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IMPORTANCE OF 'RAKTA DHATU' IN SHALYATANTRA ACCORDING TO 'SUSHRUT SAMHITA'

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ABSTRACT

Ayurved is an ancient science which is described in eight divisions like kaya, bal, griha, urdhvang (Shalakyas) shalya, Danshtra (agad), Jara (rasayan) and vrushya (vajikaran). Among brihat-trayi Sushrut Sanhita is basic prime reference book of Shalya Tantra. Dhatus are very important, as they play important functions of Dharana and Poshana.. Sushrut has given due importance to only rakta dhatu in various context. Chief functions of Rakta dhatu is to keep individual alive. It is one of the dash pranayatan which circulates prana. Rakta in various forms like fenbhut, prasadbhut participates in the organogenesis, types of various diseases like vidradhi, visarpa, arsha, vranshoth and many more diseases are described according to rakta vitiations. In various surgical and Para surgical procesures Rakta has given importance. So this study on Importance of Rakta dhatu in Shalya Tantra according to Sushrut Sanhita is designed.

Key Words: Sushrut Sanhita, Shalya Tantra, Prana, and Rakta Dhatu.

Introduction

Ayurved is the medical science which serve purpose of 'health maintenance , prevention & cure from the diseases. It is study of Dosha, Dhatu & Mala forming basic elements of human body. Each element has its own characteristics. The entity that sustains ,grows and nourishes the body is called as Dhatu. They are seven in number. Dhatu play important functions of Dharana and Poshana of sharir . Each dhatu plays specific function in our body and sustains our body as rakta plays Jeevan karma.

Aim : Literary study of 'Importance of Rakta dhatu in Shalyatantra according to 'Sushrut samhita.' To find out Objectives are, To review 'Rakta dhatu' in different Ayurvedic Compendia., To review 'Rakta dhatu' in detail related to Shalyatantra in Sushrut Sanhita.

Material and Method

Material-Literary Study Material-Literary Review

Literary review has been done from brihatrayee, ayurvedic text books, modern text books, internet media etc. The data collected from Previous dissertations related with *Dhatu, Rakta dhatu*. And also on this subject or in relation with this subject was done.^{29 30}

Ayurvedic literature study includes - Concept of *Dhatu* and *Rakta dhatu* from brihatrayee

-Concept of *Rakta dhatu* and its role in Sharir. And Importance of Rakta Dhatu in Shalya Tantra.

Ayurvedic literature -Dhatu is the entity which is responsible for Dharana and Poshana of Sharir .².

Seven dhatus are mentioned in brihat trayi as dushya. (Vitiated by dosha vata, pitta, kapha) .³

Aadya dhatu Rasa and rakta are in liquid form, whereas remaining five are semi liquid and solid form.

Rakta Nirukti -Root (*raja ranjane*) means to stain .since this *dhatu* is red colored it is called *Rakta*. If white cloth is stained with this *rakta* (*rakten sanyutam shuklvastam*), it becomes red colored. Word *ragkrut* indicates this.⁴

Synonyms always spell out the functions or physical properties of item. synonyms of *Rakta* are

Rudhir, Asruk, Shonitam, Astram, Kshatajam, Lohitam ⁵

Out of which *lohitam* and *shonitam* are indicating colour like properties, whereas *kshatajam* indicates going outside the body or bleeding property.

Utpatti of Raktadhatu From Aahara Rasa is Sapta dhatu get nourished from Aahar rasa, which is formed by Panchbhautik Aahar. and time (*kala*) required for it is minimum 2 days to form rakta from aahar.

Utpatti of Raktadhatu From Rasa Dhatu is Fluid called Rasa, when gets installed in liver & spleen; becomes red. In living body, Teja brings this red color to fluid & when produced in healthy fashion and in physiological quantity, it is fresh & is called 'Rakta'.⁶

Ranjakapittena rasaranjakatvam: -Rasa gets converted in Rakta in 7 days with the help of agni due present in Yakrut and

Pleeha. The colour changes from shwet to raktavarna. Hence Raktavarni dhatu is known as Rakta Dhatu.⁴

Pancabhautic predominance of Raktadhatu : Rakta is Teja and Jala mahabhut Pradhan entity in body⁵

All five properties of five mahabhuta are expressed in Rakta.⁷

1. Typical odor-*Pruthvi mahabhuta*
2. Fluid nature - *Aap mahabhuta*
3. Red color- *Tej mahabhuta*
4. Flow gets palpated - *Vayu mahabhuta*
5. Light, not heavy- *Aakash mahabhuta*

Location of Rakta dhatu (mula Sthana)

Raktavaha srotas -There are two *Raktavaha strotas*; principal organs of this *strotas* are- liver, spleen and *Raktavahi Dhamanyah*..⁸ -Besides liver and spleen, this compendium added in moolasthanavessels conveying rakta dhaatu.

This compendium, which was mainly written for surgery branch, has offered some different opinions than ordinary physician. In surgery, nourishing vessel if is severed, system goes at stake. This could be the reason this compendium offered conveying vessels in almost all Srotas.

Raktadhara Kala: Second among seven kala is raktadhara kala, which is present inside the mansadhatu and flowing through siras. This kala also present in Yakrut and pleeha too.⁹

Raktasara organs -Rakta dhatu should also be considered to be located at different organs mentioned in Rakta dhaatu Sara individuals. **are** - ears, eyes, mouth, tongue, nose, lips, Palmer and plantar aspects, nail, forehead and penis.¹⁰

Rakta mala is also one of the locations for expression of that dhaatu. **and** Rakta mala is pitta.¹¹

Physical and chemical properties of Raktadhatu

Rakta dhatu looks like insect (*Indragopa*), is of proper density (not too fluid not thick); and does not bear any other color than that meant for pure Rakta.¹² Rakta dhatu is not very cool not very warm. It is sweet, unctuous, red in color, heavy, smells typically, reacts to items which affect Pitta.¹³. This means its properties are alike with Pitta dosha.

Sushrut mention one verse which also expresses balance between cool and warm property of blood.

Physiological measure of Raktadhātu:-

Sushrut Samhita offers different opinion, which is very practical in Physiology as well as in clinics. He states that due to very different types of entities present in living body and due to homeostatic mechanism working in body, measurement of many entities differs every day. Hence it is not possible to quote exact measure of every body entity. ¹⁵ Hence there is no fixed gauge of Dosha-Dhatu -Mala. His commentator explains his statement by stating that to quantify each body entity in every aspect is not possible hence some of the body entities may be assessed but all are impossible to calculate 'Anjali.'

Trividha Parinaman: Dalhana states three-way- nourishment of every dhatu. Digestion of nutrient fluid results in three portions. First portion is called 'Mala', second portion is called 'Sthula', & third portion is called 'Anu'.

Hence after digestion of food, generation of 'mala' portion is in form of feces & urine. Generation of 'Sthula' portion is in form of Rasa. After digestion of Rasa, generation of 'mala' portion is in form of Kapha. Generation of 'Sthula' portion is in form of Rasa. Generation of 'Anu' portion is in form of 'Rakta'.

After digestion of Rakta, generation of 'mala' portion is in form of Pitta. Generation of 'Sthula' portion is in form of Rakta. Generation of 'Anu' portion is in form of Mansa.¹⁶

Upadhatu of Raktadhatu: are Sira Kandara.¹⁷

Sira consider here to supply the Raktadhatu all tissues of body.

Raktasara purusa laksanani: Individuals having the excellence of Rakta or blood are characterized by unctuousness, red color, beautiful dazzling appearance of the ears, Eyes, face, tongue, nose, lips, sole of the hands and feet, nails, forehead and genital organs.

Such individuals are endowed with happiness, great genius, enthusiasm, tenderness, moderate strength and inability to face difficulties.¹⁰ Their body remains hot.

Rakta Vridhhi- A plethora of blood in the system gives a reddish glow to the complexion and the White of the eyes, and imparts fullness to the veins.¹⁸

Rakta Kshaya- The loss of blood is manifested with such symptoms as a roughness of the skin, and a craving for Acid food or drink, the patient longs to be in a cool place and asks for cool things and the veins become loose and flabby.¹⁸

Physiological Functions of Raktadhātu: To keep individual alive is Chief Functions of Rakta.¹

Rakta brings luster to color of skin and it nourishes mansa;¹⁴

Circulating blood functions for nourishing dhatu. Sushrut added one property of Rakta-to be responsible for sensation of touch.

Hypothetically Vata, which is responsible for carriage of touch sensation in Ayurvedic philosophy, also circulates with blood (vatvahi sira.) Touch is a special sensation and needs attention of Prana who looks after all sense organs. Following verse proves prana circulates with rakta. This could be the reason why sushrut samhita proposed this function for rakta.(cha.su 24.4)

Another hypothesis is -Pitta circulates with Rakta. Function of Sadhak Pitta is to analyse sensation (अभिप्रेतार्थं साधनम्). Unless circulation is continued, Rakta will not reach Hridaya and let Sadhak pitta act on conveyance of touch sensation.²⁸

Out of 10 vital points, Rakta is one; hence utmost care should be taken of Rakta.

Raktavaha srotas viddha lakshana- Due to vedhan of raktavaha srotas following manifestations occurs such as shyavangata, fever, burning sensation, paleness (whitishness), excessive bleeding, redness of eyes etc.^{8,19}

Sushrutokta vyadhi in Shalya Tantra:²⁰

Vidrathi, Vranshoth,,Granthi,,Galgand ,Arbud ,Arsha ,Parikartika ,Visarpa ,Gulma ,Udar(Yakrut-udar, pleehodar) ,Vatkantaka ,Kroshtukshirsha ,Grudhrasi

Para-Surgical Procedure in Sushrut:²⁴

Ksharkarma

Agnikarma

Raktamokshan

Out of which Sushrutacharya mentioned that Raktamokshan in twakdosh, granthi, shopharoga, and raktpradoshaja vikar "**Na bhavanti Kadachana**".i.e. it is Apunarbhava chikitsa.

Importance:(Rakta Mahatva)

Raktadhatu is extremely important for sustenance of life. It is therefore needed to protect this Dhatu by every possible measure. As Vata - Pitta - Kapha are responsible for creation of living body fourth entity named Raktadhatu also takes part in origin, sustaining it and are responsible for death.²¹

Clinical importance of Rakta dhatu in Shalya Vyadhi

1. Mulsthana of Rakta Dhatu is Yakrut and Pleeha .So all disorders of liver and spleen are vitiated by Rakta Dhatu. E.g. yakrutvrudhhi-pleehavrudhhi, jaundice, cirrhosis.
2. Updhatu of Rakta are *sira-kandara*. So disorders of sira kandara such as grudhrasi, vishwachi, avbahuk, khanja, pangulya etc.³¹

3. Vriddhi of Rakta Dhatu occurred in Visarpa, Vidradhi, Kamala, and pleehavyadhi etc.³²
4. Kshaya of Rakta Dhatu occurred in Sira Shaithilya etc .vyadhi
5. Importance of Raktamokshana in various surgical disorders is highlighted.³¹
6. Importance of viddha karma in various surgical and Para surgical disorders³⁶
7. Utpatti of Guda, Basti and Antra (anal canal, urinary bladder,Intestine) from Prasad bhag of Asruja+ kapha and pachyaman pitta with Vayu. Important role of Rakta Dhatu get highlighted in All Anorectal disorders, Intestinal Disorders and Urological disorders.³³
8. Role of shonit in undukshoth (Appendicitis) is reflected³⁴.
9. Role of prasadbhut rakta in the management of vrukka disease.
- 10.Importance of Rakta in the management of vrushan vyadhi such as orchitis, epididymitis, etc.
- 11.Sushrutacharya mentioned that Raktamokshan in twakdosh, granthi, shopharoga, and raktpradoshaja vikar "**Na bhavanti Kadachana**".i.e. it is Apunarbhava chikitsa.³⁵

Avayava utpatti:- ²²

Sr.no.	Organ	Rakta participate as Utpattikar Bhava
1	Vrukka	Rakta Med prasadat
2	Vrushan	Rakta Mansa kapha Med prasadat
3	Hrudaya	Rakta Kapha prasadat
4	phuffusa(lungs)	Shonit fen prabhav
5	Unduka	Shonit kitta Prabhav
6	Aantra –Guda-Basti	Rakta kapha Prasadat
7	Jivha	Rakta kapha Mansa sarbhaga

Included in Dosha?

Rakta-as a Dosha²³

As three Dosha govern the living body, Rakta dhatu also usually participates in governing body.

All Ayurvedic compendia realize importance of Rakta dhatu. Sushrut tried to parallel this body entity with Dosha. He tried to emphasize control of this dhatu on other body entities.

In Chapter "shonit vernaniya" Sushrut insisted that other *dhatu* are dependent on the *rakta dhatu* for their maintenance and homeostatic conditions.

Also all dhatus are dependent for their nourishment on Rakta. Their status of waning or increment depends on it. References of Sushrut Samhita for his proposal for Rakta dhatu as fourth dosha- It usually participates in governing body.

Commentator Dalhan explain the reason as to why sushrut gave so much importance to Rakta dhatu. He states that Sushrut, as a surgeon had two primarily think about rakta. Dalhan further adds that surgical and other inflictions are dealt with every time in surgery, it was inevitable for sushrut to think on these terms.

In spite of giving so much importance to Rakta dhatu, Charak Samhita in its commentary doesn't accept proposal of Sushrut to think about it as a fourth Dosha.

Discussion

Being a Surgeon Sushrut has given due importance to Rakta dhatu.

He described rakta dhatu elaborative in sutra, sharir, chikitsa sthan as well.

Sushrut had devoted sutrasthana- 14- *shonit vernaniya adhyaya* for the description of rakta dhatu (origin, 7 stages of formation of rakta dhatu from rasa, functions & kshaya vridhi lakshan)

Rakta is the only dhatu whose *panchbhautikatva* is described in sushrut, Sushrut Samhita offers different opinion about praman of Rakta-dhatu, which is very practical in clinical practice. Each sharir bhava differs from each other and constant changes in it can't measure specific body entity such as rakta.

The parasurgical procedure like raktamokshan, jalaukavacharan are described while treating vatvyadhi, twak vikar etc. in *sushrut jalaukavcharniya adhyaya.*)

Conclusion

Sushrutacharya highlighted due importance of Rakta dhatu by stating *siravedha as ardha chikitsa* in all kinds of vyadhi, which are not only Shastra krut but also shaman vyadhi too.

Sushrutacharya mentioned that Raktamokshan in twakdosh, granthi, shopharoga, and raktpradoshaja vikar "**Na bhavanti Kadachana**".i.e. it is Apunarbhava chikitsa.

So importance of Rakta dhatu get highlighted and it became key factor in Clinical practice.

Even in some Shastrakrut vyadhis , in its purva avastha, chikitsa of rakta dhatu with the help of some parasurgical procedures

much benefitted and such vyadhis get cured within time limits.

After surgical procedure, in *pashchyat karma* (post-operative) treatment for samyavastha of Rakta Dhatu should be maintained to inhibit the recurrence of such *Shastrakrut vyadhi*

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