due to its special qualities and array of many bodily functions. Dhatu and Mala, in addition to other Doshas, are governed by Vata Dosha. The Vata Dosha facilitates the preservation of the condition of balance between the Dhatus, Mala, and Doshas. Vata Dosha carries all other Doshas to different places during the exacerbated phases where they cause illnesses. Vata Dosha aids in the body's removal of Mala, which preserves the body's homeostatic state. Additionally, Agni, which is said to be the primary factor in charge of several physiological processes including digestion, absorption, and metabolism, is regulated by Vata Dosha. As a result, Vata Dosha controls all of these vital processes for life sustenance. To yet, the pathophysiology of Ayurveda has not been routinely diagnosed using contemporary laboratory methods. Calculating the modification resulting from physical and metabolic changes is a more objective and easily verifiable method. Diseases result from an unbalanced condition of dosha, or the body's fundamental humors, which can take many forms in terms of clinical and biochemical alterations. It is evident that the body's doshas, or fundamental humors, have been aggravating from the disease's inception, and blood, or rakta, may be the most suitable medium in which to observe the majority of biological alterations. In this study, literary sources were examined.

KEYWORDS: Dosha, Vata Dosha, biochemical analysis, Blood, etc.

INTRODUCTION

The three components of the human body are Dosha, Dhatu, and Mala [1], with Doshas being the primary element in controlling homeostasis inside the body. Acharya Vagbhata has stated that illnesses arise from an imbalance between the doshas, and that homeostasis, or equilibrium, is preserved by their harmonious balance [2]. Acharya Sushrut has given significant significance to the role of Doshas in preservation of normality inside

body by saying-'Deha Etaistu Dharyate'-"the body is never without Kapha, Pitta and Maruta (Vayu)and even Shonita (blood);the body is always supported by these.[3]

It is acknowledged by all Ayurvedic schools that Doshas may be broadly classified into two groups: Manasa Dosha (which governs mental activities) and Sharira Dosha (which governs somatic activities). Additionally, Sharira Doshas are separated into Vata Dosha, Pitta Dosha, and Kapha Dosha, which are the three main components. Once more, Manasa Doshas is separated into Raja Dosha and Tama Dosha, which are the two main components [4]. While certain academics may sometimes refer to Rakta as the fourth Dosha in the human body, this idea is not based on any basic grounds for determining the element known as Dosha.

Two essential characteristics of Doshas should ideally be used to determine them:

(1) "Swatantreyana Dushti Katritwam Doshatwam" (the ability to vitiate oneself and others on its own) and
(2) "Prakrityarambhakatwe Sati Dushti Katritwam Doshatwam" (the ability to determine Prakriti, or phenotype) [5].

Vata has been regarded as the most significant and fundamental of the Sharira Doshas because of its characteristics, abilities, ability to regulate other Doshas, and potential to cause the greatest number of ailments. All of the Ayurvedic academics have documented the classical functions of Vayu; Acharya Charaka has made a substantial contribution. In addition to him, Vagbhata and Acharya Sushruta have also highlighted the different roles of Vata Dosha. The name "Vata" derives its etymology from "Va Gatigandhanayo," which describes two important aspects of the Vata Dosha activities in the human body: "Gati," which means movement, and "Gandhana," which means initiation [6]. It follows that the movement of other Doshas, Dhatus, and Mala, as well as the activation of various sensory and bodily organs in their appropriate activities, must be among the principal duties of Vata Dosha.

According to Acharya Charaka, the characteristics of Vata Dosha are traditionally characterized as follows: Ruksha (dry), Shita (cool), Laghu (light), Sukshma (subtle), Chala (mobile), Vishada (non-slimy), and Khara (roughness) [7]. Acharya Hemadri, the renowned Ashtanga Hridayam commentator, has delineated distinct roles ascribed to every Guruvadi Guna. When we examine the roles ascribed to the Guruvadi Gunas that Vata Dosha has, we may gain insight into the general functioning of Vata Dosha. This is condensed in the table [8] that follows:

TABLE 1: CLASSICAL FUNCTIONS OF THE EACH QUALITY POSSESSED BY VATA DOSHA

	Guna* (Quality) of *Vata Dosha	**English Meaning**	***Karma* (Functions)**	**English Meaning**
1.	*Ruksha*	Rough	*Soshan*	Absorption
2.	*Shita*	Cool	*Stambhan*	Stagnation
3.	*Laghu*	Light	*Langhan*	Create lightness
4.	*Sukshma*	Subtle	*Vivarana*	Dilatation
5.	*Chala (*can be compared with *Sara Guna)*	Mobile	*Prerana*	Transportation
6.	*Vishada*	Non slimy	*Kshalana*	Scavenge
7.	*Khara*	Coarse	*Lekhana*	Which reducesbody fat

Currently, over 4,000 distinct diagnostic tests are offered. Blood tests are the most common and reasonably priced laboratory test among many. Acharyas have also noted several subjective and objective features of rakta (blood) in both healthy and sick states thousands of years ago. As the body's structural framework, the rakta plays a vital function in maintaining life. One of the most important characteristics of rakta, or blood, is dravataa, which allows it to circulate throughout the body and transmit information at both the macro and micro levels from various body systems. Therefore, even at the cellular level, a pathogenic event might have an impact on its physical and biochemical properties. Because the doshas of vata, pitta, and kapha circulate widely through the blood, the ancient Acharyas developed the Naadi pariksha (Ayurvedic technique of research) to determine the dosha (pathological variation). The greatest medium fosters cooperation between the outside and inside human race. One of the most significant and striking characteristics of Rakta (blood) is raga. A slight deviation from the norm is clearly reflected in the blood, or Rakta. The severity of these symptoms increases as the blood, or Rakta, becomes tainted. With regard to this phenomenon, the current study sought to validate contemporary laboratory methods for diagnosing Rakta dushti, or hematological disorders, using several laboratory indicators.

BIOCHEMICAL ESTIMATION AND ANALYSIS

biochemical parameters that are often employed in diagnostic procedures were chosen. Standardized kits were chosen, and an automated analyzer was used to do biochemical estimates.

DNA ISOLATION, GENOTYPING AND VALIDATION OF GENETIC HOMOGENEITY

In order to preserve the identity of the samples, they were coded prior to doing research with them. Salting-out was used to extract genomic DNA from leukocytes in peripheral blood. Using a panel of SNPs identified as part of an ongoing Indian Genome Variation Consortium project, these samples were genotyped and analyzed along with 24 reference populations derived from different ethnic and linguistic lineages, Indo-European (IE), Austro-Asiatic (AA), Tibeto-Burman (TB), and Dravidian (DR) from various geographical zones, in order to validate

genetic homogeneity. SNP genotyping was carried out utilizing bead array technique on the Illumina platform. Neighbor joining (NJ) approach was used to estimate DA distance between populations and perform phylogenetic analysis using DISPAN.

DISCUSSIONS

The following headings provide an analysis of the functioning of Vata Dosha, as classically characterized by different scholars:

SUPREMACY OF VATA DOSHA AMONG SHARIRA DOSHAS

All the major Ayurvedic experts have firmly stated that the Vata Dosha is the first in the hierarchy of all the Sharira Doshas. Acharya Vagbhatta poetically explains the superiority of Vata Dosha over all other Doshas in Ashtanga Hridayam. This may be stated as follows. [9]:

- Vata's omnipresence, or "Vibhutwad," makes it the highest being. Because it can penetrate the minute pathways, when Vata becomes vitiated, it may more easily reach the minute portions of the body and produce ailments that affect those sections.
- Vasta is regarded as the highest because of "Ashukaritwad," which enables it to swiftly go through all of the body's channels.
- The reason Vata is regarded as superior is because of "Valitwad," which is stronger and more intense than the other two Doshas.
- Vata is regarded as the ultimate because of "Anyakopanat," which has the power to vitiate other Doshas as well. Vata assists the other two Doshas in their movement while in the Prakopa and Prasara states.
- Because it is autonomous and known as "Swatantryad," Vata is regarded as the highest. Vata's Chaya, Prakopa, and Prasara are independent of other Doshas. Vata is regarded as supreme because of "Vahu Rogatwad," which means that it may cause the greatest number of ailments.
- Vataja Nanatmaja Vikara are the most numerous of all the Nanatmaja Vikara (diseases resulting from the vitiation of a single type of Dosha), numbering 80, as opposed to Pittaja and Kaphaja Nanatmaja Vikara, which come next at 40 and 20, respectively [10]. As per Charaka Samhita, Chikitsa sthan, chapter 28- illnesses induced by vitiation of Vata Dosha are thought to be endless [11].

REGULATION OF MOVEMENT OF OTHER DOSHAS BY VATA DOSHA

Vata Dosha regulates the movements of the other two Doshas. When Vata is in its Prakrita or Vikriti Avastha (normal or abnormal) state, it transfers other Doshas to the organs it targets, causing them to function normally or to manifest a variety of disorders. In this regard, Acharya Sharangadhara has poetically explained how the lack of Vata Dosha causes Kapha, Pitta, Dhatus, and Mala to stay limp, and how Vata transfers them in a manner similar to how clouds are moved across the sky to a certain location to bring about rain[12]. Although Vata Dosha lacks

sensation, it is predominant with Raja Guna, and Raja Guna is the activator of all things. Acharya Sharangadhara explains the role of Vata Dosha in the transportation of other Doshas in their normal condition, while Acharya Sushruta describes its role in the transportation of other Doshas in their vitiated states [13]. The statement "in the body of the individual, Vata, Pitta, and Kapha move through all the channels of circulation" is how Acharya Charaka characterizes the function Vata Dosha plays in the movement of Pitta and Kapha to generate various ailments. Vata, among them, impels the other two Doshas because of its delicate nature. After inciting these two Doshas, an agitated Vata disperses them throughout the body and blocks blood vessels, resulting in the development of various illnesses and the desiccation of tissue components such as Rasa, among other things.[14]. Therefore, it may be concluded that Vata Dosha controls the movement of Pitta and Kapha Dosha.

VATA DOSHA AS THE PRINCIPAL FACTOR FOR MAINTAINING EQUILIBRIUM BETWEEN OTHER DOSHAS, DHATUS AND MALAS

Vata has several roles when it is in its natural state. One of them is the ejection of waste products (Mala), which are created as a result of the actions of Dhatvagni on various Dhatus and Jatharagni on Ahara Rasa. Vata has been viewed as Mala of Anna Rasa, Pitta has been considered as Mala of Rakta Dhatu and Kapha has been considered as Mala of Rasa Dhatu [15]. When these doshas arise within the body, Vata dosha's activity causes them to exit various routes, keeping the body in a state of balance. Therefore, it may be claimed that Vata Dosha maintains the balance condition among the other Doshas. "When Vata is in its normal state, it reflects itself in the form of enthusiasm, inspiration, physical movements, movements of Dhatus to their Poshya Dhatus (can be correlated with metabolic transformation of tissues), and excretion of different Mala or waste products in proper amount," according to Acharya Charaka in the 18th chapter of the Charaka Samhita Sutrasthana. [16] In the 12th chapter of Charaka Samhita, Sutrasthana, the Vata Dosha's function in the body's excretion of various waste products is also described under the heading "Kshepta Vahirmalanam."[17]

IMPACT OF VATA VITIATION ON SROTAS AND ITS ROLE IN SROTADUSTI

In light of this, we need to talk about how the vitiation of Vata Dosha affects Srotas. Three concepts serve as the foundation for understanding the vitiation of any Dosha: vitiation of the material as a whole (Dravyata Vriddhi), vitiation of its quality (Gunata Vriddhi), and vitiation of its function (Karmata Vriddhi). The following attributes are associated with Vata Dosha: Ruksha, Shita, Laghu, Sukshma, Chala, Vishada, and Kshara. Stambhana, or the sluggishness of any process or activity within the human body, is one of the roles of Shita Guna [18]. Therefore, if the Vata Dosha is vitiated, there may be instances of sluggishness in various channels. Furthermore, according to the Vatakalakaliya Adhyaya of Sutrasthan in the Charaka Samhita, "Dosha Samshoshan" is one of the roles of Vata Dosha. This process of absorbing the body's aqueous part is known as "Sharira Kleda Samshoshana," according to Acharya Chakrapani Dutta's commentary [19]. The Ruksha Guna of Vata Dosha is responsible for this exact function [20]. Moreover, the scope of absorption will expand when any fluid's passage within channels is slow. So, by virtue of its Dosha Samsoshana Karma or Ruksha Guna- the substance within channels may get

more condensed and changes into bolus like shape. This particular facet has been referred to as "Varta" under the Vikrita Vata Dosha function.

Modern laboratory techniques are used to analyze the physical properties of Rakta (blood). According to Ayurveda, Rakta's (blood's) color is determined with the aid of Shadaa Vidha Pariksha, particularly by Chakshurendriya (direct personal observation). Laboratory measures such as hemoglobin percentage, total iron, blood gas analysis, and serum bilirubin level in blood can be used to evaluate the color of Rakta (blood). The element that gives the body its typical color or complexion is called Rakta. The normal coloring of the body is caused by normal levels of Hb%, bilirubin, and partial oxygen gas saturation. If changed, the body may develop a pathological state. Oxyhemoglobin, which is vivid red in color, is the result of iron remaining in its ferrous form in hemoglobin even after it has combined with oxygen. Methemoglobinemia, a dark brown disease with varying degrees of pathology, is the term used to describe the state in which it oxidized and transformed into ferric iron. The normal function of hemoglobin is gas transport; the amount of hemoglobin in blood determines how much oxygen gets to the tissue. Any modifications made to this provision can result in additional revisions. Additionally, hemoglobin is converted to bilirubin, which is what causes color changes in elevated states that can show up on mucous membranes and skin.

CONCLUSION

From the foregoing explanations, it can be inferred that, among all the Doshas in our body, Vata Dosha has some special characteristics that enable it to carry out a variety of bodily duties. Because of its Sukshma Guna, which aids in controlling the actions of different channels, Vata Dosha may permeate even the smallest channels. It aids in the body's watery portion's absorption because of its Ruksha Guna. Additionally, Shita Guna contributes to its ability to slow down movement. Because of these two characteristics, when Vata Dosha is inflamed, it blocks channels and results in a variety of ailments. Laboratory data may offer impartial, objective, and calculative hints for comprehending the pathophysiology of the disease in question as well as recommendations for choosing a more suitable treatment approach. This paper represents the application of several contemporary laboratory methods to identify the pathophysiology of Rakta dushti, a haematological illness that has been reported by several ancient Ayurvedic authors. Classical books on Ayurveda include brief and clear descriptions of a wide range of blood tests. So, it can be finally concluded that, on the basis of available classical descriptions about the various qualities and functions of Vata Dosha, we can further analyze the functions of Vata Dosha in our body more elaborately which will help us to understand the importance of Vata Dosha in maintaining the homeostasis of human body and sustenance of life in a better way.

CONFLICT OF INTEREST – NONE

SOURCE OF SUPPORT- NIL

REFERENCES

1. Shastri Ambikadutta, editor. Sushrut Samhita of Maharshi Sushrut. Reprint. Vol. 1. Sutrasthan, chapter 15, Verse no. 3. Varanasi: Chaowkhamba Sanskrit Sansthan, 2012. Page no. 73
2. Murthy Srikantha K.R., editor, Vagbhata's Astanga Hridayam (Text, English translation, Notes etc.), Reprint Ed., Vol. 1, Varanasi: Chaukhamba Orientalia, 2018, Sutrasthana, chapter 1, Verse no. 20, page no. 12
3. Murthy Srikantha K.R., editor, Illustrated Sushruta Samhita (Text, English translation, Notes etc.), Reprint Ed., Vol. 1, Varanasi: Chaukhamba Orientalia, 2016, Sutrasthana, chapter 21, Verse no. 4, page no. 152
4. Sharma R.K., Dash Bhagwan, editor. Charaka Samhita of Agnivesh: commentary Ayurveda Dipika of Chakrapani Dutta. Reprint Ed. Vol. 1.Varanasi: Chowkhamba Sanskrit Series Office, 2004, Sutrasthan, Chapter 1, Verse no.57, page no. 41
5. Desai Ranjitrai, Nidan Chikitsa Hastamalaka, Reprint Ed., Vol. 1, Kolkata, Shri Baidyanath Ayurved Bhawan Pvt. Ltd., 2010, chapter no. 1, page no. 10
6. Shastri Ambikadutta, editor. Sushrut Samhita of Maharshi Sushrut. Reprint. Vol. 1. Sutrasthan, chapter 21, Verse no. 5. Varanasi: Chaowkhamba Sanskrit Sansthan, 2012. Page no. 113
7. Sharma R.K., Dash Bhagwan, editor. Charaka Samhita of Agnivesh: commentary Ayurveda Dipika of Chakrapani Dutta. Reprint Ed. Vol. 1. Varanasi: Chowkhamba Sanskrit Series Office, 2004, Sutrasthan, Chapter 1, Verse no. 59, page no. 43
8. Paradakara Hari Sadasiva Sastri, editor. Astangahridaya of Vagbhata: commentary Ayurved Rasayana of Hemadri. Reprint ed., Varanasi, Chaukhamba Sanskrit Sansthan, 2012, Sutrasthan, Chapter 1, Hemadri's commentary on verse no. 18, page no. 12
9. Sharma R.K., Dash Bhagwan, editor. Charaka Samhita of Agnivesh: commentary Ayurveda Dipika of Chakrapani Dutta. Reprint Ed. Vol. 1. Varanasi: Chowkhamba Sanskrit Series Office, 2004, Sutrasthan, Chapter 18, Verse no. 49, page no. 347
10. Sharma R.K., Dash Bhagwan, editor. Charaka Samhita of Agnivesh: commentary Ayurveda Dipika of Chakrapani Dutta. Reprint Ed. Vol. 1. Varanasi: Chowkhamba Sanskrit Series Office, 2004, Sutrasthan, Chapter 12, Verse no. 8, page no. 237
11. Shastri Ambikadutta, editor. Sushrut Samhita of Maharshi Sushrut. Reprint. Vol. 1. Nidansthan, chapter 1, Verse no. 10. Varanasi: Chaowkhamba Sanskrit Sansthan, 2012. Page no. 297
12. Murthy Srikantha K.R., editor, Vagbhata's Astanga Hridayam (Text, English translation, Notes etc.), Reprint Ed., Vol. 1, Varanasi: Chaukhamba Orientalia, 2018, Sutrasthana, chapter 11, Verse no. 1, page no. 155
13. Murthy Srikantha K.R., editor, Vagbhata's Astanga Hridayam (Text, English translation, Notes etc.), Reprint Ed., Vol. 1, Varanasi: Chaukhamba Orientalia, 2018, Sharirsthana, chapter 3, Verse no. 84, page no. 413
14. Sharma R.K., Dash Bhagwan, editor. Charaka Samhita of Agnivesh: commentary Ayurveda Dipika of Chakrapani Dutta. Reprint Ed. Vol. 1. Varanasi: Chowkhamba Sanskrit Series Office, 2004, Sutrasthan, Chapter 20, Verse no. 10, page no. 362.

15. Sharma R.K., Dash Bhagwan, editor. Charaka Samhita of Agnivesh: commentary Ayurveda Dipika of Chakrapani Dutta. Reprint Ed. Vol. 5. Varanasi: Chowkhamba Sanskrit Series Office, 2004, Chikitsasthan, Chapter 28, Verse no. 13, page no. 22
16. Srivastava Sailaja, editor. Sharangadhar Samhita of Sharangadhar, Reprint edition, Varanasi: Chaowkhamba Sanskrit Sansthan, 2013. Purvakhanda, Chapter 5, Verse no. 25, Page no. 65
17. Shastri Ambikadutta, editor. Sushrut Samhita of Maharshi Sushrut. Reprint. Vol. 1. Sutrasthan, chapter 21, Verse no. 28. Varanasi: Chaowkhamba Sanskrit Sansthan, 2012. Page no. 119
18. Sharma R.K., Dash Bhagwan, editor. Charaka Samhita of Agnivesh: commentary Ayurveda Dipika of Chakrapani Dutta. Reprint Ed. Vol. 5. Varanasi: Chowkhamba Sanskrit Series Office, 2004, Chikitsasthan, Chapter 28, Verse no. 59- 60, page no. 36
19. Sharma R.K., Dash Bhagwan, editor. Charaka Samhita of Agnivesh: commentary Ayurveda Dipika of Chakrapani Dutta. Reprint Ed. Vol. 3. Varanasi: Chowkhamba Sanskrit Series Office, 2004, Chikitsasthan, Chapter 15, Verse no. 18- 19, page no. 237
20. Bijita Majumder, Sukalyan Ray. Studies on Functions of Vata Dosha- A Novel Approach. International Journal of Ayurveda and Pharma Research. 2022;10(Suppl 2):117-124. https://doi.org/10.47070/ijapr.v10iSuppl2.2542.