

CONCEPTUAL STUDY OF RAKTA DHATU IN DIFFERENT SAMHITA'S

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ABSTRACT

The primary source of human lifespan and vitality is *Rakta Dhatu*. *Rakta Dhatu*'s formation is an ongoing process. With the assistance of *Rasa Dhatwagni* and *Bhutagni*, it is created from the *Prasada Bhaga* of *Rasa Dhatu*. The Sanskrit term "*Raj Ranjane*" which denotes the colour red, is where the name "*Rakta*" originates. Being one of the seven *Dhatu*s (tissues), it can be found throughout the entire body. However, it could be present in high amounts and operate especially in relation to one or more organs in some locations. Such locations are referred to as the *Sthana* (location) of the *Raktadhatu* (Blood). The primary location of *Raktadhatu* (Blood) is *Raktavaha Strotas*. Liver and spleen are this *Strotas* primary organs. Blood vitiation, or *raktadhatu*, is a sign of internal skin disease. Therefore, it plays a crucial role in maintaining life. This *Dhatu* (tissue), one of the most important parts of the body, must therefore be protected in any way possible.

KEYWORDS: *Rakta Dhatu*, *Rasa*, *Aahararasa*, *Raktavaha Strotas*.

INTRODUCTION

Dosha, *Dhatu*, and *Mala* are regarded as the body's three fundamental constituents.^[1] *Dhatu* performs *Dharana Karma* among them.^[2] The second *Dhatu* is *Rakta Dhatu*. Its *Gunas*, such as *Sneha*, *Ushna*, *Tikshna*, and *Drava*, are comparable to *Pitta Guna*. With the help of *Rasa Dhatwagni* and *Bhutagni*, it originates from the *Prasada Bhaga* of *Rasa Dhatu*.^[3] It flows throughout the body from *Hridaya* through *Dhamanis* and performs *Shareera Jeevana* and *Mamsa Pusti*, including *Apa* and *Teja Mahabhuta* predominating. *Rakta Dhatu* is best understood as the fluid component that nourishes all of the body's tissues and organs by circulating throughout the body via the heart and blood arteries, according to its distinguishing characteristics. Therefore, it is understood as blood. The presence of hemoglobin in RBCs is what gives blood its red colour. *Rakta Dhatu* might be viewed as the entire blood in such a horrible way. Similar to RBCs, *Rasa Dhatu* can be thought of as a component of blood. As a result, it is important to distinguish between *Rakta Dhatu* and *Rasa Dhatu*, which are both considered to be parts of blood.

Rakta is a word in *Sanskrit* that derives from the verb "to stain" in the *Raj Ranjane* epic. Because this *Dhatu* (tissue) makes white material to become red if stained, it is also known as *Rakta*.^[4] It is found in every component of the body because it comprises a single of the seven

*Dhatu*s (tissues). It might, however, be numerous in some locations and function only in relation to a particular organ. These places are referred to as the *Sthana* (location) of the *Raktadhatu* (Blood). The *Raktavaha Strotas* (channel) is the most important location of the *Raktadhatu* (Blood). Liver and spleen are the main organs of this *Strotas*.^[5] The blood vessels (*Raktavahi Dhamini*) were included by *Susruta*. When it comes to maintaining a stable internal environment, *rakta* (blood) is a vital component. For the continuation of life, it is crucial. Blood, a fourth entity known as *Rakta Dhatu*, has a role in genesis, sustenance, and is responsible for death, like *Dosha* (body humors) are.^[6]

Nirukti

Since this *Dhatu* is red in color, its *Nirukti* root, "*Raja Ranjane*," meaning to stain. *Rakta* causes white fabric to turn red, giving it a reddish blue.

Synonyms

Rudhiram, *Asriga*, *Shonitam*, *Asram*, and *Lohitam* are all synonyms for *Rakta Dhatu*.^[8] It is *Preenana* and *Trupti*'s synonym.^[9] In this context, the word "*apyayana*" means "to strengthen" or to increase.^[10]

The body is sustained, grows, and is nourished by an entity called *Dhatu*. The *Dosha*'s operational machinery is known as *Dhatu*. One of the seven *Dhatu*s is *Rakta*. It

is heavier than *Rasa Dhatu* and is in liquid form. *Asamhatam*, or a state that is neither viscous nor liquid, is the perfect state for *Rakta Dhatu*.^[11]

Location of Rakta Dhatu's

The *Raktavaha Srotas* are built on the foundations of the liver (*Yakrit*) and spleen (*Pleeha*). According to *Sushruta*, the veins that supply *Rakta* to even the tiniest parts of the body are also the foundation of the *Raktavaha Srotas*. The locations of *Rakta Dhatu's* arrangement and vitiation are the liver and spleen. There is *Raktadhara Kala* in the veins, spleen, and liver. It is concerned with the configuration and capacity of *Rakta Dhatu*. In this point of view, the liver and spleen are considered as the *Raktashaya* (Organ where blood is stored) or controlling organs.^[12]

Qualities of Rakta Dhatu

Rakta Dhatu is not too hot or too chilly (*Anushnashita Dhatu*). It smells common, is overwhelming sweet, unctuous, and crimson in shade. When exposed to things that affect *Pitta*, it reacts. *Rakta Dhatu*, the substance that sustains life, is *Snigdha*, Master (overpowering), *Chala*, and delicious to the taste, according to *Sharangdhara*. According to *Vagbhata* in *Ashtanga Hridaya*, *Shuddha Rakta* is similar to *Madhura*, *Lavana*, *Sama Shitoshna*, and *Asamhata (Drava)*, and has the *Rakta* of *Avi* (Sheep) and *Shasha* (Hare), as well as shades of *Padma*, *Indragopa*, and *Hema* (Gold). *Shuddha Rakta's* traits were also exhibited by *Vridhdha Vagbhata*. He stated that after washing fabrics, *Shuddha Rakta* does not recolor them. By temperament, it resembles *Saumya-Agneya* and *Pitta* traits. Unadulterated blood is likened to gold that has been washed with liquid, *Indragopa*, red lotus, lac, and *Gunja* (*Abrus precatorius*) products in terms of colour. Depending on the individual's constitution, these come in various shades.^[13]

Metabolism of Rakta Dhatu

All of the elements in this universe are composed of *panchamahabhuta*, and *raktadhatu* is *Tej* and *Jala* in nature. Blood, or *Raktadhatu*, is administered by a person's own *Srotas*, such as the *Raktavaha Srotas*. The standard organs that play an essential part in *Raktadhatu* (Blood) are the liver and spleen. *Susruta* went on to explain that the *Rasa* is made from the *Aahararasa*, and that it turns red as it reaches the liver and spleen from the *Kostha*. In a living body, *Tej* distributes this reddish liquid, which is known as *Rakta* (Blood) when it is provided in a sound and physiological amount. *Pitta* gets released as *Mala* (discharged part), which is known as *Vaikruta Dosha*, during the digestion of *Raktadhatu* (Blood), while *Kandara* (ligament) and *Sira* (veins) are formed during *Updhatu* (Optional tissue).^[14]

Physical & Chemical Properties of Raktadhatu

8 *Anjali* make up the *Rakta* amount. It is substantial, unctuous, red in colour, and neither extremely cold nor overly hot. It additionally has a sweet and salty flavour.

When *Raktadhatu* (blood) is pure or in a healthy state, it resembles warmed gold that turns red after being placed in a shoot, a creepy crawly flower (*Indragopa*), a crimson lotus, or the Roman god *Abrus Precatorius* (*Gunja*). Additionally, *Sushruta* portrayed the qualities of pure *Raktadhatu* (Blood). Blood has the appearance of an *Indragopa* creepy crawly, is of the proper thickness, and doesn't have any other colouring beyond that which would indicate pure blood. *Rakta dhatu* (Blood) is neither unusually cool nor warm. reacts to elements that have an effect on *pitta*.^[15]

Function of Rakta Dhatu

According to *Sushruta*, the *Rakta Dhatu* is the foundation of the living body and is responsible for maintaining life. As such, one should give the *Rakta Dhatu* proper attention by following a diet that provides the *Rakta* with nourishment. It is also in charge of touch's impression. committing blood sacrifices in behalf of the *Dhatvah*. Blood or *Rakta* elements according to Ayurveda the phrase "*Raktam varna prasaadanam mamsa pushtim jeevayathicha*" Given that it is one of the seven *Dhatu*s (tissues), the body's nutrition is its main function.^[16]

Characteristics of Rakta Dhatu Sara

The *Sanskrit* phrase *Dhatuarta* (excellence of tissue) refers to *Sara's* bright useful perspective and the *Dhatu's* superior nature. A person's body remains warm when they have *Rakta* (Blood) brilliance. The following characteristics are present in those with *Uttama Rakta Dhatu Sarata*: red-colored ears, eyes, oral pits, tongues, palms, soles, eyebrows, and penises. These organs have an incredible sheen to them. Such individuals have attraction and beauty. A heated environment or demanding work cannot be supported by them. Insight, joy, and magnificence are given to them.^[17]

Pathological Aspect of Rakta Dhatu

Susruta was referred to as the fourth *Dosha* (body humors). When these *Doshas* reach *Rakta Dhatu*, they lead to *Rakta Pradoshaja Vikara*, which is the result of *Nidana Sevana*, they also lead to *Dosha Dusti*.^[18]

Obsessive aspects of *Rakta Dhatu* include *Kshya* (hypo/disappearance of *Raktadhatu*) and *Vridhdhi* (hyper state/augmentation of *Raktadhatu*). *Susruta* also painted several more manifestations, such as red eyes, skin, and engorged veins. Inadequacy of *Raktadhatu* (Blood) is brought on by improper eating habits and a lack of wholesome food. The melting away of *Rakta Dhatu* (Blood) causes people to have rough, broken, and dull skin. *Acharya Vagbhat* featured a few symptoms, such as the requirement for piercing, icy nutrition and vein collapse. *Anjali Pramana* of *Rakta Dhatu* is eight, according to *Rakta Pramana*. The *Kandara* (ligaments) and *Sira* are the *Upadhatu* of *Rakta*. *Sira* provides *Raktadhatu* to all tissues. *Mala* of *Rakta*: *Pitta* is *Rakta's mala*. *Rakta Dhatu Sarata* the following qualities are a blessing for those who have *Uttama Rakta Dhatu Sarata*:

red-colored ears, eyes, oral pits, tongues, palms, soles, nails, temples, and penis. These organs are highly glossy and brilliant. Such individuals are incredibly alluring and attractive. They are unable to continue. demanding work or heated environment. They receive knowledge, pleasure, and magnificence. *Rakta Vriddhi* Due to excessive intake in slick, sharp food and the heated environment, *Rakta Dhatu* increases and the following indicators can be seen: *Rakta* growth causes vein engorgement and a reddening of the skin and eyes. Red eyes, skin, and pee with a drain occasionally develop as a result of an increase in *Rakta Dhatu* *Visarpa*, *Pleeha* *Vidradhi*, *Kushtha*, *Vatarakta*, *Raktapitta*, *Gulma*, *Upakusha*, *Kamla*, *Vyanga*, *Agninasha*, and *Sammoha*. *Rakta Kshaya*: Due to waning *Rakta Dhatu*, people exhibit unpleasant, split, dull, and dry skin, and they also worship bitter flavours and enjoy the cool weather. Additionally, he gains dry and free vessels. *Teja Mahabhuta* is predominately composed of sharp *rasa*. *Rakta* that has lost its physiological condition must regain it. This is the reason a severe person like that wants flavors. In cool season likewise *Agni* increments.^[19]

DISCUSSION

Blood is a connective tissue that is fluid in nature. Since both *Rasa* and *Rakta Dhatu* are liquids and circulate within the intravascular compartment, they can both be regarded as blood collectively. The term *Rasa* refers to intravascular circulating fluid (*Drava*), which is plasma including blood cells. *Chakrapani* defined *Rasa* as "*Rasateeti Raso Dravadhatuuchayate Taenrudhiraadinaamapi Dravaanam Grahanam Bhavati*" when describing the circulation of *Rasa* by the action of *Vyana Vayu* (a subtype of *Vata Dosha*).^[20] When describing the movement of *Rasa* in the heart and blood arteries, *Bhela* also used the word *Rasa*.^[21] Once more, the fully digested minimal and necessary substance (nutrients absorbed in blood) has been referred to as *Rasa-Rakta*.^[22] *Rasa* is transparent and colourless, hence it relates to plasma; *Rakta*, which is supposed to be red in colour like *Gunja phala* (fruits of *Abrus precatorius*) and *Padma* (*Nelumbo nucifera*), can be interpreted as Red Blood Cells (RBCs), while White Blood Cells (WBCs) can be interpreted as *Shonitarupi Oja*.^[23]

CONCLUSION

The *Rasa* and *Rakta Dhatu* might be regarded as blood given the previous explanation since they both exist in a liquid (*Drava*) condition, circulate inside intravascular compartments (the heart and blood vessels), and share similar physiological functions. The action of *Vyana Vata* on the heart and blood arteries (cardiovascular system) causes it to be spread throughout the entire body. It is fairly similar to blood and shares significant functional characteristics with it. All the nutrients are carried by the *Rasa-Rakta Dhatu* along with *Oja*, which nourishes and maintains every one of the tissues. To

clinically evaluate the functioning status of a specific *Dhatu*, the ideal features of *Rasa* and *Rakta Dhatu* and *Dhatu Sarata* have been established. The production of *Shuddha Rakta Dhatu* is influenced by a number of variables, including nutrition and routine, *Deshasatmya*, *Kalasantmya*, and *Oakasatmya*, which may result in a number of blood illnesses. There have also been other methods for preventing blood loss and blood clotting outlined. These descriptions demonstrate that the ancient *Ayurvedic* scholars discussed the extremely specialized physiology of blood and its practical component, and the scientific justifications in this article may aid in comprehending it. *Sushruta* classified *Rakta* as the fourth *dosha* in addition to *Vata*, *Pitta*, and *Kapha* because of its enormous physiological significance.^[24] The four humors—blood, mucus, yellow bile, black bile, and yellow bile—have also been thought of as the body's internal sensors of all physiological processes by ancient Greek medical researchers.^[25] Blood (Dam) is recognised as a humour in unani medicine.^[26] Thus, blood's significance in preserving the body's homeostasis has been acknowledged by various traditional medical professions. Certain physiological, psychological, and somatic characteristics connected to these *Dhatu* have been detailed under the assessment of *Dhatu Sarata* (excellence of tissues) in order to determine the functional suitability of *Rasa-Rakta Dhatu* in an individual.

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