

CONCEPT OF DHATU UTTAPATI WITH SPECIAL REFERENCE TO RAKTA DHATU

*Hareshwar Shirsath and Dr. Mrs. Pranita Joshi - Deshmukh

India.



*Corresponding Author: Hareshwar Shirsath

India.

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ABSTRACT

Introduction: The concept of **Dhatu** in Ayurveda is essential for understanding human physiology and health. Defined as the sustaining elements of the body, dhatus are crucial for growth and overall well-being. This study explores the formation of dhatus (Utpatti) and emphasizes the significance of Raktdhatu. **Materials and Methods:** A comprehensive review of literature was conducted using classical Ayurvedic texts, including Charak, Sushrut, and Vagbhat, along with their commentaries. Relevant journal articles on dhatus were also analyzed to gather insights. **Results:** Ayurveda identifies seven primary dhatus: Rasa, Rakta, Mamsa, Meda, Asthi, Majja, and Shukra. The process of Dhatu Utpatti begins in the intrauterine stage and continues postnatally, influenced by digestive processes. Raktdhatu is primarily formed in the liver and spleen, playing a vital role in life sustenance and nutrient distribution. Its functions include supporting metabolic processes, influencing vitality and appearance, and serving as a health indicator. **Discussion:** The study highlights the interconnectedness of dhatus and their collective role in maintaining health. The balance of Sapta Dhatu is crucial for optimal health, with Raktdhatu being a key component. The findings underscore the relevance of Ayurvedic principles in contemporary health practices. **Conclusion:** Understanding the physiology and functions of Dhatus, especially Raktdhatu, is vital for promoting health and longevity. This Ayurvedic framework aligns with modern scientific insights on the importance of blood and its role in sustaining life.

INTRODUCTION

”दोष धातू मला मूलं ही शरीरम्”^[1] Su. Su. 15/1

The *dhatus* are defined as '*dharanat dhatava*'^[2] which means that the element sustaining the body and maintaining and helping it grow are known as *dhatus*. But this definition not clarifying the exact meaning of *dhatus*. Because with dhatu, dosha and mala also helps in maintaining and sustaining the body. So we can define dhatu as, the element of body which produces another new same element without destroying self-life.

To understand the dhatu Utpatti in the body is very crucial in Ayurveda for several reasons. For Disease diagnosis, personalized treatment of individual dhatu, health and wellness, preventive care etc. we must be known about process of dhatu formation.

As we know body is made from panchamahabhutas. In intrauterine life, at time of fusion of shukra and retas in the presence of soul (jeeva) fertilization take place and new shariram comes into the shape. Dhatu utpatti process is started at this time.

In extra uterine life, *dhatus* are made due to working of jatharagni on aahar (food). Further bhutagni also again

gives final results to aahara and make sthayi Swarup dhatu.

Ayurveda based on principle of *dhatusamyata* and *Doshasamyata*.^[3] Acharya sushruta says, essence of all dhatu present in rasa dhatu which replicate over the body ends with sukra dhatu.^[4] Acharaya charaka gives this reference in context of Srotas (Internal nourishment system). According to charaka, there is two forms of *dhatus*, one is Asthayi (poshaka) dhatu and another is sthayi dhatu. (poshya).^[5] When ras dhatu moving in through srotas, it nourishes each and every poshaka dhatu.

Srotas always carries asthayi dhatu which are in movable form.^[6] Sarata is related to sthayi *dhatu* hence remains unchanged all over the life time. Study of srotas helps in imagination of dhatu Utpatti.

AIM AND OBJECTIVES

- 1) To understand about concept of *dhatu*.
- 2) To understand about concept of *dhatu Utpatti*.
- 3) To understand about *raktdhatu* specially.

MATERILAS AND METHODAS

1. Literature collected by referring various samhitas Charak, Sushrut, Vagbhat and their respective commentary.
2. Papers published in various journals and article related to dhatu.

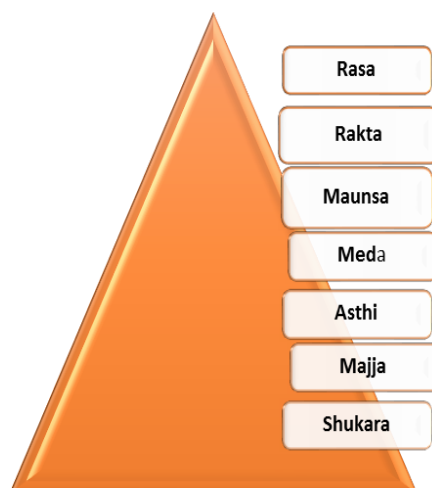
REVIEW OF LITERATURE

DHATU

Ayurveda has mentioned theories of *Dhatus* and their utpatti. They are physiological entity of body and

equilibrium of physical health and mental state depends upon the healthy state of *Dhatus*. The imbalance of *Dhatus* in guna, karma and praman may result illness in body.

Ayurveda described seven types of *Dhatus* which are as follows^[7]



Chetana dhatu denoting Atma, Beejarupa dhatu denoting sperm, Beejarupa dhatu containing the saarbha of other *Dhatus*, Pradhana dhatu denoting Shukra. The Dhatvagni nourishes and supports and is responsible for dhatu formation and growth. The metabolic wastes which are formed during these all steps are known as Dhatumala. Avarana and Dushti in Srotas may affect the process of *Dhatus* Nirmana. This process of dhatu nirman is termed as tridha parinaman.

Dhatu Utpatti and Physiology of Dhatus

Only certain forms of Agni, such as Dhatwagni, have the ability to mature the fundamental ingredients. Once Jatharagni properly digests Ahara Dravya, it separates into two forms: Prasada (Sara) and Kitta Bhaga. The Prasada portion (nutrients) serves to nourish the Dosha and Dhatus while metabolic waste, or kitta component, needs to be eliminated from the body. There are theories that explain how different Dhatu in the body get nourishment.

Tikakara postulated *Dhatu poshan* theory.

DHATU SIDHANT (THERORY OF TISSUE FORMATION)

1. Kshirdadhi nyaya.
2. Kedarkulya Nyaya.
3. Khalekapot Nyaya.

1) The Kshira Dadhi Nyaya

Also known as "Sarvatma Parinama Paksha" and "Kramaparinama Paksha," explains how Dhatus transform sequentially, similar to how whole milk turns into curd. Agni influences Ahararasa to completely transform into Rasadhatu first, then Rasadhatu changes into Raktadhatu, and the process continues until the final Dhatu, Shukra, is produced. The term "law of transformation" describes this complete conversion of one Dhatu into another. It takes six days for Shukra to form from Rasadhatu as each Dhatu transforms into the next. Sushruta says that it takes 30 days for Dhatu transformation.^[8] Time duration for the completion of Dhatu formation varies, because it is chiefly dependent on Agni.

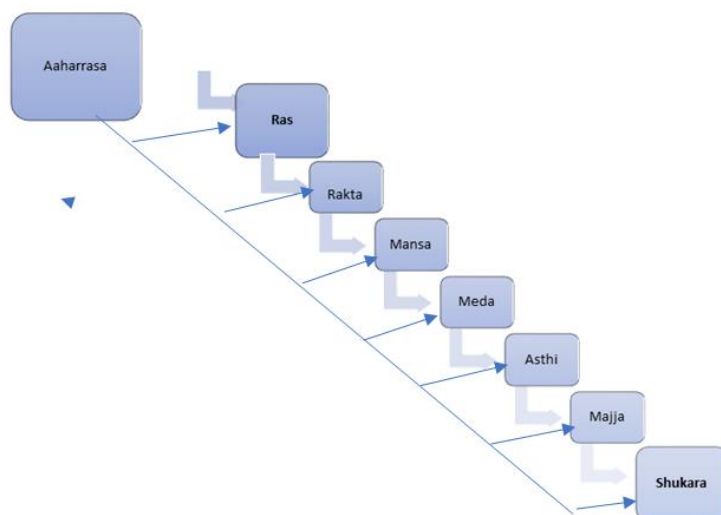


2. Kedarkulya Nyaya

This theory is described by how water is distributed among plots in rice or wheat fields from a river, tank, or well via a main channel, supplying water to the closest and farthest plots sequentially. Similarly, the Aahararasa is travelled through the main circulatory channel to reach Rasadhātu, where it is nourished by it before continuing

on to Raktadhātu. In this way, the Aahararasa is moved from one Dhātu to another, with successive Dhātu being provided with nourishment.

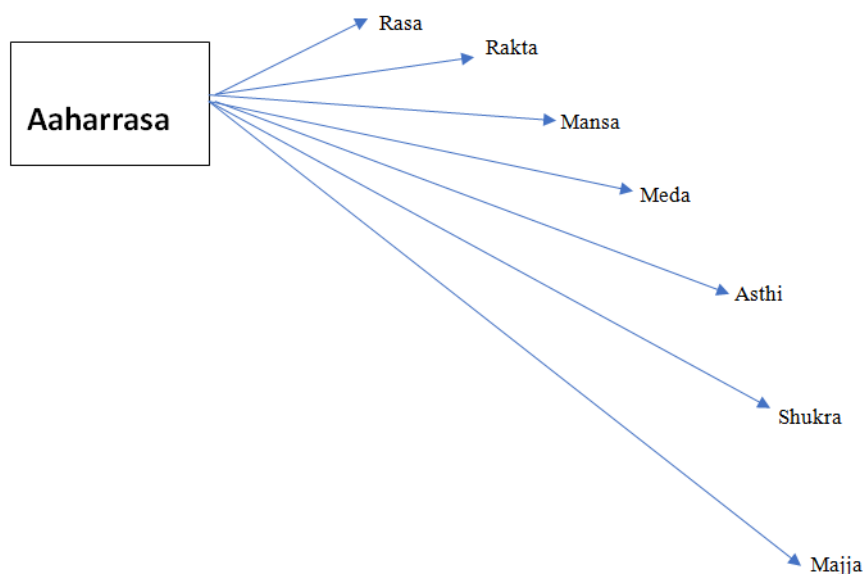
This Nyaya is utilized by Sushruta to describe Siras (vessels), such as Kedar and Kulya, which are distributed throughout the body and provide food.



3. Khalekapot Nyaya

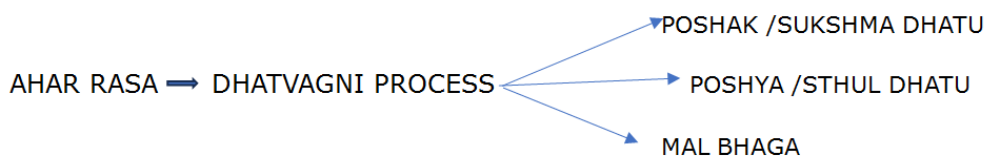
This Nyaya refers to the process by which each Dhātuvāgni's own needs are determined from the same Anna Rasa, which contains all of the Dhātu nutritional components. The length of each Srota is varied as well due to the various Dhātuashaya distances. It is observed

that the longer the Ashaya, the shorter the Srotas are; conversely, the farther away the Ashaya, the longer the Srotas and the longer the Rasa journey to reach that Ashaya. All Dhātu Poshana is said to occur straight from Rasa Dhātu; none of the Dhātu are connected to the Poshana from Poshaka Ansha of earlier Dhātu.



During the process of nourishment from the Rasa to Shukra Dhātu, dhatvāgni divide into Sukshma, Sthula and Mala bhaga at each and every level of dhatupachan. Dhatvāgni provides necessary materials to subsequent tissues in order to boost process of tissue formation and repair. The Ahara-rasa obtained from the transformed food during metabolic process helps to forms *Dhatus*.

The Ahara-rasa nourishes body components. During the process of metabolism in which *Dhatus* transformed into two parts; Poshya and Poshaka. The Poshya dhātu nourishes itself and Poshaka helps to nourishes others. The Poshya part support nourishment of Dhātu's while Poshaka parts nourishes other *Dhatus*.



RAKTA DHATU UTPATTI

Dhatu Utpatti process is going on in respective strotas. Yakrut (Liver) and Pleeha (spleen) are main manufacturing unit for raktdhatu called as raktvaha strotas.^[9] As soon as various food centers in stomach they are destroyed by jatharagni. This liquid form is called as ras. When this ras enters into Yakrut and pleeha where it is redigested by ranjak pitta and transforms ahar ras into rag varn yukt (red colored) raktdhatu which has ability to circulate in body.^[10] Due to this transformation rakt gives specific varna to body.^[11] Change in varna is examination tool for any defect in rakt dhatu.

Functions of Rakt dhatu

- 1) Most important karma of rakta dhatu is 'Jeevan' karma, means it is responsible for human life existence.^[12]
- 2) It is the Rakta dhatu which carries 'prana' all over the body. Rakt dhatu is so important, that shushrut considers it as important as *Doshas*.
- 3) It is rakt dhatu which strengthens the Agni. And is also responsible for ignition of Dhatvagni.^[13]
- 4) "*Raktam varna prasaadanam mamsa pushtim jeevayathicha*", explains it all.^[14]
- 5) Sparshagynan (sense of touch) is also karma of Raktdhatu.^[15]
- 6) Rakt literally translates to "that which is coloured and red". Prakrut Raktdhatu gives human their vigour, complexion, happiness and lifespan.^[16]
- 7) "*Rakta jeevati stithi*", explains importance of Raktdhatu.

DISCUSSION

The intricate concepts of Dhatu and their formation (Utpatti) play a pivotal role in Ayurvedic medicine, providing a comprehensive understanding of human physiology and health. Each of the seven dhatus—Rasa, Rakta, Mamsa, Meda, Asthi, Majja, and Shukra—serves distinct functions that contribute to the overall balance and harmony of the body. The principle of Dhatusamyata emphasizes that the health of these tissues is interdependent, and any imbalance can lead to physiological and psychological disorders.

Formation and Role of Raktdhatu

Among the dhatus, Raktdhatu holds significant importance as it is directly involved in sustaining life. Its formation begins in the liver and spleen, where Ranjak Pitta transforms the initial liquid food (Rasa) into the red-colored Raktdhatu. This transformation is not merely a physical change; it signifies the essence of life itself,

carrying prana throughout the body. The crucial functions of Raktdhatu—including oxygen transport, nutrient distribution, and participation in metabolic processes—underscore its status as a vital component of human health.

The relationship between Raktdhatu and the other dhatus is a reflection of Ayurvedic principles, where the nourishment of each dhatu supports the next in a continuous cycle. The understanding of Dhatvagni—the metabolic fire responsible for the transformation and nourishment of dhatus—provides insight into how these tissues are formed, maintained, and repaired. The division of the metabolic process into Poshya and Poshaka further illustrates the roles of dhatus: Poshya dhatu nourishes itself, while Poshaka facilitates the nourishment of others, highlighting their interconnected nature.

Clinical Implications

From a clinical perspective, the balance of dhatus is critical for preventing diseases. An imbalance in Raktdhatu, for instance, can manifest as anemia, fatigue, or other systemic issues, prompting a need for targeted Ayurvedic interventions. Understanding the physiology of Raktdhatu enables practitioners to develop personalized treatment plans that consider the unique constitution and health needs of individuals.

Moreover, the concept of Dhatu Mala—the waste products generated during the formation and metabolism of dhatus—provides a framework for understanding how blockages or disturbances in the Srotas can lead to diseases. The assessment of Raktdhatu through color, quality, and quantity can serve as an effective diagnostic tool, guiding practitioners in identifying underlying health issues.

Integration with Modern Science

Interestingly, the Ayurvedic understanding of blood and its functions aligns closely with contemporary medical knowledge, which recognizes blood as the lifeblood of the body, carrying oxygen and nutrients essential for survival. This intersection of ancient wisdom and modern science presents an opportunity for integrative approaches to health care, where Ayurvedic principles can complement conventional practices.

CONCLUSION

The concept of Sapta Dhatu in Ayurveda is provided as a comprehensive framework for understanding the

physiological structure and function of the human body. A unique yet interconnected role is played by each Dhatu in maintaining health and vitality. By promoting the balance and well-being of the Sapta Dhatu through holistic practices, optimal health and longevity can be strived for by individuals in harmony with nature's principles.

The life process is maintained by Raktdhatu, which is its most important function. In modern sciences, blood is also described as the fluid of life, as it carries respiratory gases and nutrient materials necessary for the basic life process. *Raktdhatu* is considered one of the most vital organs among the ten vital points, and therefore, utmost care should be taken to ensure its health and functionality. Modern sciences also describe blood as the fluid of life, as respiratory gases and nutrient materials required for the basic life process are carried by it. Rakthasthana means either the site where raktha is formed or stored. Pleeha and Rakthasthana have been recognized by Charak and Susruta as the moola of Rakthavahasrotas. Survival without prana and rakthadhathu cannot be achieved by the body.

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